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1 of 2

REPORT

Interim Remedial Measure Report Soil/Drainline Remediation Activities

Tennessee Gas Pipeline Company
Compressor Station 229
Eden, New York

February 1996

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7010

Michael D. Zagata
Commissioner

FEB 22 1996

Mr. Charles Amento
Bureau of Environmental Exposure Investigation
New York State Department of Health
Two University Place
Albany, New York 12203-3313

Dear Mr. Amento:

Re: Site #9-15-140
Tenneco Station 229
Erie County

Enclosed please find a copy of the Interim Remedial Measure Report for Tenneco Station 229. Please review and comment by March 14, 1996. By effect of this letter, I am requesting comments from all those receiving copies.

If you have any questions, please call Jim Drumm at 457-7878.

Sincerely,

George Harris, P.E.
Chief, Western Field Services Section
Bureau of Construction Services
Div. of Hazardous Waste Remediation

Enclosure

cc: w/enc.: J. Moras
C. Dowd - DFW
J. Walia - NYSDEC, Region 9
C. O'Connor - NYSDOH, Buffalo

Interim Remedial Measure Report Soil/Drainline Remediation Activities

Tennessee Gas Pipeline Company
Compressor Station 229
Eden, New York

February 1996

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

6723 Towpath Road
Syracuse, New York 13214
(315) 446-9120

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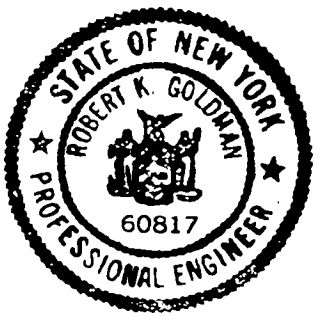
Table of Contents

CERTIFICATION STATEMENT

I hereby certify that this document has been prepared in accordance with the requirements of the Order on Consent (#A9-0328-9503, dated July 24, 1995) between the New York State Department of Environmental Conservation (NYSDEC) and the Tennessee Gas Pipeline Company (TGP) for the development and implementation of an Interim Remedial Measure (IRM) at TGP's Compressor Station 229, Eden, New York. Furthermore, I certify that the IRM was performed as described herein and that unless otherwise noted, such performance was in accordance with the requirements specified in the document entitled "Interim Remedial Measure Design Plan Tennessee Gas Pipeline Company Compressor Station 229 at Eden, New York" (July 1995) which was prepared by Blasland, Bouck & Lee, Inc. under my signature and stamp as a Professional Engineer in the State of New York.



Robert K. Goldman, P.E.
N.Y.P.E. No. 60817

2/10/96
Date

CERTIFICATION STATEMENT

I hereby certify that the IRM was performed as described herein and that unless otherwise noted, such performance was in accordance with the requirements specified in the document entitled "Interim Remedial Measure Design Plan, Tennessee Gas Pipeline Company, Compressor Station 229 at Eden, New York" (July 1995).

J. Paul Doody, P.E.
Project Manager

2/9/96
Date

Mark O. Gravelding, P.E.
Senior Project Engineer

2/9/96
Date

Joseph Molina, P.E.
Engineer's On-Site Representative

2/9/96
Date

EXECUTIVE SUMMARY

Between July 1995 and September 1995, Tennessee Gas Pipeline Company (TGP) performed an Interim Remedial Measure (IRM) at TGP's Compressor Station 229, located near Eden, New York. The IRM was performed in accordance with an Order on Consent (#A9-0328-9503, dated July 24, 1995) between TGP and the New York State Department of Environmental Conservation (NYSDEC), and consistent with the procedures established in documents entitled "Interim Remedial Measure Work Plan Tennessee Gas Pipeline Company Station 229, Eden, New York" (the "IRM Work Plan") and the "Interim Remedial Measure Design Plan Tennessee Gas Pipeline Company, Compressor Station 229 at Eden, New York" (the "IRM Design Plan"). Two primary remediation components were performed: (1) the excavation and off-site disposal of soils containing polychlorinated biphenyls (PCBs); and (2) the closure of various drainlines and related appurtenances.

Soil remediation was performed in seven areas of the site. These areas are as follows:

- Air Receiver Tank Area;
- Pipe Rack Area;
- Scrap Yard Area;
- Compressor Building Area;
- Shop Building Area;
- Auxiliary Building Area; and
- Drainage Ditch B Area.

Remediation generally involved the excavation and off-site disposal of soils exceeding PCB levels specified in the Work Plan. However, a portion of the Air Receiver Tank Area remediation consisted of the installation of a low-permeability cap after removal of some soils.

Within the soil excavation areas, approximately 414 in-place cubic yards (cy) of soil were excavated and disposed off-site. The total volume was disposed at the Chemical Waste Management facility in Model City, New York. Excavation areas were subsequently backfilled, regraded and restored to match original conditions.

Drainline remediation was performed for two on-site drainline systems: Drainlines C and D. Portions of these drainlines were closed by filling with non-shrink grout. Approximately 3,025 linear feet of drainline were closed via filling with non-shrink grout.

Certain post-IRM activities also have been or will be implemented at Station 229 to provide for the long-term maintenance and management of the remediated site. These activities include further evaluation of the site as part of the feasibility study (including long-term site management activities such as operations, maintenance, and monitoring) and long-term management of data collected as part of IRM activities.

Overall, the intent of this IRM Report is to summarize the remediation activities performed at Station 229, and to demonstrate that the completed activities satisfy the requirements established in the IRM Design Plan and IRM Work Plan and provide documentation of any variances from these plans, all in accordance

with the requirements of Order on Consent (#A9-0328-9503, dated July 24, 1995). To this end, the document provides a summary of the pertinent background information, area-specific summaries of soil and drainline remediation activities, quality assurance/quality control information, and a description of post-remediation activities.

Section 1

SECTION 1 - INTRODUCTION

1.1 General

Between July 1995 and September 1995, TGP performed an IRM at TGP's Compressor Station 229, located near Eden, New York. The primary focus of IRM activities involved the presence of PCBs and included the removal of on-site soils and the closure (via filling with non-shrink grout) of drainlines. TGP proposed this IRM to the NYSDEC as a means of expediting remediation at the site. The extent of soil removal and drainline closure was based on specific criteria as presented in a document entitled "Interim Remedial Measure Work Plan Tennessee Gas Pipeline Company Station 229, Eden, New York" (Environ Corporation, April 1995) hereafter referred to as the "IRM Work Plan."

The scope and closure requirements of the IRM at Station 229 were established in a document entitled "Interim Remedial Measure Design Plan Tennessee Gas Pipeline Company Compressor Station 229 at Eden, New York" (Blasland, Bouck & Lee, Inc., July 1995) hereafter referred to as the "IRM Design Plan." Approval of the IRM Design Plan was provided by NYSDEC in a letter dated July 13, 1995.

As required by the Order on Consent (#A9-0328-9503, dated July 24, 1995) between TGP and NYSDEC, two primary remediation components were addressed in the IRM Design Plan: (1) the excavation and off-site disposal of certain PCB-containing soils; and (2) the closure of various drainlines and related appurtenances. Documentation of these activities is provided in this IRM Report.

1.2 Facility Description

TGP owns and operates a natural gas pipeline system which extends from Texas to New England. Compressor stations are located at various points along the pipeline to pressurize the natural gas in the pipeline to facilitate its transmission. Several of these compressor stations are located throughout New York. Station 229 is located near Eden, Erie County, New York. This station occupies approximately 50.5 acres and is bordered on the north by residences, on the east by East Eden Road, on the south by agricultural land, and on the west by forested land.

The primary operational facilities at Station 229 consist of the Compressor Building, which contains six reciprocal-type gas compressor engines, an Auxiliary Building which contains the starting air compressors, and an area that contains seven air receiver tanks (ARTs) immediately west of the Auxiliary Building. In addition, a dehydration facility, utility building, shop building, truck garage, station warehouse, pipeline warehouse, meter buildings, heliport, and office building are present at the station. A lake and separator pond are located in the southwestern portion of the site. A site plan for the station is provided as Figure 1.

Drainage systems have been utilized at Station 229 for the conveyance and discharge of sanitary wastes, storm water, and floor, roof, and foundation drainage for several buildings. With the exception of sanitary wastes, these systems discharge to surface outfalls. The sanitary wastes discharge to a public sanitary sewer system. Additional components of these systems (depending on the specific system) include holding tanks, oil/water separators, manholes, and other drainline appurtenances. A total of four discharge outfalls have been utilized at the site. These include Outfalls 001, 002, 003, and 004 (Outfall 004 formerly discharged to the west of the station lake and was re-routed to the separator pond in 1981).

1.3 Report Format

The purpose of this IRM Report is to document the remediation activities performed at Station 229 and to demonstrate that the completed activities satisfy the requirements established in the IRM Work Plan and IRM Design Plan and to provide documentation of changes from these plans, all in accordance with the Order on Consent (#A9-0328-9503). To this end, this document provides a summary of the pertinent background information, area-specific summaries of soil and drainline remediation activities, quality assurance/quality control information, and a description of post-remediation activities.

In addition to the report narrative, several tables, figures, and attachments have been prepared to summarize the IRM activities. In general, tables and figures are provided at the end of the section in which they are first referenced. However, in Section 3, tables and figures are provided at the end of each tabbed section (tabbed sections are provided for each soil remediation area). All attachments are provided at the end of the document. Throughout the report, this information will be referenced as appropriate.

1.4 Remediation Project Roles

Soil and drainline remediation activities at Station 229 involved several firms, organizations, and facilities, including the following:

- **Tennessee Gas Pipeline Company (TGP), Houston, Texas** - TGP is the owner and operator of Station 229. TGP secured the services of the various firms, organizations, and facilities involved in remediation activities and provided overall coordination during remediation. TGP also provided a Chief Inspector, who served as TGP's on-site representative during remediation activities.

- **New York State Department of Environmental Conservation (NYSDEC)** - NYSDEC reviewed and approved the IRM Work Plan and Design Plan and conducted periodic inspections of on-site remediation activities. Primary regulatory oversight was provided by the NYSDEC Region 9 Office in Buffalo, New York.

- **Environ Corporation (Environ), Princeton, New Jersey** - Environ coordinated the collection and presentation of the previous site characterization data, assisted TGP in developing the IRM Work Plan and coordinating with regulatory agencies, and supported the IRM activities.

- **Blasland, Bouck & Lee, Inc. (BBL), Syracuse, New York** - BBL prepared the IRM Design Plan including the IRM Contract Documents, performed pre- and post-remediation sampling, performed field immunoassay PCB analyses, provided an Engineer's On-Site Representative to monitor the Remediation Contractor's general compliance with the Contract Documents, and assisted TGP in coordinating with regulatory agencies and various assessment, permitting, and support activities.

- **Philip Environmental Services Corporation, (Philip), Houston, Texas** - Philip served as the Remediation Contractor. Philip performed IRM activities or directed subcontractor services as necessary to implement soil and drainline remediation activities in accordance with the Contract Documents.

- **RECRA Environmental Inc. (RECRA), Amherst, New York** - RECRA served as the analytical laboratory for the analysis of delineation and verification samples collected at Station 229.

- **Chemical Waste Management (CWM) Model City Landfill, Model City, New York** - The CWM Model City facility was utilized for the disposal of solid waste materials containing greater than 25 parts per million (ppm) PCBs and for the disposal of liquid wastes generated during remediation activities. The facility is permitted under the provisions of 40 CFR 761 to accept such materials.

Section 2

SECTION 2 - OVERVIEW OF REMEDIATION ACTIVITIES

2.1 General

Section 2 summarizes the scope of activities associated with the remediation of soils and drainlines at Station 229. This summary is provided to familiarize the reader with the remediation process and to describe activities that were common to each of the soil and drainline remediation areas. Specific IRM details are provided in Sections 3 and 4.

2.2 Remediation Requirements

Various environmental studies have been conducted at the site since 1988. These studies included the performance of phased and targeted investigations to determine the presence and extent of PCBs and other constituents at the site. A summary of the results of these prior investigations is provided in the IRM Work Plan.

The data collected during prior characterization activities were utilized to identify the goals of the IRM at Station 229. The IRM Work Plan describes the basis and approach utilized in the development of these goals. A summary is provided below.

2.2.1 Soils

The soil cleanup goal established in the IRM Work Plan was 25 ppm PCBs. For Station 229, the criteria for determining compliance with the soil cleanup goal for PCBs involved the performance of remediation-related sampling, with the following interpretation of the results: for each remediation area, the post-remediation verification samples results could not exceed 25 ppm PCBs unless it was determined that the excavation could not proceed due to operational or safety concerns (in this case a low permeability cap was to be installed).

2.2.2 Drainlines

An action level of 25 ppm for PCBs in drainlines was also established in the IRM Work Plan. Drainlines containing PCBs above the action level were closed in place via filling with non-shrink grout. The effectiveness of drainline remediation was determined based on field observations by the TGP Chief Inspector, the Engineer's On-Site Representative, and the NYSDEC.

2.3 Scope of Remediation Activities

This section summarizes the remediation activities performed by TGP at Station 229. In general, the scope of activities associated with a given remediation component (e.g., soil remediation, drainline remediation, etc.) were consistent for each area subject to remediation. While there were some exceptions to the activities described in this section, these exceptions were relatively limited. Deviations from the general

scope presented in this section, and specific area-by-area remediation details, are provided in Sections 3 and 4 of this IRM Report.

2.3.1 Soil Remediation

The primary component of soil remediation activities involved the excavation and off-site disposal of soils exceeding the cleanup goal. In addition, the IRM Design Plan also included provisions for engineering controls (i.e., a low permeability cap) in areas where excavation was not practicable.

Based on the information presented in the IRM Work Plan, as modified by supplemental data collected during remediation, seven areas were identified for soil remediation due to the presence of PCBs. These remediation areas were as follows:

- Air Receiver Tank Area;
- Pipe Rack Area;
- Scrap Yard Area;
- Compressor Building Area;
- Shop Building Area;
- Auxiliary Building Area; and
- Drainage Ditch B Area.

All areas subject to remediation were identified based on a review of previous site characterization results, as well as the results of a pre-remediation delineation sampling and analysis program conducted prior to the initiation of on-site activities. The pre-remediation sampling and analysis program utilized both immunoassay and fixed laboratory analyses to confirm/refine the extent of soil to be remediated. In addition, where appropriate, pre-remediation sampling results were also utilized as final verification samples defining the extent of remediation. The procedures utilized for pre-remediation delineation were described in the IRM Work Plan, and are summarized in Section 3.2 of this report.

Soil excavation was performed by two methods depending on site conditions: manual excavation and mechanical excavation. Manual excavation involved the removal of soils utilizing hand tools and was performed adjacent to buildings, gas lines, utilities, foundations, and other operationally sensitive areas. Mechanical excavation involved the use of mechanical equipment and was utilized in areas where manual excavation was not required.

Soils were excavated and placed directly into containers or vehicles to be used for off-site transport and disposal. All vehicles/containers utilized for off-site transport and disposal were lined, tarped, manifested, and transported to the CWM disposal facility in Model City, New York.

Upon completion of excavation, post-remediation verification sampling and analysis was performed. In accordance with the IRM Work Plan, post-remediation sampling and analysis included the collection of samples from the bottom of the excavation, as well as sidewall samples, if necessary. Section 3.2 provides additional information concerning the verification sampling approach. If results

indicated that the cleanup goals had been achieved, the area was backfilled and restored. If an area did not meet the cleanup criteria, additional excavation was performed and the area was resampled. Generally, this iterative process continued until it was determined that each area met the cleanup goals or until excavation could not progress further due to limiting subgrade features. In these areas, a low-permeability cap was installed.

Restoration of the remediated areas included re-establishing the initial contours and appearance of each area. In general, this included the placement of backfill material to within 6 inches of the initial grade. The uppermost six inches were then covered with topsoil if the area was previously vegetated, or crushed stone if the area previously had a gravel cover. Areas receiving topsoil were subsequently raked, fertilized, seeded, and mulched. Disturbed areas that were paved with asphalt or that had side walks were restored to original conditions. Additionally, rip-rap was utilized as backfill for the drainage channel portion of the excavation in the Drainage Ditch B Area to limit potential future erosion. The remainder of the excavation area was backfilled with common backfill and seeded.

2.3.2 Drainline Remediation

The IRM Work Plan identified two drainline systems (C and D, see Figure 1) to be remediated and established a scope of remediation for these two drainline systems. Remedial actions for the drainlines included two remediation components to address the potential presence of PCBs within the drainlines:

Cleaning - removal of accumulated water and sediments from manholes, sumps, or oil/water separators, by either manual or mechanical means.

Grouting - placement of non-shrink grout to fill (to the extent possible) designated drainlines to prevent future use of the pipe as a means of water conveyance and to prevent potential migration of PCBs.

Section 3

SECTION 3 - SOIL REMEDIATION

3.1 General

This section provides a summary of the soil remediation activities performed at Station 229. This includes a description of the pre-and post-remediation soil sampling approaches, as well as an area-specific summary of the remediation activities undertaken in each soil remediation area.

3.2 Pre- and Post-Remediation Sampling

An integral component of the Station 229 soil remediation program was the performance of pre- and post-remediation sampling and analysis. Initial remediation areas were established in the IRM Work Plan based on previous characterization sampling performed during the Remedial Investigation. Therefore, pre-remediation sampling and analysis performed as part of the IRM was utilized to refine the initial remediation areas. Once a remediation area was excavated, post-remediation sampling was performed to verify the completion of remediation or, alternatively, identify additional areas subject to further remediation. Since the horizontal extent of remediation was primarily established based on the pre-remediation sampling, post-excavation sampling was primarily utilized to verify the vertical extent of remediation.

The sampling approaches that were utilized for the pre- and post-remediation sampling programs were described in the IRM Work Plan. The sampling approach varied based on field conditions, site features, previous sampling data, and the estimated extent of excavation. The pre-remediation sampling approach generally consisted of iterative sampling to determine the lateral extent of excavation, with limited sampling at depth to determine the vertical extent of remediation. As necessary, following excavation, pre-remediation sampling was supplemented with post-remediation sampling consisting of samples collected from the base of the excavation at a minimum of one sample per 1,000 square feet of bottom excavated area and a minimum of two sidewall samples for each contiguous excavation area of the same depth. In general, pre- and post-remediation samples were collected and initially analyzed using PCB screening techniques (i.e., EnSys PCB-Risc immunoassay test kits). A minimum of 50 percent of the samples that defined the final excavation areas were sent to RECRA for verification by laboratory analysis in accordance with USEPA SW846 Method 8081.

For these sampling activities, known reference points were established by: 1) relocating previous sample nodes from the Remedial Investigation or 2) establishing a surveyed grid (Pipe Rack and Auxiliary Building areas). To facilitate the mapping of sampling locations, samples were field located relative to the known reference point and the number of feet north, south, east, and/or west of that point. Figure 2 presents a sample location key to assist in locating a sample point on the figures based on the sample location ID presented in the data tables.

3.3 Soil Remediation

This section provides a summary of the remediation activities conducted in each of the seven areas covered by the IRM. For each area, this section provides general background information, a summary of pre-remediation delineation activities, a summary of the scope of remediation, results of verification analyses, and identification of deviations from the IRM Work Plan or IRM Design Plan, as appropriate.

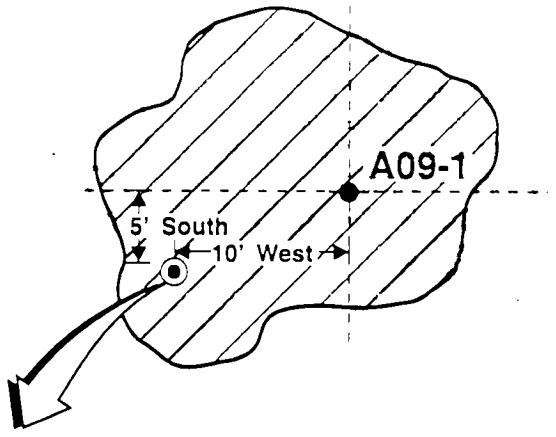
Certain components of the remediation process were common to each remediation area, and are therefore not specifically included in the following detailed descriptions. Initially, site activities consisted of mobilization to the site and the set-up of an office trailer for use by contractor personnel and an office trailer for use by the NYSDEC, TGP, and BBL. Other site preparation activities included placement of a stabilized construction entrance for the soil transportation trucks, set-up of the materials and equipment staging area, and connection of electrical and telephone utilities for the office trailers. In addition, unless otherwise noted in the detailed descriptions, the following activities were performed as necessary prior to remediation activities in each area:

- Establishment of a health and safety Exclusion Zone, Contamination Reduction Zone, and Support Zone;
- Implementation of erosion and sedimentation control measures (e.g., staked hay bales, silt fences, sandbags, etc.);
- Clearing and grubbing of vegetation to access soils;
- Placement of construction safety fencing around the excavation areas;
- Establishment of Remediation Support Areas to be utilized for direct soil loading; and
- Liquid handling procedures for excavations including the collection and containerization (in a 500-gallon polyethylene tank) of water which accumulated in the excavations. Containerized water was transported and disposed off-site at the CWM facility in Model City, New York.

It should be noted that the use of sandbags for erosion control represents a modification from the IRM Design Plan. Sandbags were utilized as erosion control measures in areas where the presence of sidewalks or pavement prevented the excavation of trenches for the embedment of haybales or silt fences, and along the fenceline in the Pipe Rack area where access was limited. This modification was implemented in consultation with the NYSDEC on-site representative.

Another modification to the IRM Design Plan involved erosion control in the Drainage Ditch B area. The IRM Design Plan provided for the use of rock check-dams to reduce erosion in drainage channels by restricting the velocity of flow. However, due to the anticipated short duration of excavation activities in Drainage Ditch B, the Contractor bypass pumped the water around the excavation area. This activity was performed in consultation with the NYSDEC on-site representative and consisted of: 1) placing an impermeable membrane (supported by sandbags) on the upgradient side of the excavation to pool any water flowing in the drainage ditch; 2) placing a submersible pump into the pooled water; and 3) operating the pump as required to bypass water to the ditch downgradient of the excavation area. Additionally, a silt curtain was placed in the ditch at the pump discharge location to dissipate the pump discharge energy and limit potential erosion.

The remainder of this section summarizes the specific activities performed in each of the seven remediation areas. To facilitate review of the remediation activities performed in each area, tabbed dividers have been inserted in this document to identify each remediation area. Each tabbed section includes the text, tables and figures documenting the remediation activities in that area.



RECORD DRAWINGS

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

BLASLAND, BOUCK & LEE, INC.

By _____ 2/9/96

North

Example:

A09-1 - 10W-5S

Location of Previous Ecology & Environment, Inc. Sample Collected as Part of the Remedial Investigation (As Surveyed by Blasland, Bouck & Lee, Inc.)

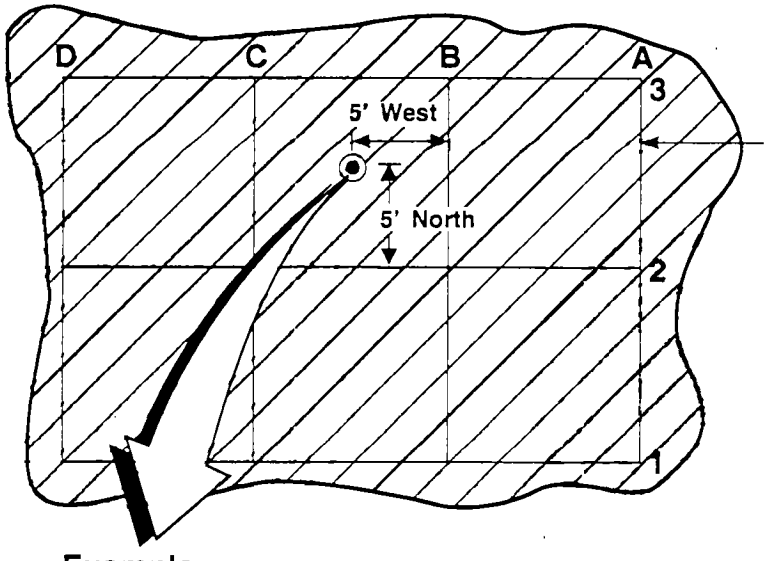
Specific Sample Location in Feet and Direction (N, S, E, W) From the Previous Remedial Investigation Sample (As Field Located by Blasland, Bouck & Lee, Inc.)

Legend/Notes:

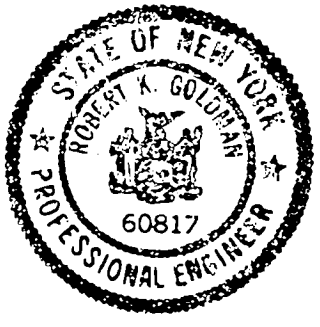
▨ = *Area Subject to Soil Removal and/or Sampling and Analysis*

⊕ = *Previous Ecology & Environment, Inc. Sample Location as Surveyed by Blasland, Bouck & Lee, Inc.*

◉ = *Sample Location (As Field Located by Blasland, Bouck & Lee, Inc.)*



Surveyed Grid



Example:

B2 - 5W-5N

Grid Point (As Surveyed by Blasland, Bouck & Lee, Inc.)

Specific Sample Location in Feet and Direction (N, S, E, W) From Grid Point

10' 0' 10'

Approximate Scale: **1" = 10'**

Legend/Notes:

▨ = *Area Subject to Soil Removal and/or Sampling and Analysis*

◉ = *Sample Location (As Field Located by Blasland, Bouck & Lee, Inc.)*

1/96 D54 PMC
51302001/51302g04.CDR

TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS
COMPRESSOR STATION 229
EDEN, NEW YORK

SAMPLE LOCATION KEY

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE **2**

Air Receiver Tank (ART) Area

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

3.3.1 Air Receiver Tank (ART) Area

The ART area is located on the west side of the Auxiliary Building. The results of prior characterization sampling in this area indicated the presence of PCBs at levels ranging from 1.3 ppm to 13,000 ppm. Remediation in this area was proposed because of the presence of PCBs above the cleanup goal in three sample locations, one off the northeast corner of the ARTs and two along the west side of the foundation supporting the ARTs (Attachment 1).

3.3.1.1 Pre-Remediation Delineation

Initially, pre-remediation sampling and analysis activities included the collection of 10 samples to confirm the anticipated extent of excavation presented in the IRM Work Plan. Four of these samples indicated PCB levels above 25 ppm. Sampling to verify the proposed depth of excavation resulted in the collection of 34 additional samples. Table 1 provides a summary of the results of pre-remediation sampling in this area. The results of pre-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 3.

3.3.1.2 Remediation and Verification

Remediation in the ART area initially consisted of excavation of soils in the areas estimated based on the results of pre-remediation sampling and analysis. Due to the proximity of the ARTs and other sensitive operations areas, excavation was primarily performed by manual means.

Following excavation, verification sampling and analysis was performed. Verification sampling initially included the collection of nine samples. Six of the samples indicated PCB levels less than the cleanup goal. However, three of the samples indicated a PCB level greater than 25 ppm and additional excavation and sampling activities were conducted until verification sampling demonstrated PCBs less than the cleanup criteria or until it was determined that the excavation could not proceed due to subsurface limiting features. Forty-three additional post-remediation samples were collected in this area. Table 1 provides a summary of the results of post-remediation sampling in this area. The results of post-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 3.

Because of subsurface limitations, a low-permeability cap was installed over the excavation area west of the ARTs. As shown on Figure 3, the final sidewall samples in this area were less than 25 ppm, however, the bottom samples were greater than 25 ppm (78 and 110 ppm). However, the bottom of this excavation area was at bedrock and at the bottom of the adjacent ART support pier, and it was not possible to excavate additional material. Accordingly, with the DEC's approval and in accordance with the IRM Design Plan, a low permeability cap was placed over the entire area on the west side of the ARTs (Figure 3).

The depth of excavation in the ART area ranged from 6 to 60 inches. The total volume of soil excavated from this area is estimated to be approximately 93 cy. This total volume was disposed at the CWM disposal facility in Model City, New York.

TABLE 1
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - AIR RECEIVER TANK REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
PRE-REMEDIATION SAMPLES							
229-AR01-4DS-045-01	B07-1	0 - 6	04/27/95	> 25	78 E	ND (110)	
229-AR01-4DS-082-01	B07-1-10N	0 - 6	05/09/95	> 25	36		
229-AR01-4DS-112-01	B07-1-10N	0 - 6	05/09/95		38		Field duplicate of 229-AR01-4DS-082-01
229-AR01-4DS-147-01	B07-1-10N,5E	0 - 6	05/12/95		12		Utilized as a final verification sample
229-AR01-4DS-148-01	B07-1-10N,5W	0 - 6	05/12/95		5.8		Utilized as a final verification sample
229-AR01-4DS-122-01	B07-1-15N	0 - 6	05/11/95	> 25			
229-AR01-4DS-122-01D	B07-1-15N	0 - 6	05/11/95	> 25			Field duplicate of 229-AR01-4DS-122-01
229-AR01-4DS-131-01	B07-1-20N	0 - 6	05/11/95	< 25		3.6 J	Utilized as a final verification sample
229-AR01-4DS-172-01	B07-1-20N,5E	0 - 6	07/20/95			4.9	Utilized as a final verification sample
229-AR01-4DS-168-01	B07-1-20N,5W	0 - 6	07/20/95			3.2	Utilized as a final verification sample
229-AR01-4DS-168-02	B07-1-20N,5W	6 - 24	07/20/95			ND (0.066)	Utilized as a final verification sample
229-AR01-4DS-198-01	B07-1-5N,10E	0 - 6	07/25/95			8.6	Utilized as a final verification sample
229-AR01-4DS-169-01	B07-1-5N,5E	0 - 6	07/20/95			140	Utilized as a final verification sample
229-AR01-4DS-169-02	B07-1-5N,5E	6 - 24	07/20/95			2.0	Utilized as a final verification sample
229-AR01-4DS-173-01	B07-1-5N,5W	0 - 6	07/20/95			10	Utilized as a final verification sample
229-AR01-4DS-046-01	B07-2	0 - 6	04/27/95	> 25	200 E	740	
229-AR01-4DS-083-01	B07-2-5W	0 - 6	05/09/95	< 25		2.6 J	Utilized as a final verification sample
229-AR01-4DS-083-02	B07-2-5W	6 - 24	05/10/95	< 25		0.13 J	Utilized as a final verification sample
229-AR01-4DS-047-01	B07-3	0 - 6	04/27/95	> 25	170 E	500	
229-AR01-4DS-084-01	B07-3-5S	0 - 6	05/09/95	< 25		2.1 J	Utilized as a final verification sample
229-AR01-4DS-084-02	B07-3-5S	6 - 24	05/10/95	< 25		0.052 J	Utilized as a final verification sample
229-AR01-4DS-085-01	B07-4	0 - 6	05/09/95	> 25	67 E		

(See Pages 5 and 6 for Notes)

TABLE 1
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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AR01-4DS-123-01	B07-4-5E	0 - 6	05/11/95	< 25			Utilized as a final verification sample
229-AR01-4DS-174-01	B07-4-5E,5N	0 - 6	07/20/95			0.38	Utilized as a final verification sample
229-AR01-4DS-171-01	B07-4-5E,5S	0 - 6	07/20/95			1.8	Utilized as a final verification sample
229-AR01-4DS-171-02	B07-4-5E,5S	6 - 24	07/20/95			0.074	Utilized as a final verification sample
229-AR01-4DS-170-01	B07-4-5N	0 - 6	07/20/95			0.74	Utilized as a final verification sample
229-AR01-4DS-170-02	B07-4-5N	6 - 24	07/20/95			2.8	Utilized as a final verification sample
229-AR01-4DS-199-01	B07-4-5S	0 - 6	07/25/95			1.2	
229-AR02-4DS-048-01	B16-1	0 - 6	04/27/95	> 25	280 E	2,900	
229-AR02-4DS-087-01	B16-1-5N	0 - 6	05/09/95	< 25		6.4	Utilized as a final verification sample
229-AR02-4DS-130-01	B16-1-5N	0 - 6	05/09/95			7.0	Utilized as a final verification sample, Field duplicate of 229-AR02-4DS-087-01
229-AR02-4DS-087-02	B16-1-5N	6 - 18	05/10/95	< 25		2.1 J	Utilized as a final verification sample
229-AR02-4DS-113-01	B16-1-5N	6 - 18	05/10/95			2.0 J	Utilized as a final verification sample, Field duplicate of 229-AR02-4DS-087-02
229-AR02-4DS-049-01	B16-2	0 - 6	04/27/95	< 25	13	24	
229-AR02-4DS-049-02	B16-2	6 - 18	05/09/95	< 25	ND (1.0)	0.38 J	
229-AR02-4DS-050-01	B16-3	0 - 6	04/27/95	> 25	70 E	59	
229-AR02-4DS-088-01	B16-3-5S	0 - 6	05/09/95	< 25			
229-AR02-4DS-086-01	B16-4	0 - 6	05/09/95	< 25			Utilized as a final verification sample
229-AR03-4DS-051-01	B19-1	0 - 6	04/27/95	< 25	1.4	1.2	
229-AR03-4DS-051-02	B19-1	6 - 18	05/09/95	> 25	160 E	190	
229-AR03-4DS-143-01	**B19-1-5N**	**0 - 6**	**05/12/95**		3.9		
229-AR03-4DS-143-02	B19-1-5N	6 - 12	05/12/95			0.96	
229-AR03-4DS-052-01	B19-2	0 - 6	04/27/95	< 25	0.35 J	0.51	
229-AR03-4DS-053-01	B19-3	0 - 6	04/27/95	< 25	0.50 J	0.80	Utilized as a final verification sample

(See Pages 5 and 6 for Notes)

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AR03-4DS-054-01	B19-4	0 - 6	04/27/95	< 25	ND (1.0)	0.043	
229-AR03-4DS-054-02	B19-4	6 - 18	05/09/95	< 25	ND (1.0)	0.60	
229-AR03-4DS-054-02D	B19-4	6 - 18	05/09/95	< 25			Immunoassay duplicate of 229-AR03-4DS-054-02
POST-REMEDIATION SAMPLES							
229-AR01-5DS-019-01	B07-1-10N	6 - 12	07/31/95			0.20	Utilized as a final verification sample
229-AR01-5DS-020-01	B07-1-6N,7E	6 - 12	07/31/95			1.5	Utilized as a final verification sample
229-AR01-5DS-014-01	B07-2	24 - 30	07/31/95			1.9	Utilized as a final verification sample
229-AR01-5DS-015-01	B07-3	24 - 30	07/31/95			92	
229-AR01-5DS-015-02	B07-3	30 - 36	08/02/95	> 25			
229-AR01-5DS-015-03	B07-3	36 - 42	08/10/95			25	Utilized as a final verification sample
229-AR01-5DS-015-04	B07-3	42 - 48	08/10/95	< 25			Utilized as a final verification sample
229-AR01-5DS-017-01	B07-3-1.5E	6 - 24	07/31/95			270	
229-AR01-5DS-046-01	B07-3-5S	24 - 36	08/10/95	< 25			Utilized as a final verification sample
229-AR01-5DS-016-01	B07-3.5N	6 - 24	07/31/95			7.2	Utilized as a final verification sample
229-AR01-5DS-021-01	B07-4	6 - 12	07/31/95			8.0	Utilized as a final verification sample
229-AR01-5DS-023-01	B07-4-11.5S,3.5W	0 - 6	08/02/95	< 25			Utilized as a final verification sample
229-AR01-5DS-023-02	B07-4-11.5S,3.5W	6 - 24	08/02/95	< 25			Utilized as a final verification sample
229-AR01-5DS-023-03	B07-4-11.5S,3.5W	24 - 30	08/02/95	< 25			Utilized as a final verification sample
229-AR01-5DS-023-04	B07-4-11.5S,3.5W	30 - 36	08/10/95	< 25			Utilized as a final verification sample
229-AR01-5DS-045-01	B07-4-2W,7S	6 - 12	08/10/95			7.2	Utilized as a final verification sample
229-AR01-5DS-022-01	B07-4-4.5S,3.5W	0 - 6	08/02/95	> 25			Utilized as a final verification sample
229-AR01-5DS-022-04	B07-4-4.5S,3.5W	6 - 12	08/03/95	< 25			Utilized as a final verification sample

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AR01-5DS-022-02	B07-4-4.5S,3.5W	6 - 24	08/02/95	< 25			Utilized as a final verification sample
229-AR01-5DS-022-03	B07-4-4.5S,3.5W	24 - 30	08/02/95	< 25			Utilized as a final verification sample
229-AR01-5DS-025-01	B07-4-5S,1.5E	0 - 6	08/03/95	< 25			Utilized as a final verification sample
229-AR02-5DS-107-01	B16-1-4N	24 - 36	09/01/95			1.6	Utilized as a final verification sample
229-AR02-5DS-107-02	B16-1-4N	36 - 48	09/01/95			4.1 J	Utilized as a final verification sample
229-AR02-5DS-112-01-FD	B16-1-4N	36 - 48	09/01/95			7.4 J	Utilized as a final verification sample, Field duplicate of 229-AR02-5DS-107-02
229-AR02-5DS-107-03	B16-1-4N	48 - 60	09/01/95			21	Utilized as a final verification sample
229-AR02-5DS-012-02	B19-1	24 - 30	08/02/95	> 25			
229-AR02-5DS-012-03	B19-1	30 - 36	08/09/95			110	
229-AR02-5DS-012-04	B19-1	36 - 42	08/12/95	< 25			
229-AR02-5DS-012-05	B19-1	60 - 66	08/21/95			110	Utilized as a final verification sample
229-AR02-5DS-090-01	B19-1-11N,1.5E	36 - 48	08/29/95			3,000	
229-AR02-5DS-090-02	B19-1-11N,1.5E	48 - 60	08/29/95			460	
229-AR02-5DS-050-01	B19-1-3.5N	42 - 48	08/17/95			1,600	
229-AR02-5DS-050-02	B19-1-3.5N	60 - 66	08/21/95			78	Utilized as a final verification sample
229-AR02-5DS-053-01	B19-1-3.5N,2.5W	12 - 24	08/19/95			5.3	
229-AR02-5DS-053-02	B19-1-3.5N,2.5W	24 - 36	08/19/95			3.8	
229-AR02-5DS-053-03	B19-1-3.5N,2.5W	36 - 42	08/21/95			50	
229-AR02-5DS-054-01-FD	B19-1-3.5N,2.5W	36 - 42	08/21/95			38	Field duplicate of 229-AR02-5DS-053-03
229-AR02-5DS-053-04	**B19-1-3.5N,2.5W**	**42 - 48**	**08/21/95**			**87**	
229-AR02-5DS-053-05	B19-1-3.5N,2.5W	48 - 60	08/21/95			3.3	
229-AR02-5DS-089-01	B19-1-3.5N,6W	36 - 48	08/29/95			0.20	Utilized as a final verification sample
229-AR02-5DS-089-02	B19-1-3.5N,6W	48 - 60	08/29/95			0.92	Utilized as a final verification sample

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AR02-5DS-008-01	B19-1-3.5S	18 - 24	07/29/95			2.5	
229-AR02-5DS-008-02	B19-1-3.5S	24 - 30	08/23/95	> 25			
229-AR02-5DS-008-03	B19-1-3.5S	36 - 42	08/23/95	> 25			
229-AR02-5DS-008-04	B19-1-3.5S	42 - 48	08/23/95	> 25			
229-AR02-5DS-008-05	B19-1-3.5S	48 - 60	08/23/95	> 25			
229-AR02-5DS-091-01	B19-1-5S,1.5E	24 - 36	08/29/95			1,300	
229-AR02-5DS-091-02	B19-1-5S,1.5E	36 - 48	08/29/95			210	
229-AR02-5DS-091-03	B19-1-5S,1.5E	48 - 60	08/29/95			310	
229-AR02-5DS-009-01	B19-1-8.5N	18 - 24	07/29/95			2.7	
229-AR02-5DS-009-02	B19-1-8.5N	24 - 36	08/19/95			1.1	
229-AR02-5DS-009-03	B19-1-8.5N	36 - 42	08/19/95			1.3	
229-AR02-5DS-009-04	B19-1-8.5N	42 - 48	08/21/95			36	
229-AR02-5DS-009-05	B19-1-8.5N	48 - 60	08/21/95			85	
229-AR02-5DS-012-01	B19-2	18 - 24	07/31/95			61	
229-AR02-5DS-108-01	B20-0.5N	24 - 36	09/01/95			ND (0.066)	Utilized as a final verification sample
229-AR02-5DS-108-02	B20-0.5N	36 - 48	09/01/95			1.2	Utilized as a final verification sample
229-AR02-5DS-113-01-FD	B20-0.5N	36 - 48	09/01/95			1.3	Utilized as a final verification sample, Field duplicate of 229-AR02-5DS-108-02
229-AR02-5DS-108-03	B20-0.5N	48 - 60	09/01/95			ND (0.066)	Utilized as a final verification sample

Notes:

J = **Estimated value**

E = Sample concentration above maximum calibration limit, actual concentration may be higher

ND (0.066) = Not Detected (method detection limit is shown in parentheses)

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Notes (cont.):

Field Duplicate = QA/QC sample used as an indicator of the precision relative to the sample matrix

Immunoassay Duplicate = QA/QC sample used as an indicator of the precision relative to the analysis procedure

1. Laboratory Samples were analyzed by Recra Environmental, Inc. (Recra - Amherst, New York).
2. Data Validation was performed by Blasland, Bouck & Lee, Inc. of Syracuse, NY using USEPA Region II Guidelines.
3. Pre- and post-remediation analytical data shown on the tables or figures (i.e., samples labeled as "Utilized as a final verification sample") were collected during the implementation of the IRM Work Plan (4/26/95 to 9/26/95). Results represent total PCBs in milligrams/kilogram (mg/kg) or parts per million (ppm). Please note the following regarding sample information displayed on figures and this table:
   - Sample ID utilized by Tennessee Gas Pipeline Company for their database and internal tracking purposes;
   - Location is used to position samples based on a surveyed grid or a previous Ecology & Environment, Inc. sample location (as surveyed by Blasland, Bouck & Lee, Inc.). See Figure 2 - Sample Location Key for further clarification regarding the method used to locate a discrete sample;
   - Sample depth refers to the distance below the original ground surface;
   - Sample date refers to the date that the sample was collected in the field;
   - Immunoassay Results obtained by Blasland, Bouck & Lee, Inc. using Ensys® PCB RISc Immunoassay Test Kits;
   - Laboratory Screening Results obtained by Recra Environmental, Inc. using the Recra Total PCB Screening Method;
   - Laboratory Method 8081 Results obtained by Recra Environmental, Inc. using USEPA SW-846 Method 8081; and
   - Laboratory Method 8081 samples that were used as final verification samples were validated.

Pipe Rack Area

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

3.3.2 Pipe Rack Area

The Pipe Rack area is located to the west of the Compressor Building. The results of prior characterization sampling in this area indicated the presence of PCBs at levels ranging from 1.3 ppm to 55 ppm. Remediation in this area was proposed because of the presence of PCBs above the cleanup goal in one sample location adjacent to the fenceline (Attachment 1) and the presence of PCBs at elevated levels in two composite samples taken from within the Pipe Rack area, east of the fenceline.

3.3.2.1 Pre-Remediation Delineation

Initially, pre-remediation sampling and analysis activities included the collection of 25 samples from a 50 ft by 50 ft grid spacing within the Pipe Rack area to further characterize the area and five samples from the adjacent fenceline area to confirm the anticipated extent of excavation presented in the IRM Work Plan. One of these samples indicated PCB levels above 25 ppm and additional samples were collected to further characterize both the fenceline area and the Pipe Rack area, east of the fenceline. This resulted in the collection of 32 additional samples and the identification of three areas to be remediated. Table 2 provides a summary of the results of pre-remediation sampling in this area. The results of pre-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 4.

3.3.2.2 Remediation and Verification

Remediation in the Pipe Rack area consisted of excavation of soils in the three identified areas to the extent estimated based on the results of pre-remediation sampling and analysis. Since there were no sensitive operations areas, excavation was performed by mechanical means.

Following excavation, verification sampling and analysis was performed. Verification sampling included the collection of five samples. Samples indicated levels less than the cleanup goal and additional excavation and sampling activities were not required. Table 2 provides a summary of the results of post-remediation sampling in this area. The results of post-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 4.

The depth of excavation in the Pipe Rack area was 6 inches for each of the three remediation areas. The total volume of soil excavated from this area is estimated to be approximately 34 cy. This total volume was disposed at the CWM disposal facility in Model City, New York.

TABLE 2
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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
PRE-REMEDIATION SAMPLES							
229-PR-4DS-090-01	A5	0 - 6	05/09/95	< 25	3.5	1.5 J	Utilized as a final verification sample
229-PR-4DS-007-01	B3	0 - 6	04/26/95	< 25	9.3	7.9	Utilized as a final verification sample
229-PR-4DS-018-01	B4	0 - 6	04/26/95	< 25	9.7	8.4	Utilized as a final verification sample
229-PR-4DS-019-01	B5	0 - 6	04/26/95	> 25	35	31	
229-PR-4DS-019-02	B5	6 - 12	05/10/95	< 25			Utilized as a final verification sample
229-PR-4DS-106-01	B5-25E	0 - 6	05/10/95	< 25			Utilized as a final verification sample
229-PR-4DS-104-01	B5-25N	0 - 6	05/10/95	> 25	14	24 J	Utilized as a final verification sample
229-PR-4DS-104-02	B5-25N	6 - 12	05/10/95	< 25			Utilized as a final verification sample
229-PR-4DS-105-01	B5-25S	0 - 6	05/10/95	< 25			Utilized as a final verification sample
229-PR-4DS-105-02	B5-25S	6 - 12	05/10/95	< 25			Utilized as a final verification sample
229-PR-4DS-107-01	B5-25W	0 - 6	05/10/95	< 25			Utilized as a final verification sample
229-PR-4DS-089-01	B6	0 - 6	05/09/95	< 25			Utilized as a final verification sample
229-PR-4DS-006-01	C3	0 - 6	04/26/95	> 25	10	8.9	Utilized as a final verification sample
229-PR-4DS-017-01	C4	0 - 6	04/26/95	< 25			Utilized as a final verification sample
229-PR-4DS-020-01	C5	0 - 6	04/26/95	< 25			Utilized as a final verification sample
229-PR-4DS-008-01	D3	0 - 6	04/26/95	< 25	2.3	2.1	Utilized as a final verification sample
229-PR-4DS-016-01	D4	0 - 6	04/26/95	< 25			Utilized as a final verification sample
229-PR-4DS-021-01	D5	0 - 6	04/26/95	< 25	1.6	5.6	Utilized as a final verification sample
229-PR-4DS-009-01	E3	0 - 6	04/26/95	< 25			Utilized as a final verification sample
229-PR-4DS-009-01D	E3	0 - 6	04/26/95	< 25			Utilized as a final verification sample, Immunoassay dup 229-PR-4DS-009-01
229-PR-4DS-022-01	E5	0 - 6	04/26/95	< 25	0.40 J	ND (1.8)	Utilized as a final verification sample
229-PR-4DS-010-01	F3	0 - 6	04/26/95	< 25	1.3	ND (1.2)	Utilized as a final verification sample

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-PR-4DS-160-01	F3-10E	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-158-01	F3-10N	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-159-01	F3-10S	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-161-01	F3-10W	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-015-01	F4	0 - 6	04/26/95	< 25			Utilized as a final verification sample
229-PR-4DS-023-01	F5	0 - 6	04/26/95	< 25			Utilized as a final verification sample
229-PR-4DS-156-01	F5-10E	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-154-01	F5-10N	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-155-01	F5-10S	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-157-01	F5-10W	0 - 6	05/12/95	> 25			
229-PR-4DS-011-01	G3	0 - 6	04/26/95	< 25			Utilized as a final verification sample
229-PR-4DS-014-01	G4	0 - 6	04/26/95	< 25	ND (1.0)	ND (0.066)	Utilized as a final verification sample
229-PR-4DS-024-01	G5	0 - 6	04/26/95	< 25			Utilized as a final verification sample
229-PR-4DS-012-01	H3	0 - 6	04/26/95	< 25	0.44 J	0.20	Utilized as a final verification sample
229-PR-4DS-164-01	H3-10E	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-162-01	H3-10N	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-163-01	H3-10S	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-165-01	H3-10W	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-013-01	H4	0 - 6	04/26/95	< 25	2.5	ND (1.9)	Utilized as a final verification sample
229-PR-4DS-025-01	H5	0 - 6	04/26/95	< 25	2.7	2.4	Utilized as a final verification sample
229-PR-4DS-152-01	H5-10E	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-150-01	H5-10N	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR-4DS-151-01	H5-10S	0 - 6	05/12/95	< 25			Utilized as a final verification sample

TABLE 2
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - PIPE RACK REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-PR-4DS-151-01D	H5-10S	0 - 6	05/12/95	< 25			Utilized as a final verification sample, Immunoassay dup 229-PR-4DS-151-01
229-PR-4DS-153-01	H5-10W	0 - 6	05/12/95	< 25			Utilized as a final verification sample
229-PR02-4DS-194-01	F5	0 - 6	07/21/95			3.0	Utilized as a final verification sample
229-PR02-4DS-192-01	F5-10N,20W	0 - 6	07/21/95			0.56	Utilized as a final verification sample
229-PR02-4DS-193-01	F5-10S,20W	0 - 6	07/21/95			0.46	Utilized as a final verification sample
229-FL-4DS-058-01	E15-1	0 - 6	04/28/95	< 25		1.6	Utilized as a final verification sample
229-FL-4DS-059-01	E15-2	0 - 6	04/28/95	< 25			Utilized as a final verification sample
229-FL-4DS-059-01D	E15-2	0 - 6	04/28/95	< 25			Utilized as a final verification sample
229-FL-4DS-060-01	E15-3	0 - 6	04/28/95	< 25			Utilized as a final verification sample
229-FL-4DS-061-01	E15-4	0 - 6	04/28/95	< 25			Utilized as a final verification sample
229-FL-4DS-067-01	E15-5	0 - 6	04/28/95	< 25		0.23 J	Utilized as a final verification sample
229-FL-4DS-101-01	E15-6	0 - 6	05/10/95	> 25			
229-FL-4DS-101-02	E15-6	6 - 12	05/11/95	< 25		9.3 J	Utilized as a final verification sample
229-FL-4DS-125-01	E15-6-10W	0 - 6	05/11/95	< 25		ND (0.066) J	Utilized as a final verification sample
229-FL-4DS-124-01	E15-6-5W	0 - 6	05/11/95	> 25			Utilized as a final verification sample
POST-REMEDIATION SAMPLES							
229-PR01-5DS-038-01	E15-6-5W	6 - 12	08/08/95			0.44	Utilized as a final verification sample
229-PR02-5DS-026-01	F5-10W	6 - 12	08/03/95			0.056	Utilized as a final verification sample
229-PR03-5DS-027-01	B5	6 - 12	08/04/95			0.34 J	Utilized as a final verification sample
229-PR03-5DS-028-01-FD	B5	6 - 12	08/04/95			0.17 J	Utilized as a final verification sample,Field duplicate of 229-PR03-5DS-027-01

TABLE 2
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - PIPE RACK REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-PR03-5DS-029-01	B5-20N	6 - 12	08/04/95			0.10 J	Utilized as a final verification sample
229-PR03-5DS-030-01-FD	B5-20N	6 - 12	08/04/95			0.071 J	Utilized as a final verification sample,Field duplicate of 229-PR03-5DS-029-01
229-PR03-5DS-031-01	B5-20S	6 - 12	08/04/95	< 25			Utilized as a final verification sample

Notes:

J = Estimated value

ND (0.066) = Not Detected (method detection limit is shown in parentheses)

Field Duplicate = QA/QC sample used as an indicator of the precision relative to the sample matrix

Immunoassay Duplicate = QA/QC sample used as an indicator of the precision relative to the analysis procedure

1. Laboratory Samples were analyzed by Recra Environmental, Inc. (Recra - Amherst, New York).
2. Data Validation was performed by Blasland, Bouck & Lee, Inc. of Syracuse, NY using USEPA Region II Guidelines.
3. Pre- and post-remediation analytical data shown on the tables or figures (i.e., samples labeled as "Utilized as a final verification sample") were collected during the implementation of the IRM Work Plan (4/26/95 to 9/26/95). Results represent total PCBs in milligrams/kilogram (mg/kg) or parts per million (ppm). Please note the following regarding sample information displayed on figures and this table:
   - Sample ID utilized by Tennessee Gas Pipeline Company for their database and internal tracking purposes;
   - Location is used to position samples based on a surveyed grid or a previous Ecology & Environment, Inc. sample location (as surveyed by Blasland, Bouck & Lee, Inc.). See Figure 2 - Sample Location Key for further clarification regarding the method used to locate a discrete sample;
   - Sample depth refers to the distance below the original ground surface;
   - Sample date refers to the date that the sample was collected in the field;
   - Immunoassay Results obtained by Blasland, Bouck & Lee, Inc. using Ensys® PCB RISc Immunoassay Test Kits;
   - Laboratory Screening Results obtained by Recra Environmental, Inc. using the Recra Total PCB Screening Method;
   - Laboratory Method 8081 Results obtained by Recra Environmental, Inc. using USEPA SW-846 Method 8081; and
   - Laboratory Method 8081 samples that were used as final verification samples were validated.

Scrap Yard Area

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

3.3.3 Scrap Yard Area

The Scrap Yard area is located to the south of the Pipe Rack area. The results of prior characterization sampling in this area indicated the presence of PCBs at levels ranging from 2.9 ppm to 32 ppm. Remediation in this area was proposed because of the presence of PCBs above the cleanup goal in one sample located approximately in the center of the roadway turn-around (Attachment 1).

3.3.3.1 Pre-Remediation Delineation

Initially, pre-remediation sampling and analysis activities included the collection of four samples to confirm the anticipated extent of excavation presented in the IRM Work Plan. None of these samples indicated PCB levels above 25 ppm. The four initial samples were centered around a previous Remedial Investigation sample location and when field relocated as part of the IRM these samples were collected from the four corners of a concrete pad located within the Scrap Yard area. However, based on field observations and discussions with station personnel, it was determined that the concrete pad was present during the Remedial Investigation sampling activities and that prior sampling had not been conducted beneath the pad. This suggested that the initial sample locations were not correctly relocated. As a result, five additional samples were collected in the open area to the south of the concrete pad to further characterize the area. One of these samples indicated PCB levels above 25 ppm. Table 3 provides a summary of the results of pre-remediation sampling in this area. The results of pre-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 5.

3.3.3.2 Remediation and Verification

Remediation in the Scrap Yard area consisted of excavation of soils to the extent estimated based on the results of pre-remediation sampling and analysis. Since there were no sensitive operations areas, excavation was performed by mechanical means.

Following excavation, verification sampling and analysis was performed. Verification sampling included the collection of two samples. Both verification samples indicated PCB levels less than the cleanup goal and additional excavation and sampling activities were not required. Table 3 provides a summary of the results of post-remediation sampling in this area. The results of post-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 5.

The depth of excavation in the Scrap Yard area was 6 inches. The total volume of soil excavated from this area is estimated to be approximately 12 cy. This total volume was disposed at the CWM disposal facility in Model City, New York.

TABLE 3
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - SCRAP YARD REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
PRE-REMEDIATION SAMPLES							
229-SY-4DS-026-01	SYG18-1	0 - 6	04/26/95	< 25	5.4	3.8	Utilized as a final verification sample
229-SY-4DS-027-01	SYG18-2	0 - 6	04/26/95	< 25	19	20	Utilized as a final verification sample
229-SY-4DS-028-01	SYG18-3	0 - 6	04/26/95	< 25	13	11	Utilized as a final verification sample
229-SY-4DS-102-01	SYG18-3-10S	0 - 6	05/10/95	< 25			Utilized as a final verification sample
229-SY-4DS-029-01	SYG18-4	0 - 6	04/26/95	< 25	8.8	10	Utilized as a final verification sample
229-SY-4DS-103-01	SYG18-4-10S	0 - 6	05/10/95	< 25			Utilized as a final verification sample
229-SY-4DS-144-01	SYG18-5	0 - 6	05/12/95		68 E		
229-SY01-4DS-187-01	SYG-18-3-20S	0 - 6	07/21/95			1.6	Utilized as a final verification sample
229-SY01-4DS-188-01	SYG-18-4-20S	0 - 6	07/21/95			0.82	Utilized as a final verification sample
POST-REMEDIATION SAMPLES							
229-SY01-5DS-035-01	SYG18-5	6 - 12	08/07/95			0.13	Utilized as a final verification sample
229-SY01-5DS-036-01	SYG18-5-10N	6 - 12	08/07/95			3.1	Utilized as a final verification sample

(See Page 2 for Notes)

TABLE 3
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - SCRAP YARD REMEDIATION AREA

Notes:

E = Sample concentration above maximum calibration limit, actual concentration may be higher

1. Laboratory Samples were analyzed by Recra Environmental, Inc. (Recra - Amherst, New York).
2. Data Validation was performed by Blasland, Bouck & Lee, Inc. of Syracuse, NY using USEPA Region II Guidelines.
3. Pre- and post-remediation analytical data shown on the tables or figures (i.e., samples labeled as "Utilized as a final verification sample") were collected during the implementation of the IRM Work Plan (4/26/95 to 9/26/95). Results represent total PCBs in milligrams/kilogram (mg/kg) or parts per million (ppm). Please note the following regarding sample information displayed on figures and this table:
   - Sample ID utilized by Tennessee Gas Pipeline Company for their database and internal tracking purposes;
   - Location is used to position samples based on a surveyed grid or a previous Ecology & Environment, Inc. sample location (as surveyed by Blasland, Bouck & Lee, Inc.). See Figure 2 - Sample Location Key for further clarification regarding the method used to locate a discrete sample;
   - Sample depth refers to the distance below the original ground surface;
   - Sample date refers to the date that the sample was collected in the field;
   - Immunoassay Results obtained by Blasland, Bouck & Lee, Inc. using Ensys® PCB RISc Immunoassay Test Kits;
   - Laboratory Screening Results obtained by Recra Environmental, Inc. using the Recra Total PCB Screening Method;
   - Laboratory Method 8081 Results obtained by Recra Environmental, Inc. using USEPA SW-846 Method 8081; and
   - Laboratory Method 8081 samples that were used as final verification samples were validated.

Compressor Building Area

BLASLAND, BOUCK & LEE, INC.
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3.3.4 Compressor Building Area

The Compressor Building is located to the southwest of the ART area. The results of prior characterization sampling in this area indicated the presence of PCBs at levels ranging from 2.7 ppm to 2,800 ppm. Remediation in this area was proposed because of the presence of PCBs above the cleanup goal in two sample locations, one off the northwest corner of the Compressor Building and one off the southeast corner of the Compressor Building (Attachment 1).

3.3.4.1 Pre-Remediation Delineation

Initially, pre-remediation sampling and analysis activities included the collection of eight samples (five from the northwest corner and three from the southeast corner) to confirm the anticipated extent of excavation presented in the IRM Work Plan. None of these samples indicated PCB levels above 25 ppm. Since the exact location of the prior sample off the northwest corner of the Compressor Building was not certain, four additional samples were collected to further characterize the area. Two of these samples indicated PCB levels above 25 ppm. Table 4 provides a summary of the results of pre-remediation sampling in these areas. The results of pre-remediation sampling and analysis that were utilized as final verification samples are shown on Figures 6 and 7.

3.3.4.2 Remediation and Verification

Remediation in the two Compressor Building areas consisted of excavation of soils to the extent estimated based on the results of pre-remediation sampling and analysis. Due to the proximity of the building and other physical obstacles, excavation was performed by manual means for the area off the southeast corner of the building. Since there were no sensitive operations areas, excavation was performed by mechanical means for the area off the northwest corner of the building.

Following excavation, verification sampling and analysis was performed. Verification sampling included the collection of three samples. All of the samples indicated PCB levels less than the cleanup goal and additional excavation and sampling activities were not required. Table 4 provides a summary of the results of post-remediation sampling in this area. The results of post-remediation sampling and analysis that were utilized as final verification samples are shown on Figures 6 and 7.

The depth of excavation in the Compressor Building area was 6 inches for the remediation area off the northwest corner of the building and 18 inches for the remediation area off the southeast corner of the building. The total volume of soil excavated from the these areas is estimated to be approximately 18 cy. This total volume was disposed at the CWM disposal facility in Model City, New York.

TABLE 4
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - COMPRESSOR BUILDING REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
PRE-REMEDIATION SAMPLES							
229-CB01-4DS-001-01	C08-1	0 - 6	04/26/95	< 25	ND (1.0)	0.054	Utilized as a final verification sample
229-CB01-4DS-002-01	C08-2	0 - 6	04/26/95	< 25	ND (1.0)	0.056	Utilized as a final verification sample
229-CB01-4DS-003-01	C08-3	0 - 6	04/26/95	< 25	0.32 J	0.40	Utilized as a final verification sample
229-CB01-4DS-004-01	C08-4	0 - 6	04/26/95	< 25	ND (1.0)	ND (0.066)	Utilized as a final verification sample
229-CB01-4DS-005-01	C08-5	0 - 6	04/26/95	> 25	2.1	3.2	Utilized as a final verification sample
229-CB01-4DS-092-01	C08-5-10E	0 - 6	05/09/95	> 25			
229-CB01-4DS-091-01	C08-5-10N	0 - 6	05/09/95	< 25			Utilized as a final verification sample
229-CB01-4DS-093-01	C08-5-10S	0 - 6	05/09/95	> 25			
229-CB01-4DS-094-01	C08-5-10W	0 - 6	05/09/95	< 25			Utilized as a final verification sample
229-CB02-4DS-055-01	D15-1	0 - 6	04/28/95	< 25		0.050	Utilized as a final verification sample
229-CB02-4DS-055-02	D15-1	6 - 18	05/10/95	< 25		ND (0.066) J	Utilized as a final verification sample
229-CB02-4DS-056-01	D15-2	0 - 6	04/28/95	< 25		0.32	Utilized as a final verification sample
229-CB02-4DS-056-02	D15-2	6 - 18	05/10/95	< 25		0.91 J	Utilized as a final verification sample
229-CB02-4DS-197-01	D15-2-5N	0 - 6	07/21/95			5.3	Utilized as a final verification sample
229-CB02-4DS-057-01	D15-3	0 - 6	04/28/95	< 25			Utilized as a final verification sample
POST-REMEDIATION SAMPLES							
229-CB01-5DS-039-01	C08-5-10E	6 - 12	08/08/95			0.13 J	Utilized as a final verification sample
229-CB01-5DS-041-01-FD	C08-5-10E	6 - 12	08/08/95			0.23 J	Utilized as a final verification sample, Field duplicate of 229-CB01-5DS-039-01
229-CB01-5DS-040-01	C08-5-10S	6 - 12	08/08/95			0.27	Utilized as a final verification sample
229-CB02-5DS-048-01	D15	18 - 24	08/10/95			6.7	Utilized as a final verification sample

TABLE 4
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - COMPRESSOR BUILDING REMEDIATION AREA

Notes:

J = Estimated value

ND (0.066) = Not Detected (method detection limit is shown in parentheses)

Field Duplicate = QA/QC sample used as an indicator of the precision relative to the sample matrix

Immunoassay Duplicate = QA/QC sample used as an indicator of the precision relative to the analysis procedure

1. Laboratory Samples were analyzed by Recra Environmental, Inc. (Recra - Amherst, New York).
2. Data Validation was performed by Blasland, Bouck & Lee, Inc. of Syracuse, NY using USEPA Region II Guidelines.
3. Pre- and post-remediation analytical data shown on the tables or figures (i.e., samples labeled as "Utilized as a final verification sample") were collected during the implementation of the IRM Work Plan (4/26/95 to 9/26/95). Results represent total PCBs in milligrams/kilogram (mg/kg) or parts per million (ppm). Please note the following regarding sample information displayed on figures and this table:
   - Sample ID utilized by Tennessee Gas Pipeline Company for their database and internal tracking purposes;
   - Location is used to position samples based on a surveyed grid or a previous Ecology & Environment, Inc. sample location (as surveyed by Blasland, Bouck & Lee, Inc.). See Figure 2 - Sample Location Key for further clarification regarding the method used to locate a discrete sample;
   - Sample depth refers to the distance below the original ground surface;
   - Sample date refers to the date that the sample was collected in the field;
   - Immunoassay Results obtained by Blasland, Bouck & Lee, Inc. using Ensys® PCB RISc Immunoassay Test Kits;
   - Laboratory Screening Results obtained by Recra Environmental, Inc. using the Recra Total PCB Screening Method;
   - Laboratory Method 8081 Results obtained by Recra Environmental, Inc. using USEPA SW-846 Method 8081; and
   - Laboratory Method 8081 samples that were used as final verification samples were validated.

Shop Building Area

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

3.3.5 Shop Building Area

The Shop Building area is located to the north of the ART area. The results of prior soil characterization sampling in this area indicated the presence of PCBs at levels ranging from 36.9 ppm to 640 ppm. Remediation in this area was proposed because of the presence of PCBs above the cleanup goal in two sample locations off the northwest corner of the Shop Building (Attachment 1).

3.3.5.1 Pre-Remediation Delineation

Initially, pre-remediation sampling and analysis activities included the collection of 20 samples to confirm the anticipated extent of excavation presented in the IRM Work Plan. Three of these samples indicated PCB levels above 25 ppm. This combined with sampling to verify the proposed depth of excavation, resulted in the collection of six additional samples. Table 5 provides a summary of the results of pre-remediation sampling in this area. The results of pre-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 8.

3.3.5.2 Remediation and Verification

Remediation in the Shop Building area initially consisted of excavation of soils to the extent estimated based on the results of pre-remediation sampling and analysis. Since there were no sensitive operations areas, excavation was performed by mechanical means.

Initially excavation was performed to the anticipated extent of remediation; however, discolored soil was observed and excavation was continued until discolored soil was no longer observed and then verification sampling and analysis were then performed. Verification sampling included the collection of six samples. These samples indicated PCB levels less than the cleanup goal. Table 5 provides a summary of the results of post-remediation sampling in this area. The results of post-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 8.

The depth of excavation in the Shop Building area was 84 inches. The total volume of soil excavated from this area is estimated to be approximately 42 cy. This total volume was disposed at the CWM disposal facility in Model City, New York.

TABLE 5
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - SHOP BUILDING REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
PRE-REMEDIATION SAMPLES							
229-SB-4DS-068-01	SB26-1	0 - 12	05/01/95	> 25	26		
229-SB-4DS-068-02	SB26-1	12 - 24	05/01/95	> 25	12		
229-SB-4DS-068-03	SB26-1	24 - 36	05/01/95	> 25	16		
229-SB-4DS-095-03	SB26-1	24 - 36	05/01/95		17		Field duplicate of 229-SB-4DS-068-03
229-SB-4DS-068-04	SB26-1	36 - 48	05/01/95	> 25	73 E		
229-SB-4DS-068-05	SB26-1	48 - 60	05/01/95	> 25	49		
229-SB-4DS-117-01	SB26-1-10N	0 - 12	05/11/95	< 25			Utilized as a final verification sample
229-SB-4DS-108-01	SB26-1-5N	0 - 12	05/10/95	> 25		13	Utilized as a final verification sample
229-SB-4DS-118-01	SB26-1-5N,5E	0 - 12	05/11/95	< 25			Utilized as a final verification sample
229-SB-4DS-119-01	SB26-1-5N,5W	0 - 12	05/11/95	> 25		8.6	Utilized as a final verification sample
229-SB-4DS-069-01	SB26-2	0 - 12	05/01/95	> 25	18	20	Utilized as a final verification sample
229-SB-4DS-069-02	SB26-2	12 - 24	05/01/95	< 25			Utilized as a final verification sample
229-SB-4DS-069-03	SB26-2	24 - 36	05/01/95	< 25			Utilized as a final verification sample
229-SB-4DS-069-04	SB26-2	36 - 48	05/01/95	< 25			Utilized as a final verification sample
229-SB-4DS-069-05	SB26-2	48 - 60	05/01/95	< 25			Utilized as a final verification sample
229-SB-4DS-109-01	SB26-2-5W	0 - 12	05/10/95	< 25			Utilized as a final verification sample
229-SB-4DS-071-01	SB26-3	0 - 12	05/01/95	> 25	50	23	Utilized as a final verification sample
229-SB-4DS-071-02	SB26-3	12 - 24	05/01/95	< 25		0.34	Utilized as a final verification sample
229-SB-4DS-071-03	SB26-3	24 - 36	05/01/95	< 25		0.51	Utilized as a final verification sample
229-SB-4DS-071-04	SB26-3	36 - 48	05/01/95	< 25		0.64	Utilized as a final verification sample
229-SB-4DS-071-05	SB26-3	48 - 60	05/01/95	< 25		0.14	Utilized as a final verification sample

TABLE 5
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - SHOP BUILDING REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-SB-4DS-070-01	SB26-4	0 - 12	05/01/95	> 25	14	21	Utilized as a final verification sample
229-SB-4DS-070-02	SB26-4	12 - 24	05/01/95	< 25			Utilized as a final verification sample
229-SB-4DS-070-03	SB26-4	24 - 36	05/01/95	< 25			Utilized as a final verification sample
229-SB-4DS-070-03D	SB26-4	24 - 36	05/01/95	< 25			Utilized as a final verification sample;Immunoassay Duplicate
229-SB-4DS-070-04	SB26-4	36 - 48	05/01/95	< 25			Utilized as a final verification sample
229-SB-4DS-070-05	SB26-4	48 - 60	05/01/95	< 25			Utilized as a final verification sample
229-SB-4DS-110-01	SB26-4-5S	0 - 12	05/10/95	< 25			Utilized as a final verification sample
POST-REMEDIATION SAMPLES							
229-SB01-5DS-051-01	SB26-1-5N	12 - 24	08/17/95	< 25		0.11	Utilized as a final verification sample
229-SB01-5DS-051-02	SB26-1-5N	24 - 36	08/17/95	< 25		ND (0.066)	Utilized as a final verification sample
229-SB01-5DS-051-03	SB26-1-5N	36 - 48	08/18/95			0.38	Utilized as a final verification sample
229-SB01-5DS-051-04	SB26-1-5N	48 - 60	08/18/95			0.12	Utilized as a final verification sample
229-SB01-5DS-051-05	SB26-1-5N	60 - 78	08/18/95			0.20	Utilized as a final verification sample
229-SB01-5DS-052-01	SB26-2.5W	84 - 90	08/18/95			ND (0.066)	Utilized as a final verification sample

Notes:

E = Sample concentration above maximum calibration limit, actual concentration may be higher

ND (0.066) = Not Detected (method detection limit is shown in parentheses)

Field Duplicate = QA/QC sample used as an indicator of the precision relative to the sample matrix

Immunoassay Duplicate = QA/QC sample used as an indicator of the precision relative to the analysis procedure

1. Laboratory Samples were analyzed by Recra Environmental, Inc. (Recra - Amherst, New York).

2. Data Validation was performed by Blasland, Bouck & Lee, Inc. of Syracuse, NY using USEPA Region II Guidelines.

TABLE 5
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - SHOP BUILDING REMEDIATION AREA

Notes (cont.):

3. Pre- and post-remediation analytical data shown on the tables or figures (i.e., samples labeled as "Utilized as a final verification sample") were collected during the implementation of the IRM Work Plan (4/26/95 to 9/26/95). Results represent total PCBs in milligrams/kilogram (mg/kg) or parts per million (ppm). Please note the following regarding sample information displayed on figures and this table:
   - Sample ID utilized by Tennessee Gas Pipeline Company for their database and internal tracking purposes;
   - Location is used to position samples based on a surveyed grid or a previous Ecology & Environment, Inc. sample location (as surveyed by Blasland, Bouck & Lee, Inc.). See Figure 2 - Sample Location Key for further clarification regarding the method used to locate a discrete sample;
   - Sample depth refers to the distance below the original ground surface;
   - Sample date refers to the date that the sample was collected in the field;
   - Immunoassay Results obtained by Blasland, Bouck & Lee, Inc. using Ensys® PCB RISc Immunoassay Test Kits;
   - Laboratory Screening Results obtained by Recra Environmental, Inc. using the Recra Total PCB Screening Method;
   - Laboratory Method 8081 Results obtained by Recra Environmental, Inc. using USEPA SW-846 Method 8081; and
   - Laboratory Method 8081 samples that were used as final verification samples were validated.

Auxiliary Building Area

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

3.3.6 Auxiliary Building Area

The Auxiliary Building area is located on the east side of the ART area. The results of prior characterization sampling in this area indicated the presence of PCBs at levels ranging from 1.1 ppm to 167 ppm. Remediation in this area was proposed because of the presence of PCBs above the cleanup goal in eight sample locations, seven off the east side of the building and one off the south side of the building (Attachment 1).

3.3.6.1 Pre-Remediation Delineation

Initially, pre-remediation sampling and analysis activities included the collection of 15 samples to confirm the anticipated extent of excavation presented in the IRM Work Plan. Four of these samples indicated PCB levels above 25 ppm. This combined with sampling to verify the proposed depth of excavation, resulted in the collection of 83 additional samples. Table 6 provides a summary of the results of pre-remediation sampling in this area. The results of pre-remediation sampling and analysis that were utilized as final verification samples are shown on Figures 9 and 10.

3.3.6.2 Remediation and Verification

Remediation in the Auxiliary Building area initially consisted of excavation of soils to the extent estimated based on the results of pre-remediation sampling and analysis. Due to the proximity of the building foundation, piping, and other sensitive operations areas, excavation was primarily performed by manual means.

Following excavation, verification sampling and analysis was performed. Verification sampling initially included the collection of 30 samples. Nineteen of the samples indicated PCB levels less than the cleanup goal. However, 10 of the samples indicated PCB levels greater than 25 ppm and additional excavation and sampling activities were conducted until verification sampling demonstrated PCB levels less than the cleanup criteria. Forty-five additional post-remediation samples were collected in this area. Table 6 provides a summary of the results of post-remediation sampling in this area. The results of post-remediation sampling and analysis that were utilized as final verification samples are shown on Figures 9 and 10.

Due to a laboratory miscalculation, there is one location in the Auxiliary Building area where a final sidewall sample indicates that the remaining soil is greater than the PCB cleanup level [sample location H4-1N,5E (24" to 36") at a concentration of 29 ppm]. During remediation activities this sample was reported as non-detect and as a result, it was believed that the PCB cleanup goals had been achieved and the excavation was backfilled. However, when the final laboratory report was received subsequent to the completion of remediation activities, it was determined that the laboratory had mistakenly reported this sample result and it should have been reported as 29 ppm. The final sidewall sample below this location is less than the PCB cleanup goal [H4-1N,5E (36" to 48") at a concentration of 18 ppm] and in the adjacent excavation area the final bottom sample, located 1 foot to the north, is also less than the PCB cleanup goal [H4-2N,5E (24" to 30") at a

concentration of 1.1 ppm]. Therefore, it appears that this is an isolated area with a small soil volume that is slightly greater than the PCB cleanup goal. Further, the soil is at a depth greater than two feet and located beneath a sidewalk (See Figure 9). Based on the above information, additional excavation activities are not warranted.

The depth of the excavation in the Auxiliary Building area ranged from 6 to 48 inches. The total volume of soil excavated from this area is estimated to be approximately 110 cy. This total volume was disposed at the CWM disposal facility in Model City, New York.

TABLE 6
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PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - AUXILIARY BUILDING REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
PRE-REMEDIATION SAMPLES							
229-AB01-4DS-072-01	A5	0 - 6	05/08/95	< 25			Utilized as a final verification sample
229-AB01-4DS-030-01	B5	0 - 6	04/27/95	> 25	78	92	
229-AB01-4DS-141-01	B5-5N	0 - 6	05/11/95	< 25			Utilized as a final verification sample
229-AB01-4DS-178-01	B5-5N,5E	0 - 6	07/21/95			2.1	Utilized as a final verification sample
229-AB01-4DS-178-02	B5-5N,5E	6 - 12	07/21/95			0.10	Utilized as a final verification sample
229-AB01-4DS-142-01	B5-5S	0 - 6	05/11/95	< 25		2.2	Utilized as a final verification sample
229-AB01-4DS-179-01	B5-5S,5E	0 - 6	07/21/95			3.8	Utilized as a final verification sample
229-AB01-4DS-179-02	B5-5S,5E	6 - 12	07/21/95			0.51 J	Utilized as a final verification sample
229-AB01-4DS-191-02-FD	B5-5S,5E	6 - 12	07/21/95			0.35	Utilized as a final verification sample, Field duplicate of 229-AB01-4DS-179-02
229-AB01-4DS-031-01	B6	0 - 6	04/27/95	> 25	16	21	Utilized as a final verification sample
229-AB01-4DS-180-01	B6	6 - 18	07/21/95			1.1	Utilized as a final verification sample
229-AB01-4DS-180-02	B6	18 - 30	07/21/95			0.47	Utilized as a final verification sample
229-AB01-4DS-032-01	C5	0 - 6	04/27/95	< 25	3.8	2.9	Utilized as a final verification sample
229-AB01-4DS-073-01	C6	0 - 6	05/08/95	> 25			
229-AB01-4DS-140-01	C6-5N	0 - 6	05/11/95	> 25	55 E		
229-AB01-4DS-140-02	C6-5N	6 - 18	05/12/95	> 25			
229-AB01-4DS-141-02	C6-5N	6 - 12	05/12/95			0.10	
229-AB01-4DS-033-01	C7	0 - 6	04/27/95	< 25	ND (1.0)	0.12	Utilized as a final verification sample
229-AB01-4DS-034-01	D6	0 - 6	04/27/95	< 25	24	11	Utilized as a final verification sample
229-AB01-4DS-181-01	D6	6 - 18	07/21/95			1.0	Utilized as a final verification sample
229-AB01-4DS-181-02	D6	18 - 30	07/21/95			1.8	Utilized as a final verification sample
229-AB01-4DS-035-01	E5	0 - 6	04/27/95	< 25	7.8	7.9	Utilized as a final verification sample

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AB01-4DS-182-01	E5	6 - 12	07/21/95			16	Utilized as a final verification sample
229-AB01-4DS-182-02	E5	18 - 30	07/21/95			1.2	Utilized as a final verification sample
229-AB01-4DS-074-01	E6	0 - 6	05/08/95	> 25			
229-AB01-4DS-183-01	E6-5N	6 - 18	07/21/95			5.6	Utilized as a final verification sample
229-AB01-4DS-183-02	E6-5N	18 - 30	07/21/95			4.2	Utilized as a final verification sample
229-AB01-4DS-139-01	E6-5S	0 - 6	05/11/95	< 25			Utilized as a final verification sample
229-AB01-4DS-139-02	E6-5S	6 - 18	05/12/95			0.30	Utilized as a final verification sample
229-AB01-4DS-184-01	E6-5S	6 - 18	07/21/95			2.2	Utilized as a final verification sample
229-AB01-4DS-184-02	E6-5S	18 - 30	07/21/95			0.81	Utilized as a final verification sample
229-AB01-4DS-075-01	F5	0 - 6	05/08/95	> 25			
229-AB01-4DS-076-01	F6	0 - 6	05/08/95	< 25			Utilized as a final verification sample
229-AB01-4DS-138-01	F6-5S	0 - 6	05/11/95	< 25		4.0	Utilized as a final verification sample
229-AB01-4DS-138-02	F6-5S	6 - 18	05/12/95	< 25			Utilized as a final verification sample
229-AB01-4DS-138-03	F6-5S	18 - 30	05/12/95	< 25			Utilized as a final verification sample
229-AB01-4DS-137-01	F6-5W	0 - 6	05/11/95	< 25			Utilized as a final verification sample
229-AB01-4DS-137-02	F6-5W	6 - 18	05/12/95	< 25		0.13	Utilized as a final verification sample
229-AB01-4DS-128-01	G2	0 - 6	05/11/95	< 25			Utilized as a final verification sample
229-AB01-4DS-116-01	G3	0 - 6	05/11/95	> 25	200 E		
229-AB01-4DS-081-01	G4	0 - 6	05/08/95	> 25			
229-AB01-4DS-176-01	G4	6 - 12	07/21/95			1,200	
229-AB01-4DS-176-02	G4	12 - 18	07/21/95			240	
229-AB01-4DS-036-01	G5	0 - 6	04/27/95	> 25	96	72	
229-AB01-4DS-077-01	G6	0 - 6	05/08/95	< 25			Utilized as a final verification sample

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AB01-4DS-136-01	G6-5W	0 - 6	05/11/95	> 25	60 E		Utilized as a final verification sample
229-AB01-4DS-136-02	G6-5W	6 - 18	05/12/95	< 25		0.41	Utilized as a final verification sample
229-AB01-4DS-136-03	G6-5W	18 - 30	05/12/95	< 25			Utilized as a final verification sample
229-AB01-4DS-098-01	G7	0 - 6	05/10/95	> 25			Utilized as a final verification sample
229-AB01-4DS-203-01	G7-5E	0 - 6	07/27/95			210	
229-AB01-4DS-185-01	G7-5N	0 - 6	07/21/95			40	
229-AB01-4DS-225-01	G7-9E	0 - 6	08/18/95	< 25		2.8	Utilized as a final verification sample
229-AB01-4DS-115-01	G8	0 - 6	05/11/95	< 25			Utilized as a final verification sample
229-AB01-4DS-177-01	H2-2.5W	0 - 6	07/21/95			0.22	Utilized as a final verification sample
229-AB01-4DS-177-02	H2-2.5W	6 - 12	07/21/95			1.2	Utilized as a final verification sample
229-AB01-4DS-190-02-FD	H2-2.5W	6 - 12	07/21/95			0.92	Utilized as a final verification sample, Field duplicate of 229-AB01-4DS-177-02
229-AB01-4DS-129-01	H3	0 - 6	05/11/95	> 25			
229-AB01-4DS-039-01	H4	0 - 6	04/27/95	< 25	31	21	
229-AB01-4DS-078-01	H5	0 - 6	05/08/95	> 25			
229-AB01-4DS-037-01	H6	0 - 6	04/27/95	> 25	8.3	10	Utilized as a final verification sample
229-AB01-4DS-135-01	H6-5W	0 - 6	05/11/95	> 25	69 E		Utilized as a final verification sample
229-AB01-4DS-135-02	H6-5W	6 - 18	05/12/95	< 25		19	Utilized as a final verification sample
229-AB01-4DS-135-03	H6-5W	18 - 30	05/12/95	< 25			Utilized as a final verification sample
229-AB01-4DS-038-01	H7	0 - 6	04/27/95	> 25	73 E	99	
229-AB01-4DS-038-01D	H7	0 - 6	04/27/95	> 25			Immunoassay duplicate of 229-AB01-4DS-038-01
229-AB01-4DS-038-02	H7	6 - 12	05/12/95		3.9		Utilized as a final verification sample
229-AB01-4DS-038-03	H7	12 - 18	05/12/95			0.76	Utilized as a final verification sample
229-AB01-4DS-134-01	H7-5E	0 - 6	05/11/95	< 25			Utilized as a final verification sample

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AB01-4DS-134-02	H7-5E	6 - 12	05/12/95	< 25		0.060	Utilized as a final verification sample
229-AB01-4DS-133-01	H7-5N	0 - 6	05/11/95	< 25		0.27	Utilized as a final verification sample
229-AB01-4DS-175-01	H7-5N,5E	0 - 6	07/21/95			1.2	Utilized as a final verification sample
229-AB01-4DS-079-01	H8	0 - 6	05/08/95	< 25			Utilized as a final verification sample
229-AB01-4DS-111-01	I4	0 - 6	05/10/95	< 25		1.5 J	Utilized as a final verification sample
229-AB01-4DS-111-02	I4	6 - 12	05/11/95	< 25		0.22	Utilized as a final verification sample
229-AB01-4DS-146-02	I4	6 - 12	05/11/95			0.19	Utilized as a final verification sample,Field duplicate of 229-AB01-4DS-111-02
229-AB01-4DS-040-01	I5	0 - 6	04/27/95	< 25	0.74 J	0.83	Utilized as a final verification sample
229-AB01-4DS-040-02	I5	6 - 12	05/08/95	< 25	ND (1.0)	ND (0.066) J	Utilized as a final verification sample
229-AB01-4DS-096-02	I5	6 - 12	05/08/95		ND (1.0)	ND (0.066) J	Utilized as a final verification sample, Field duplicate of 229-AB01-4DS-040-02
229-AB01-4DS-080-01	I7	0 - 6	05/08/95	< 25			Utilized as a final verification sample
229-AB01-4DS-041-01	J4	0 - 6	04/27/95	< 25	1.0	0.71	Utilized as a final verification sample
229-AB01-4DS-041-02	J4	6 - 12	05/08/95	< 25	ND (1.0)	0.49 J	Utilized as a final verification sample
229-AB02-4DS-042-01	A09-1	0 - 6	04/27/95	< 25			
229-AB02-4DS-121-01	A09-1-10W	0 - 6	08/12/95	< 25		27	
229-AB02-4DS-186-01	A09-1-10W,5S	0 - 6	07/21/95			29	
229-AB02-4DS-202-01	A09-1-10W,5S,2.5SW	0 - 6	07/27/95			320	
229-AB02-4DS-207-01	A09-1-10W-9S	0 - 6	08/09/95	< 25			Utilized as a final verification sample
229-AB02-4DS-212-01	A09-1-14W	0 - 6	08/10/95	< 25			Utilized as a final verification sample
229-AB02-4DS-211-01	A09-1-14W-13S	0 - 6	08/12/95	< 25		1.9	Utilized as a final verification sample
229-AB02-4DS-205-01	A09-1-14W-5S	0 - 6	08/09/95	> 25			
229-AB02-4DS-206-01	A09-1-14W-9S	0 - 6	08/09/95	> 25			
229-AB02-4DS-213-01	A09-1-18W	0 - 6	08/12/95	< 25		0.31	

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AB02-4DS-210-01	A09-1-18W-13S	0 - 6	08/09/95	< 25			Utilized as a final verification sample
229-AB02-4DS-208-01	A09-1-18W-5S	0 - 6	08/09/95	> 25			
229-AB02-4DS-209-01	A09-1-18W-9S	0 - 6	08/12/95	< 25		3.5	Utilized as a final verification sample
229-AB02-4DS-214-01	A09-1-22W,5S	0 - 6	08/10/95	< 25			Utilized as a final verification sample
229-AB02-4DS-222-01	A09-1-3N,10W	0 - 6	08/16/95			4.7	Utilized as a final verification sample
229-AB02-4DS-223-01	A09-1-3N,14W	0 - 6	08/16/95	< 25			Utilized as a final verification sample
229-AB02-4DS-224-01	A09-1-3N,18W	0 - 6	08/16/95	< 25			Utilized as a final verification sample
229-AB02-4DS-100-01	A09-1-5S	0 - 6	05/10/95	< 25		1.1	Utilized as a final verification sample
229-AB02-4DS-100-01D	A09-1-5S	0 - 6	05/10/95	< 25			Utilized as a final verification sample, Immuno. dup. of 229-AB02-4DS-100-01
229-AB02-4DS-099-01	A09-1-5W	0 - 6	05/10/95	> 25			
229-AB02-4DS-220-01-FD	A09-1-6W,5S	0 - 6	08/12/95			2.8	Utilized as a final verification sample, Field duplicate of 229-AB02-4DS-204-01
229-AB02-4DS-204-01	A09-1-6W-5S	0 - 6	08/12/95	< 25		2.3	Utilized as a final verification sample
229-AB02-4DS-043-01	A09-2	0 - 6	04/27/95	< 25			Utilized as a final verification sample
229-AB02-4DS-044-01	A09-3	0 - 6	04/27/95	< 25	ND (1.0)	0.30	Utilized as a final verification sample
POST-REMEDIATION SAMPLES							
229-AB01-5DS-061-01	B5	12 - 18	08/24/95			0.75 J	Utilized as a final verification sample
229-AB01-5DS-062-01-FD	B5	12 - 18	08/24/95			1.5 J	Utilized as a final verification sample, Field duplicate of 229-AB01-5DS-061-01
229-AB01-5DS-060-01	B6	6 - 18	08/23/95			0.36	Utilized as a final verification sample
229-AB01-5DS-060-02	B6	18 - 24	08/23/95			0.090	Utilized as a final verification sample
229-AB01-5DS-058-01	C6	24 - 30	08/23/95			12	Utilized as a final verification sample
229-AB01-5DS-059-01	C6-3E	4 - 18	08/23/95			0.20	Utilized as a final verification sample

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AB01-5DS-059-02	C6-3E	18 - 24	08/23/95			ND (0.066)	Utilized as a final verification sample
229-AB01-5DS-063-01	E6	24 - 30	08/24/95			5.6	Utilized as a final verification sample
229-AB01-5DS-064-01	F5	24 - 30	08/24/95			47	
229-AB01-5DS-064-02	F5	30 - 36	08/26/95			180	
229-AB01-5DS-064-03	F5	36 - 42	08/30/95			9.2	Utilized as a final verification sample
229-AB01-5DS-064-04	F5	42 - 48	08/31/95	< 25			Utilized as a final verification sample
229-AB01-5DS-085-01	F5-2S	24 - 30	08/26/95			35	
229-AB01-5DS-083-01	F5-5N,2W	24 - 30	08/26/95	< 25			
229-AB01-5DS-100-01	F5-5S,2E	24 - 36	08/30/95			6.5	Utilized as a final verification sample
229-AB01-5DS-084-01	F5-5S,2W	24 - 30	08/26/95	< 25			Utilized as a final verification sample
229-AB01-5DS-086-01	F5-7N	24 - 30	08/26/95			490	
229-AB01-5DS-065-01	F6-2.5W,1S	0 - 6	08/24/95			8.7	Utilized as a final verification sample
229-AB01-5DS-065-02	F6-2.5W,1S	6 - 18	08/24/95			0.23	Utilized as a final verification sample
229-AB01-5DS-065-03	F6-2.5W,1S	18 - 24	08/24/95			ND (0.066)	Utilized as a final verification sample
229-AB01-5DS-098-01	G3-13N	0 - 12	08/30/95			100	
229-AB01-5DS-098-02	G3-13N	12 - 24	08/30/95			2.2	Utilized as a final verification sample
229-AB01-5DS-098-03	G3-13N	24 - 30	08/30/95			1.6	Utilized as a final verification sample
229-AB01-5DS-098-04	G3-13N	30 - 48	08/31/95			0.034	Utilized as a final verification sample
229-AB01-5DS-081-01	G3-5N	12 - 18	08/26/95			1,100	
229-AB01-5DS-081-02	G3-5N	30 - 36	08/30/95	> 25			
229-AB01-5DS-081-03	G3-5N	48 - 54	08/31/95	< 25		1.4	Utilized as a final verification sample
229-AB01-5DS-081-04	G3-5N	54 - 60	08/31/95	< 25			Utilized as a final verification sample
229-AB01-5DS-105-01	G3-5N,6W	24 - 36	08/31/95	< 25		0.36	Utilized as a final verification sample

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Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AB01-5DS-105-02	G3-5N,6W	36 - 48	08/31/95	< 25		0.12	Utilized as a final verification sample
229-AB01-5DS-069-01	G4-5N	24 - 30	08/25/95			260	
229-AB01-5DS-069-02	G4-5N	36 - 42	08/29/95			50	
229-AB01-5DS-096-01-FD	G4-5N	36 - 42	08/29/95			56	Field duplicate of 229-AB01-5DS-069-02
229-AB01-5DS-069-03	G4-5N	48 - 54	08/31/95	< 25		6.0	Utilized as a final verification sample
229-AB01-5DS-069-04	G4-5N	54 - 60	08/31/95	< 25			Utilized as a final verification sample
229-AB01-5DS-073-01	G4-5N,3.5W	12 - 24	08/25/95			6.2	
229-AB01-5DS-073-02	G4-5N,3.5W	24 - 36	08/29/95			2.6	
229-AB01-5DS-092-01	G4-6N,1E	24 - 36	08/29/95			80	
229-AB01-5DS-099-01	G5-2E	24 - 36	08/30/95	> 25		240	
229-AB01-5DS-075-01	G5-3N	24 - 36	08/25/95			14	
229-AB01-5DS-068-01	G5-3N,2.5W	36 - 42	08/25/95			2.5	Utilized as a final verification sample
229-AB01-5DS-074-01	G5-3N,5W	24 - 36	08/25/95			200	
229-AB01-5DS-066-01	G5-5E,5N	24 - 30	08/25/95			31	
229-AB01-5DS-066-02	G5-5E,5N	30 - 36	08/29/95			57	
229-AB01-5DS-066-03	G5-5E,5N	36 - 42	08/31/95			2.7	Utilized as a final verification sample
229-AB01-5DS-110-01	G5-5S,4E	24 - 36	09/01/95			1.3	Utilized as a final verification sample
229-AB01-5DS-070-01	G6-5N	6 - 18	08/25/95			42	
229-AB01-5DS-070-02	G6-5N	18 - 24	08/25/95			23	
229-AB01-5DS-070-03	G6-5N	24 - 36	08/31/95			0.69	Utilized as a final verification sample
229-AB01-5DS-101-01	G6-5N,2E	24 - 30	08/30/95			6.8	Utilized as a final verification sample
229-AB01-5DS-102-01	G6-5N,3.5E	6 - 12	08/30/95			6.6	Utilized as a final verification sample
229-AB01-5DS-102-02	G6-5N,3.5E	12 - 24	08/30/95			3.1	Utilized as a final verification sample

TABLE 6
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - AUXILIARY BUILDING REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AB01-5DS-080-01	G7-2.5N,6.5E	6 - 12	08/26/95			1.6	Utilized as a final verification sample
229-AB01-5DS-082-01	H3	3 - 12	08/26/95			700	
229-AB01-5DS-117-01	H3-13.5N	0 - 12	09/05/95			35	
229-AB01-5DS-118-01	H3-18.5N	0 - 12	09/07/95			9.8	Utilized as a final verification sample
229-AB01-5DS-119-01-FD	H3-18.5N	0 - 12	09/07/95			9.6	Utilized as a final verification sample, Field duplicate of 229-AB01-5DS-118-01
229-AB01-5DS-109-01	H3-8.5N	0 - 12	09/01/95			43	
229-AB01-5DS-106-01	H4-1N,3.5W	24 - 36	08/31/95			6.9	Utilized as a final verification sample
229-AB01-5DS-106-02	H4-1N,3.5W	36 - 48	08/31/95			7.3	Utilized as a final verification sample
229-AB01-5DS-072-01	H4-1N,5E	6 - 18	08/25/95			51	
229-AB01-5DS-072-02	H4-1N,5E	18 - 24	08/25/95			46	
229-AB01-5DS-072-03	H4-1N,5E	24 - 36	08/31/95			29	Utilized as a final verification sample
229-AB01-5DS-072-04	H4-1N,5E	36 - 48	08/31/95			18	Utilized as a final verification sample
229-AB01-5DS-095-01	H4-2N,10.5E	12 - 24	08/29/95			0.38	Utilized as a final verification sample
229-AB01-5DS-093-01	H4-2N,3.5W	12 - 24	08/29/95			0.58	
229-AB01-5DS-094-01	H4-2N,5E	24 - 30	08/29/95			1.1	Utilized as a final verification sample
229-AB01-5DS-067-01	H5-3S,2.5W	24 - 30	08/25/95			17	Utilized as a final verification sample
229-AB01-5DS-071-01	H5-5E	12 - 24	08/25/95			4.6	Utilized as a final verification sample
229-AB01-5DS-071-02	H5-5E	24 - 30	08/29/95			0.68	Utilized as a final verification sample
229-AB01-5DS-071-03	H5-5E	30 - 36	08/31/95			2.8	Utilized as a final verification sample
229-AB01-5DS-079-01	H7	6 - 12	08/26/95			0.59	Utilized as a final verification sample
229-AB01-5DS-076-01	I5-5S,5W	12 - 18	08/25/95			2.4 J	Utilized as a final verification sample
229-AB01-5DS-077-01-FD	I5-5S,5W	12 - 18	08/25/95			1.5 J	Utilized as a final verification sample, Field duplicate of 229-AB01-5DS-076-01
229-AB02-5DS-104-01	A09-1-10W	6 - 12	08/30/95			12	Utilized as a final verification sample

TABLE 6
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - AUXILIARY BUILDING REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-AB02-5DS-088-01	A09-1-14W,5S	6 - 12	08/26/95			87	
229-AB02-5DS-088-02	A09-1-14W,5S	12 - 18	08/30/95			3.4	Utilized as a final verification sample
229-AB02-5DS-103-01	A09-1-18W	6 - 12	08/30/95			44	
229-AB02-5DS-111-01	A09-1-21W,2N	0 - 12	09/01/95			0.56	Utilized as a final verification sample
229-AB02-5DS-087-01	A09-1-5W	6 - 12	08/26/95			1.0	Utilized as a final verification sample

Notes:

J = Estimated value

E = Sample concentration above maximum calibration limit, actual concentration may be higher

ND (0.066) = Not Detected (method detection limit is shown in parentheses)

Field Duplicate = QA/QC sample used as an indicator of the precision relative to the sample matrix

Immunoassay Duplicate = QA/QC sample used as an indicator of the precision relative to the analysis procedure

1. Laboratory Samples were analyzed by Recra Environmental, Inc. (Recra - Amherst, New York).
2. Data Validation was performed by Blasland, Bouck & Lee, Inc. of Syracuse, NY using USEPA Region II Guidelines.
3. Pre- and post-remediation analytical data shown on the tables or figures (i.e., samples labeled as "Utilized as a final verification sample") were collected during the implementation of the IRM Work Plan (4/26/95 to 9/26/95). Results represent total PCBs in milligrams/kilogram (mg/kg) or parts per million (ppm). Please note the following regarding sample information displayed on figures and this table:
   - Sample ID utilized by Tennessee Gas Pipeline Company for their database and internal tracking purposes;
   - Location is used to position samples based on a surveyed grid or a previous Ecology & Environment, Inc. sample location (as surveyed by Blasland, Bouck & Lee, Inc.). See Figure 2 - Sample Location Key for further clarification regarding the method used to locate a discrete sample;
   - Sample depth refers to the distance below the original ground surface;
   - Sample date refers to the date that the sample was collected in the field;
   - Immunoassay Results obtained by Blasland, Bouck & Lee, Inc. using Ensys® PCB RISc Immunoassay Test Kits;

TABLE 6
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - AUXILIARY BUILDING REMEDIATION AREA

Notes (cont.):

- Laboratory Screening Results obtained by Recra Environmental, Inc. using the Recra Total PCB Screening Method;
- Laboratory Method 8081 Results obtained by Recra Environmental, Inc. using USEPA SW-846 Method 8081; and
- Laboratory Method 8081 samples that were used as final verification samples were validated.

Drainage Ditch B Area

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Drainage Ditch B Area

3.3.7 Drainage Ditch B Area

The Drainage Ditch B area is located in the southwest corner of the site. The results of prior characterization sampling in this area indicated the presence of PCBs at levels ranging from 0.33 ppm to 30 ppm. Remediation in this area was proposed because of the presence of PCBs above the cleanup goal in one sample located approximately in the center of the ditch near the culvert that discharges to the separator pond (Attachment 1).

3.3.7.1 Pre-Remediation Delineation

Initially, pre-remediation sampling and analysis activities included the collection of five samples to confirm the anticipated extent of excavation presented in the IRM Work Plan. None of these samples indicated PCB levels above 25 ppm. Since the exact location of the prior samples was not certain, six additional samples were collected to further characterize the area. Again, none of these samples indicated PCB levels above 25 ppm. Following discussions with the NYSDEC, it was determined that a limited excavation would be performed in the approximate location of the prior sample that was above the cleanup goal. Table 7 provides a summary of the results of pre-remediation sampling in this area. The results of pre-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 11.

3.3.7.2 Remediation and Verification

Remediation in the Drainage Ditch B area consisted of excavation of soils in an area approximately 5-ft by 5-ft centered around and the estimated location of the prior sample point exceeding 25 ppm PCBs. Since there were no sensitive operations areas, excavation was performed by mechanical means.

Following excavation, verification sampling and analysis was performed. Verification sampling included the collection of five samples. Two of the samples indicated PCB levels less than the cleanup goal. However, three of the samples indicated PCB levels greater than 25 ppm and additional excavation and sampling activities were conducted until verification sampling demonstrated PCB levels less than the cleanup criteria. Thirty-seven additional post-remediation samples were collected in this area. Table 7 provides a summary of the results of post-remediation sampling in this area. The results of post-remediation sampling and analysis that were utilized as final verification samples are shown on Figure 11.

As necessary, due to the high water content of the soils from this area, cement was mixed with the soils as they were removed, to reduce the water content of the materials for disposal purposes. The depth of excavation in the Drainage Ditch B area ranged from 6 to 18 inches. The total volume of soil excavated from this area is estimated to be approximately 105 cy. This total volume was disposed at the CWM disposal facility in Model City, New York.

TABLE 7
TENNESSEE GAS PIPELINE COMPANY ,
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - DRAINAGE DITCH B REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
PRE-REMEDIATION SAMPLES							
229-DA-4DS-062-01	G10-1	0 - 6	05/09/95	< 25		3.8	Utilized as a final verification sample
229-DA-4DS-063-01	G10-2	0 - 6	05/09/95	< 25			Utilized as a final verification sample
229-DA-4DS-064-01	G10-3	0 - 6	05/09/95	< 25			Utilized as a final verification sample
229-DA-4DS-065-01	G10-4	0 - 6	05/09/95	< 25		2.7	Utilized as a final verification sample
229-DA-4DS-066-01	G10-5	0 - 6	05/09/95	< 25		0.88	Utilized as a final verification sample
229-DA-4DS-145-01	G10-6	0 - 6	05/12/95			5.0	Utilized as a final verification sample
229-DA01-4DS-216-01	G10-6-1.5N,6E	0 - 6	08/11/95			4.4	Utilized as a final verification sample
229-DA01-4DS-217-01	G10-6-1N,12.5E	0 - 6	08/11/95			0.68 J	Utilized as a final verification sample
229-DA01-4DS-218-01-FD	G10-6-1N,12.5E	0 - 6	08/11/95			1.0 J	Utilized as a final verification sample, Field duplicate of 229-DA01-4DS-217-01
229-DA01-4DS-195-01	G10-7.5NE	0 - 6	07/21/95			3.4	Utilized as a final verification sample
229-DA01-4DS-196-01	G10-7.5SW	0 - 6	07/21/95			4.7	Utilized as a final verification sample
POST-REMEDIATION SAMPLES							
229-DA01-5DS-055-01	G10-6	6 - 12	08/22/95	< 25		5.5	Utilized as a final verification sample
229-DA01-5DS-127-01	G10-6-10.5N,17E	0 - 6	09/14/95			72 J	
229-DA01-5DS-137-01	G10-6-11.5N,43.5E	0 - 6	09/22/95	< 25		2.6	Utilized as a final verification sample
229-DA01-5DS-137-02	G10-6-11.5N,43.5E	6 - 12	09/22/95	< 25		4.7	Utilized as a final verification sample
229-DA01-5DS-137-03	G10-6-11.5N,43.5E	12 - 18	09/22/95	< 25		6.5	Utilized as a final verification sample
229-DA01-5DS-120-01	G10-6-11W	6 - 12	09/08/95	> 25			
229-DA01-5DS-120-02	G10-6-11W	12 - 18	09/09/95	< 25		0.27	
229-DA01-5DS-126-01	G10-6-13.5N,12.5E	0 - 6	09/14/95			26 J	
229-DA01-5DS-125-01	G10-6-15.5N,7E	0 - 6	09/14/95	< 25		16 J	

TABLE 7
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - DRAINAGE DITCH B REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-DA01-5DS-136-01	G10-6-17.5N,42.5E	0 - 6	09/22/95	< 25			Utilized as a final verification sample
229-DA01-5DS-136-02	G10-6-17.5N,42.5E	6 - 12	09/22/95	< 25			Utilized as a final verification sample
229-DA01-5DS-136-03	G10-6-17.5N,42.5E	12 - 18	09/22/95	< 25			Utilized as a final verification sample
229-DA01-5DS-130-01	G10-6-18.5N,11E	0 - 6	09/14/95	< 25			
229-DA01-5DS-138-01	G10-6-20N,28.5E	18 - 24	09/26/95	< 25		ND (0.066)	Utilized as a final verification sample
229-DA01-5DS-124-01	G10-6-20W	0 - 6	09/09/95	< 25		0.30	Utilized as a final verification sample
229-DA01-5DS-124-02	G10-6-20W	6 - 12	09/09/95			0.068	Utilized as a final verification sample
229-DA01-5DS-131-01	G10-6-22.5N,14E	0 - 6	09/14/95	< 25			
229-DA01-5DS-135-01	G10-6-23N,41.5E	0 - 6	09/22/95	< 25			Utilized as a final verification sample
229-DA01-5DS-135-02	G10-6-23N,41.5E	6 - 12	09/22/95	< 25			Utilized as a final verification sample
229-DA01-5DS-135-03	G10-6-23N,41.5E	12 - 18	09/22/95	< 25			Utilized as a final verification sample
229-DA01-5DS-122-01	G10-6-2N,16W	0 - 6	09/08/95	> 25			
229-DA01-5DS-116-01	G10-6-2S,8W	0 - 6	09/05/95			520	
229-DA01-5DS-116-02	G10-6-2S,8W	6 - 12	09/12/95	> 25		2,600 J	
229-DA01-5DS-116-03	G10-6-2S,8W	12 - 18	09/14/95	> 25			
229-DA01-5DS-116-04	G10-6-2S,8W	18 - 24	09/26/95	< 25		ND (0.066)	Utilized as a final verification sample
229-DA01-5DS-139-01-FD	G10-6-2S,8W	18 - 24	09/26/95			ND (0.066)	Utilized as a final verification sample, Field duplicate of 229-DA01-5DS-116-04
229-DA01-5DS-140-01	G10-6-30N,19.5E	0 - 6	09/26/95	< 25			Utilized as a final verification sample
229-DA01-5DS-134-01	G10-6-30N,40.5E	0 - 6	09/22/95	< 25		7.5	Utilized as a final verification sample
229-DA01-5DS-134-02	G10-6-30N,40.5E	6 - 12	09/22/95	< 25		0.18	Utilized as a final verification sample
229-DA01-5DS-134-03	G10-6-30N,40.5E	12 - 18	09/22/95	< 25		0.62	Utilized as a final verification sample
229-DA01-5DS-121-01	G10-6-4.5N,9W	0 - 6	09/09/95	> 25		18	
229-DA01-5DS-121-02	G10-6-4.5N,9W	6 - 12	09/09/95			12	

TABLE 7
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HOUSTON, TEXAS

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EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - DRAINAGE DITCH B REMEDIATION AREA

Sample ID	Location	Sample Depth (in.)	Sample Date	Immuno-assay Results (ppm)	Laboratory Screening Results (ppm)	Laboratory Method 8081 Results (ppm)	Comments
229-DA01-5DS-128-01	G10-6-4N,5.5W	0 - 6	09/14/95	> 25			
229-DA01-5DS-115-01	G10-6-5N	0 - 6	09/05/95			3.3	
229-DA01-5DS-123-01	G10-6-5S,12W	0 - 6	09/09/95	< 25		14	Utilized as a final verification sample
229-DA01-5DS-129-01	G10-6-7S,9.5W	0 - 6	09/14/95	< 25			Utilized as a final verification sample
229-DA01-5DS-129-02	G10-6-7S,9.5W	6 - 18	09/26/95	< 25		2.6	Utilized as a final verification sample
229-DA01-5DS-132-01	G10-6-9N,1W	0 - 6	09/14/95	> 25			

Notes:

J = Estimated value

ND (0.066) = Not Detected (method detection limit is shown in parentheses)

Field Duplicate = QA/QC sample used as an indicator of the precision relative to the sample matrix

Immunoassay Duplicate = QA/QC sample used as an indicator of the precision relative to the analysis procedure

1. Laboratory Samples were analyzed by Recra Environmental, Inc. (Recra - Amherst, New York).

2. Data Validation was performed by Blasland, Bouck & Lee, Inc. of Syracuse, NY using USEPA Region II Guidelines.

TABLE 7
TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

PRE- AND POST-REMEDIATION PCB SAMPLING ANALYSIS RESULTS - DRAINAGE DITCH B REMEDIATION AREA

Notes (cont.):

3. Pre- and post-remediation analytical data shown on the tables or figures (i.e., samples labeled as "Utilized as a final verification sample") were collected during the implementation of the IRM Work Plan (4/26/95 to 9/26/95). Results represent total PCBs in milligrams/kilogram (mg/kg) or parts per million (ppm). Please note the following regarding sample information displayed on figures and this table:
   - Sample ID utilized by Tennessee Gas Pipeline Company for their database and internal tracking purposes;
   - Location is used to position samples based on a surveyed grid or a previous Ecology & Environment, Inc. sample location (as surveyed by Blasland, Bouck & Lee, Inc.). See Figure 2 - Sample Location Key for further clarification regarding the method used to locate a discrete sample;
   - Sample depth refers to the distance below the original ground surface;
   - Sample date refers to the date that the sample was collected in the field;
   - Immunoassay Results obtained by Blasland, Bouck & Lee, Inc. using Ensys® PCB RISc Immunoassay Test Kits;
   - Laboratory Screening Results obtained by Recra Environmental, Inc. using the Recra Total PCB Screening Method;
   - Laboratory Method 8081 Results obtained by Recra Environmental, Inc. using USEPA SW-846 Method 8081; and
   - Laboratory Method 8081 samples that were used as final verification samples were validated.

3.4 Air Monitoring Results

During the performance of remedial activities, personal and/or community air monitoring was conducted in accordance with the IRM Design Plan. The air monitoring program consisted of monitoring for PCBs, particulates, volatile organic compounds (VOCs), and lower explosive limit (LEL).

Beginning on July 27, 1995, perimeter air monitoring for PCBs was conducted on a daily basis at one upwind and two downwind locations. PCB air sample collection commenced approximately one hour prior to the start of excavation and continued until one hour after excavation activities ceased. The samples were collected according to the National Institute for Occupational Safety and Health (NIOSH) analytical method #5503 Polychlorobiphenyls. All PCB air monitoring results indicated airborne levels of PCBs below the detection limit of the NIOSH analytical method (0.08 to 0.3 ug/m^3). As a result, and as agreed to by the NYSDEC, on August 18, 1995, the perimeter air monitoring program for PCBs was discontinued.

Air monitoring for total particulates was conducted at one upwind location and in the exclusion zone during remedial excavation utilizing two MIE Inc. Model PDL-10 (RAM-1) real-time aerosol monitors. The RAM-1 monitors were operated continuously during excavation activities and 15-minute time-weighted averages were recorded. Additionally, a MIE Inc., Model PDM-3 (Miniram) was available to provide additional real-time data as necessary. Data collected indicated that airborne levels of total dust were below the site action level (0.150 mg/m^3 above background), with two exceptions. The first exception occurred on August 3, 1995 in the Pipe Rack area. It was determined that this was due to adjacent lawn mowing activities which caused the RAM-1 monitor to malfunction. The Miniram monitor was used to provide supplemental information during this time period and these readings were below the site action level. In addition, station personnel were asked to discontinue any further upwind lawn mowing activities. The second exception occurred on August 19, 1995 in the ART area. It was determined that this was due to backfilling of "clean" materials in adjacent excavations. The backfilling activities were discontinued and subsequent readings were below the site action level.

Air monitoring for VOCs was conducted in the exclusion zone once per hour during remedial excavation. Readings were collected in the worker breathing zone over a 5-minute period using a Century Organic Vapor Analyzer (OVA) flame ionization detector. The site action level (5 ppm above background) was not exceeded in the exclusion zone during excavation activities; therefore, downwind perimeter monitoring was not required as provided in the IRM Design Plan.

Air monitoring for LEL was conducted periodically in the exclusion zone. Readings were collected in the work area using a Gastech 201 LEL meter. The data collected demonstrated that the site action level (10 percent of the LEL) was not exceeded in the exclusion zone during excavation activities.

3.5 Backfill and Restoration of Excavated Areas

Following verification that a given excavation area had been successfully remediated, "clean" materials were obtained from an off-site source and utilized to backfill the area. Representative samples of all soil backfill materials were subject to laboratory analysis for PCBs, metals, total petroleum hydrocarbons (TPH), VOCs,

and semi-VOCs to demonstrate that these constituents were not present at levels of concern in the backfill materials. Copies of analytical results for backfill materials are provided as Attachment 2. It should be noted that the IRM Design Plan was modified via an August 15, 1995 letter to the NYSDEC to eliminate TPH testing of backfill soils.

In general, common backfill was placed and compacted to within approximately 6 inches of the original grade. In areas which were previously vegetated, the final 6 inches were backfilled with topsoil, fertilized, seeded, and mulched to re-establish a vegetative cover. In areas which previously contained a gravel cover, the final 6 inches were backfilled with gravel to re-establish original conditions. Areas that were previously paved with asphalt or had sidewalks were restored to original conditions. The drainage channel portion of the excavation area in Drainage Ditch D was backfilled with rip-rap to limit potential erosion. The remainder of the excavation area was backfilled with common backfill and seeded.

3.6 Summary

In total, soil remediation activities were performed in seven areas of the site: the ART area, Pipe Rack area, Scrap Yard area, Compressor Building area, Shop Building area, Auxiliary Building area, and Drainage Ditch B area. Within these areas, approximately 414 in-place cy of soil were excavated and disposed of off-site disposal at the CWM disposal facility as "TSCA-Regulated" materials. A summary of the disposal manifests and associated disposal weights is provided in Table 8. It should be noted that disposal weights provided on the summary table include not only materials generated as part of soil remediation, but also debris removed as part of drainline cleaning, temporary erosion control materials, and other miscellaneous solid waste materials generated in conjunction with remediation activities.

TABLE 8

TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

DISPOSAL SUMMARY

Solid Materials			
Maninfest Number	**Date of Shipment**	**Container Type**	**Weight (kg)**
NYB 8218854 95007	08/02/95	Roll-off Dumpster	12,537
NYB 8218917 95008	08/04/95	Roll-off Dumpster	8,165
NYB 8219142 95009	08/04/95	Roll-off Dumpster	11,267
NYB 8218926 95010	08/07/95	Roll-off Dumpster	16,974
NYB 8218935 95011	08/07/95	Roll-off Dumpster	11,966
NYB 8218944 95012	08/08/95	Roll-off Dumpster	15,450
NYB 8218953 95013	08/08/95	Roll-off Dumpster	9,934
NYB 8218962 95013A	08/08/95	Roll-off Dumpster	15,132
NYB 8218971 95014	08/09/95	Roll-off Dumpster	8,591
NYB 8218989 95015	08/11/95	Roll-off Dumpster	11,676
NYB 8218998 95016	08/11/95	Roll-off Dumpster	5,579
NYB 8219007 95017	08/11/95	Roll-off Dumpster	10,660
NYB 8219016 95018	08/21/95	Roll-off Dumpster	13,082
NYB 8219025 95019	08/22/95	Roll-off Dumpster	16,175
NYB 8219034 95020	08/22/95	Roll-off Dumpster	12,864
NYB 8219043 95022	08/25/95	Roll-off Dumpster	12,002
NYB 8219052 95023	08/25/95	Roll-off Dumpster	10,070
NYB 8219061 95023A	08/29/95	Roll-off Dumpster	12,719
NYB 8219079 95024	08/29/95	Roll-off Dumpster	12,710
NYB 8219088 95025	08/30/95	Roll-off Dumpster	10,777
NYB 8219097 95026	08/30/95	Roll-off Dumpster	10,324
NYB 8219106 95027	08/31/95	Roll-off Dumpster	12,565
NYB 8219115 95028	08/31/95	Roll-off Dumpster	12,202
NYB 8219124 95029	08/31/95	Roll-off Dumpster	13,862
NYB 8219133 95030	08/31/95	Roll-off Dumpster	8,925
NYB 7937685 95031	08/31/95	Roll-off Dumpster	11,757
NYB 7937676 95032	08/31/95	Roll-off Dumpster	8,655
NYB 8293662 95033	09/01/95	Roll-off Dumpster	14,760
NYB 8293644 95034	09/07/95	Roll-off Dumpster	10,705
NYB 8293635 95035	09/07/95	Roll-off Dumpster	9,580
NYB 8293626 95036	09/07/95	Roll-off Dumpster	14,570
NYB 8293653 95034A	09/01/95	Roll-off Dumpster	15,849
NYB 8293617 95037	09/08/95	Roll-off Dumpster	11,712
NYB 7937622 95038	09/08/95	Roll-off Dumpster	16,965
NYB 7937631 95039	09/08/95	Roll-off Dumpster	14,352
NYB 8293608 95040	09/08/95	Roll-off Dumpster	8,782
NYB 8293599 95041	09/11/95	Roll-off Dumpster	15,023
NYB 8293581 95042	09/11/95	Roll-off Dumpster	13,517
NYB 8293572 95043	09/19/95	Roll-off Dumpster	5,108
NYB 7937649 95044	09/19/95	Roll-off Dumpster	11,050
NYB 7937658 95045	09/19/95	Roll-off Dumpster	6,341
NYB 7937667 95046	09/19/95	Roll-off Dumpster	12,274

TABLE 8

TENNESSEE GAS PIPELINE COMPANY
HOUSTON, TEXAS

COMPRESSOR STATION 229 IRM REPORT
EDEN, NEW YORK

DISPOSAL SUMMARY

Solid Materials			
Maninfest Number	**Date of Shipment**	**Container Type**	**Weight (kg)**
NYB 7937451 95047	09/28/95	Roll-off Dumpster	8,355
NYB 7937478 95048	09/28/95	Roll-off Dumpster	9,544
NYB 7937487 95049	09/29/95	Roll-off Dumpster	9,607
NYB 7937496 95050	09/29/95	Roll-off Dumpster	8,927
NYB 7937505 95051	09/29/95	Roll-off Dumpster	8,981
NYB 7937514 95052	09/29/95	Roll-off Dumpster	6,359
NYB 7937523 95053	09/29/95	Roll-off Dumpster	8,455
NYB 7937532 95054	09/29/95	Roll-off Dumpster	5,906
NYB 7937541 95055	09/29/95	Roll-off Dumpster	7,856
NYB 7937586 95056	10/02/95	Roll-off Dumpster	12,129
NYB 7937577 95057	10/02/95	Roll-off Dumpster	3,992
NYB 7937595 95058	10/02/95	Roll-off Dumpster	4,581
Liquid (Non-Hazardous)			
Maninfest Number	**Date of Shipment**	**Container Type**	**Volume (gal)**
95N002	09/07/95	Tank Truck	4,040
95N003	09/11/95	Tank Truck	3,509
95N005	09/18/95	Tank Truck	3,241
95N006	09/29/95	Tank Truck	1,117
		Total Solid Material (kg):	**591,900**
		Pounds:	**1,305,140**
		Tons:	**652.6**
		Total Liquid (gallons):	**11,907**

Notes:

1. Disposal quantities include materials excavated as part of soil remediation, debris removed as part of drainline cleaning, and other materials generated in conjunction with remediation activities.
2. All solid and liquid materials were disposed at the Chemical Waste Management Facility in Model City New York.

Section 4

SECTION 4 - DRAINLINE REMEDIATION

4.1 General

This section provides a summary of the drainline activities performed at Station 229. The goal of drainline remediation was to prevent potential future migration of PCBs via drainlines. To this end, remediation activities primarily included cleaning, plugging, and/or grouting of the appropriate drainline segments and related appurtenances. In addition, other activities were performed to address specific considerations associated with each drainline. The specific remediation activities undertaken for each drainline system are identified below.

4.2 Drainline C

Drainline C (Figure 11) extends from the Compressor Building area to Outfall 003. Components of this drainline, as identified in the IRM Work Plan, include the Compressor Building roof and floor drains, drainage piping, a 100-gallon concrete sump tank adjacent to the northeast corner of the Compressor Building, and a 100-gallon concrete oil/water separator located at the outfall. This drainline was selected for remediation activities based on the presence of PCBs in Manhole 2 and the 100-gallon concrete sump tank adjacent to the Compressor Building. However, subsequent to the preparation of the IRM Work Plan and Design Plan, information was obtained relative to Drainline C indicating that remediation of the drainline was not necessary. Specifically, it was noted that the Compressor Building floor drains are connected to Manholes 1 and 2 which discharge through the Drainline D system, whereas the Compressor Building roof drains are not connected to Manholes 1 and 2 and discharge through the Drainline C system. As shown on Figure 12, the roof drain from the east side of the Compressor Building passes through Manhole 2 but does not discharge into it, and the roof drain from the west side of the building bypasses around Manhole 1. Additionally, an observation of the 100-gallon concrete sump tank adjacent to the Compressor Building indicated that it was not connected to the drainlines and there was no indication that it was previously connected to the roof or floor drains.

As a result of the above information, the activities identified in the IRM Work Plan were modified in consultation with the NYSDEC and included the following (see also Figure 12):

- The roof drainage piping from the Compressor Building roof drains were re-routed around Manhole 2 to Drainline C, rather than through Manhole 2. The locations where the pipe passed through Manhole 2 were grouted to seal the openings;

- The 100-gallon concrete sump tank adjacent to the Compressor building was cleaned (i.e., sediment and water removed) and filled with grout. The water and sediment were separately handled, sediments were disposed as "Regulated" materials and water was disposed as "Non-Hazardous" material at the CWM disposal facility in Model City, New York. The water was removed utilizing a vacuum truck and the sediments were removed manually;

- The oil/water separator and the short section of pipe from the separator to the outfall were removed from service, and the oil/water separator was filled with grout during previous station maintenance activities. As a result, remediation activities were not performed for these components; and

- The roof drain lines and the remaining drainage piping of Drainline C were left open to be evaluated by TGP's water management group for potential future use. [Note: **The water management group's evaluation of Drainline C included a hydraulic evaluation and the collection of a water sample from the Drainline C outfall. The water sample was analyzed for PCBs and the results of the analytical testing indicated non-detect at a concentration of 0.65 ppb, which is consistent with the previously collected water samples. These results supported the determination that Drainline C could be re-used. However, the hydraulic evaluation indicated that the hydraulic capacity of Drainline C was insufficient. As a result, the portions of Drainline C that run along the east and west sides of the Compressor Building were re-used for the roof drains but the portion from the south east corner of the Compressor Building to the outfall, was abandoned in-place and will not be re-used (See Figure 12). A new 18-inch diameter drainline was installed to provide sufficient capacity for the roof drainage water.**

4.3 Drainline D

Drainline D (Figure 12) extends from the Auxiliary Building area, the Jacket Water Cooler area, and the Compressor Building area to Outfall 004. Components of this drainline include the Auxiliary Building floor, roof and foundation drains; the Auxiliary Cooler drains; the Jacket Water Cooler drains; the heliport hangar floor drains; the Compressor Building Floor drains (as noted above); drainage piping; 10 manholes; a 100-gallon concrete sump tank (adjacent to the Auxiliary Building); and a 1,000-gallon oil/water separator adjacent to the separator pond. This drainline system was identified for remediation based on the presence of PCBs greater than 25 ppm in the manhole and oil/water separator sediments. A sample of the sediment from Manhole 10 was collected and submitted to RECRA for waste characterization analysis for disposal purposes. The results of this testing are presented in Attachment 3.

Similar to Drainline System C, the remediation activities identified in the IRM Design Plan were modified in consultation with the NYSDEC and included the following (see also Figure 12):

- The drainline appurtenances including the manholes, 100-gallon sump tank, and 1,000-gallon oil/water separator were cleaned (i.e., water and sediment removed). The water and sediment were separately handled, sediments were disposed as "Regulated" materials and water was disposed as "Non-Hazardous" material at the CWM disposal facility in Model City, NY. The water was removed using a vacuum truck and the sediments were removed manually; and

- The roof, floor and foundation drainlines for the Auxiliary Building; the floor drainlines for the Compressor Building; and Manholes 1, 2, 4, and 5 were left open to be evaluated by TGP's water management group for potential future use. Mechanical compression plugs were installed in the inlet and outlet pipes in Manholes 1, 2, 4, and 5 to temporarily limit use. The remainder of

Drainline System D, including the appurtenances, was grouted in accordance with the IRM Design Plan to prevent potential future PCB migration. **[Note: the water management group determined that the remaining portions of Drainline D will not be re-used. As a result, the drainlines and manholes that were not remediated will be subject to closure in accordance with the procedures outlined in the October 13, 1995 letter from BBL to the NYSDEC. This remaining portions of this drainline and the appurtenances are scheduled to be closed during 1996.]**

The specific procedures that were followed for drainline remediation are described in further detail below.

Following the removal of sediment and water from drainline appurtenances, the drainline pipes were grouted by attaching a length of discharge hose to one end of the pipe and using a concrete pump to pump the grout into the pipe until it was observed flowing out of the other end. Both ends of the pipe (if accessible) were then sealed with a compression plug. After this procedure was repeated for all pipes entering or exiting a drainline appurtenance, the appurtenance was filled to within 6 inches of the ground surface. Once the grout had set, the top 6 inches were restored to match surrounding surface conditions using soil backfill and vegetation or gravel.

To the extent possible, the drainline pipes were filled in one continuous effort. This was generally accomplished for the drainlines larger than 8 inches in diameter. For smaller diameter drainlines, it was found that due to the materials of construction of the pipes (vitreous clay) the grout mixture could only be pumped into short lengths of the pipe. As a result, excavations were performed at periodic intervals (as frequent as 20-foot intervals) to expose the drainline at the locations where it was believed that the grout had been pumped to. The exposed pipe was opened and the grout was pumped into the pipe (in both directions, if necessary). This procedure was repeated until it was determined that the pipe had been filled.

The effectiveness of the above drainline remediation procedures was determined based on field observations by the NYSDEC, the TGP Chief Inspector, and the Engineer's On-Site Representative.

Section 5

SECTION 5 - QUALITY ASSURANCE/QUALITY CONTROL

5.1 General

The Quality Assurance/Quality Control (QA/QC) procedures associated with soil and drainline remediation were used to ensure that the analytical data were sufficient to meet the data quality objectives (DQOs) specified in the Quality Assurance Project Plan (QAPP) for New York State Compressor Stations (BBL, May 1995). The DQOs were established to provide: (1) a framework for the control and evaluation of field and laboratory data; and (2) the definitions of acceptable data quality for the various analyses in terms of precision and accuracy. To achieve the designated DQOs, specific procedures for field sampling activities, analytical procedures, data reporting, and data validation were established in the QAPP. The QAPP also outlined procedures to evaluate overall data quality through the analysis of the precision, accuracy, representativeness, completeness, and comparability (PARCC) parameters. The remainder of this section presents a summary of the QA/QC-related requirements of the IRM Design Plan.

5.2 Sample Collection

The IRM Design Plan and the QAPP outlined specific procedures for the collection of samples. These procedures were established to ensure that sample results were representative of the environment from which they were collected.

In compliance with the IRM Design Plan and the QAPP, the laboratory analytical samples for this investigation were collected and sent to the laboratory with chain-of-custody (COC) forms. The COC forms provided a record of sample collection and custody from the time of collection until laboratory receipt. These forms were completed prior to the transport of each sample and represent one form of communication between the sampling team and the analytical laboratory. The COC forms provide important information for the laboratory, including project name, sample identification number, sampling date, and required analyses. The original COC forms accompanied the samples shipped to the laboratory, and copies were retained by the sampling team.

Field notebooks were also utilized to document field sampling activities. These notebooks were utilized by the sampling team to record activities performed at the site related to both sampling events and the overall remedial activities. This form of documentation provides a source of information to assist in the reconstruction of field events, and aid in the data review and interpretation process.

Sample collection activities were also monitored through the collection and analysis of field duplicate and field blank samples. The field duplicate samples consisted of two environmental samples collected from the same location, but were analyzed as two discrete samples. Sample identification for one of the two samples occurred in a manner consistent with the sample numbering system presented in the QAPP. However, the second sample (the "duplicate" sample) was given a non-descriptive sample identification. Analysis of each sample by the laboratory, and comparison of the results by personnel not affiliated with the laboratory provided a "blind" audit of the performance of the sample collection and analysis procedures. A total of 30 field duplicate samples were collected, representing a collection frequency of 5.3 percent.

Rinse blank samples were collected to ensure that the sample containers and sampling equipment were not impacting the environmental sample. Rinse blank samples were prepared by pouring de-ionized/distilled water over or through the decontaminated sampling device and collecting the water. The rinse blank water was collected and transferred to sample containers using procedures consistent with the handling of the environmental samples. A total of 25 field blank samples were collected representing a frequency of 4.4 percent. An evaluation of the compliance of the field QA/QC sample results with the QAPP-specified DQOs is presented in a separate Data Validation Report for Station 229 (Blasland, Bouck & Lee, Inc., February 1996). In summary, the data were within specified QA/QC limits and are sufficient for their intended use. Any necessary qualifiers are noted on the tables and figures of this IRM Report.

5.3 *Immunoassay Screening Analysis*

Field screening of soil was conducted for 277 samples using immunoassay analysis. The field screening analysis program also included nine duplicate immunoassay analyses (3.2 percent frequency). The duplicate immunoassay analyses were conducted by preparing two aliquots for analysis from the same sample. The duplicate immunoassay analyses were in agreement in all cases.

Of the 277 immunoassay analyses, 120 were subject to laboratory verification analysis. This represents an overall verification rate of 43.3 percent. For the final verification samples only, the laboratory verification rate was 97 out of 192 samples, or 50.5 percent. This exceeded the targeted laboratory verification rate of 50 percent, as specified in the IRM Work Plan.

It should be noted that in instances where immunoassay results did not agree with fixed laboratory analytical results, the laboratory result was considered to be the accurate measure of the soil PCB levels.

5.4 *Laboratory Screening Analysis*

Laboratory screening of soil samples also was conducted for 70 samples by RECRA. The laboratory screening analysis program also collected three field duplicate samples (4.3 percent frequency).

Of the 70 field screening analyses, 55 were subject to laboratory verification analysis. This represents an overall verification rate of 78.6 percent. For the final verification samples, the laboratory verification rate was 37 out of 40 samples, or 92.5 percent.

5.5 *Confirmation Sample Analysis*

Laboratory analyses were conducted for 295 samples by RECRA utilizing analytical procedures consistent with the requirements presented in the IRM Design Plan and the QAPP. Of these 295 samples, 252 verification samples were subject to data validation following the procedures outlined in the QAPP. An evaluation of the compliance of these QA/QC sample results with the QAPP-specified DQOs is presented in a separate Data Validation Report for Station 229 (Blasland, Bouck & Lee, Inc., February 1996). In summary, the data were within specified QA/QC limits and are valid for their intended use.

Section 6

SECTION 6 - POST-REMEDIATION ACTIVITIES

6.1 General

TGP is currently developing a Feasibility Study (FS) that will address the remaining areas of potential concern at Station 229, including any additional on-site activities determined to be necessary. Upon review and approval of the FS and issuance of the Record of Decision (ROD) by NYSDEC, long-term site management activities such as operations, maintenance and monitoring will be established. Therefore, the only post-remediation activities that have been identified at this time are the long-term management of sampling and analysis data collected as part of IRM activities. Additional details regarding these activities are provided below.

6.2 Data Management

TGP maintains an electronic database of all sampling and analysis data generated as part of site remediation activities. This database includes sample IDs, media designations, locations, depths, analytical parameters, results, and other sample-specific information. TGP will maintain this information in accordance with the Order on Consent for the IRM, as documentation of the remediation of the site.

REFERENCES

Blasland, Bouck & Lee, Inc. (BBL), February 1996, *Data Validation Report for Station 229.*

BBL, July 1995, *Interim Remedial Measure Design Plan Tennessee Gas Pipeline Company Compressor Station 229 at Eden, New York.*

BBL, May 1995, *Quality Assurance Project Plan Soil/Drainline Remediation New York State Compressor Stations.*

Environ Corporation (Environ), April 1995, *Interim Remedial Measure Work Plan Tennessee Gas Pipeline Company Station 229, Eden, New York.*

Letter from BBL (Doody) to NYSDEC dated August 15, 1995, re: Modification to Remedial Design Work Plans for TGP Compressor Stations 229 and 237.

Letter from New York State Department of Environmental Conservation (NYSDEC) (Moras) to TGP (Schaper) dated July 13, 1995, re: Approval of the Interim Remedial Measure Design Plan.

Letter from BBL (Palmerton) to NYSDEC (Drumm) dated October 13, 1995, re: Modification to Drainline Grouting Procedures.

ATTACHMENTS

Attachment 1

Attachment 2

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

000016
CLIENT NO.

229-BF01-SCS-001-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385802

Sample wt/vol: 5.10 (g/mL) G Lab File ID: H7874.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. 0.9 Heated Purge: Y Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

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

11-28-95

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000017
Client No.

229-BF01-SCS-001-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385802

Sample wt/vol: 5.10 (g/mL) G Lab File ID: H7874.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. 0.9 Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NO.	Compound Name	RT	Est. Conc.	Q
1.		UNKNOWN OXYGENATED COMPOUND	3.85	8	J
2.		CYCLOALKYL COMPOUND	10.18	5	J
3.		CYCLOALKYL COMPOUND	12.68	6	J
4.		~~ORGANOSILICON COMPOUND~~	~~21.98~~	R ~~6~~	~~BJ~~

11-28-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000035

Client No.

229-BF01-SCS-001-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385802

Sample wt/vol: 30.19 (g/mL) G Lab File ID: 23009X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 1.5 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	810	U
100-02-7	4-Nitrophenol	810	U
132-64-9	Dibenzofuran	46	J
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenyl ether	330	U
86-73-7	Fluorene	130	J
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	U
86-30-6	N-Nitrosodiphenylamine	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	810	U
85-01-8	Phenanthrene	590	
120-12-7	Anthracene	74	J
86-74-8	Carbazole	35	J
84-74-2	Di-n-butylphthalate	330 ~~37~~	~~B~~ U
206-44-0	Fluoranthene	430	
129-00-0	Pyrene	320	J
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	98	J
218-01-9	Chrysene	200	J
117-81-7	bis(2-Ethylhexyl)phthalate	330 ~~57~~	~~B~~ U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	43	J
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

11-29-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000034 No.

229-BF01-5CS-001-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385802

Sample wt/vol: 30.19 (g/mL) G Lab File ID: 23009X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 1.5 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	76	J
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,3,5-Trichlorophenol	810	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	810	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	810	U

8-29-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000036

229-BF01-SCS-001-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385802

Sample wt/vol: 30.19 (g/mL) G Lab File ID: 23009X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 1.5 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.4

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NO.	Compound Name	RT	Est. Conc.	Q
1.		UNKNOWN ALKANE	6.40	670	J
2.		ETHYL METHYL BENZENE ISOMER	8.45	510	J
3.		UNKNOWN ALKANE	8.58	1400	J
4.		CHLORINATED COMPOUND	9.30	R ~~3000~~	~~BJ~~
5.		DICHLOROCYCLOHEXANE ISOMER	10.12	R ~~970~~	~~BJ~~
6.		UNKNOWN ALKANE	10.72	900	J
7.		UNKNOWN	12.73	990	J
8.		UNKNOWN	14.62	1300	J
9.		UNKNOWN	16.40	1800	J
10.		BENZENE DERIVATIVE	16.80	560	J
11.		UNKNOWN	17.23	290	J
12.		UNKNOWN	17.38	360	J
13.		UNKNOWN	18.07	1700	J
14.		UNKNOWN	19.65	1700	J
15.		UNKNOWN	21.15	1900	J
16.		UNKNOWN	22.07	410	J
17.		UNKNOWN	23.92	1000	J
18.		UNKNOWN	25.22	920	J
19.		UNKNOWN	26.08	170	J
20.		UNKNOWN	26.45	960	J

11-21-95

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

~~101~~ 229-BF01-5CS-001-01

Lab Name: RECRA_ENVIRONMENTAL_INC._ Contract: NY94-393__
Lab Code: RECNY_ Case No.: 151SR SAS No.: _____ SDG No.: 229F1_
Matrix (soil/water): SOIL_ Lab Sample ID: 0581
Level (low/med): LOW__ Date Received: 07/19/95
% Solids: _98.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	656			P
7440-36-0	Antimony	2.0	U	UJ	P
7440-38-2	Arsenic	3.2			P
7440-39-3	Barium	4.1	B	J	P
7440-41-7	Beryllium	0.61	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	147000		J	P
7440-47-3	Chromium	4.7			P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	6.9			P
7439-89-6	Iron	2860			P
7439-92-1	Lead	3.9			P
7439-95-4	Magnesium	4990		J	P
7439-96-5	Manganese	64.5		J	P
7439-97-6	Mercury	0.03	B	UJ	CV
7440-02-0	Nickel	8.5			P
7440-09-7	Potassium	897	B	J	P
7782-49-2	Selenium	0.79	U		F
7440-22-4	Silver	2.0	U	UJ	P
7440-23-5	Sodium	416	B	J	P
7440-28-0	Thallium	0.79	U	UJ	F
7440-62-2	Vanadium	3.1	B	J	P
7440-66-6	Zinc	25.0		J	P
	Cyanide	0.88	U		C
	Hexchrom	0.20	U	UJ	A

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:
LAB_SAMPLE_ID: A5385802-CG000755
CLIENT_SAMPLE_ID: 229-BF01-5CS-001-01

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 000055

5CS00101

229-RECI-5CS-CC1-C1

Lab Name: RECRA ENVIRON Contract: NY94-393

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385802

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) N Date Received: 07/19/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/21/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 07/29/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.4 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.4	U
72-55-9	4,4'-DDE	3.4	U
72-20-8	Endrin	0.43	J
33213-65-9	Endosulfan II	3.4	U
72-54-8	4,4'-DDD	3.4	U
1031-07-8	Endosulfan sulfate	3.4	U
50-29-3	4,4'-DDT	3.4	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.4	U
7421-93-4	Endrin aldehyde	3.4	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	68	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12672-29-6	Aroclor-1248	34	U
11097-69-1	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U

12-5-95

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

Client No.: 000018

229-BF01-5CS-002-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385805

Sample wt/vol: 5.04 (g/mL) G Lab File ID: H7875.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. 12.9 Heated Purge: Y Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
108-88-3	Toluene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethyl Benzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylenes (total)	11	U

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000019

Client No.

229-BF01-SCS-002-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385805

Sample wt/vol: 5.04 (g/mL) G Lab File ID: H7875.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. 12.9 Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	Compound Name	RT	Est. Conc.	Q
1.	~~ORGANOSILICON COMPOUND~~	~~21.97~~	R ~~7~~	~~BJ~~

FORM IE - GC/MS VOA TIC

11-28-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

Client No.

229-BF01-5CS-002-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385805

Sample wt/vol: 30.38 (g/mL) G Lab File ID: 23013X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 11.9 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/26/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	900	U
95-95-4	2,3,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	900	U
88-74-4	2-Nitroaniline	370	U
131-11-3	Dimethylphthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	900	U
99-09-2	3-Nitroaniline		

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000038
Client No.

229-BF01-5CS-002-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385805

Sample wt/vol: 30.38 (g/mL) G Lab File ID: 23013X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 11.9 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/26/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	900	~~U~~ UJ
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenyl ether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	12	J
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butylphthalate	370 ~~43~~	~~B~~ U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	13	J
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)phthalate	370 ~~60~~	~~B~~ U
117-84-0	Di-n-octylphthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)fluoranthene	370	U
50-32-8	Benzo(a)pyrene	370	U
193-39-5	Indeno(1,2,3-cd)pyrene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)perylene	370	U

11-29-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000039
Client No.

229-BF01-5CS-002-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385805

Sample wt/vol: 30.38 (g/mL) G Lab File ID: 23013X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 11.9 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/26/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.4

Number TICs found: 19 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NO.	Compound Name	RT	Est. Conc.	Q
1.		SUSPECTED ALDOL COND PRODUCT	6.77	R ~~660~~	~~BJ~~
2.		UNKNOWN	7.42	R ~~680~~	~~BJ~~
3.		CHLOROCYCLOHEXANOL ISOMER	9.27	R ~~3400~~	~~BJ~~
4.		DICHLOROCYCLOHEXANE ISOMER	10.12	R ~~1400~~	~~BJ~~
5.		UNKNOWN	24.57	350	J
6.		UNKNOWN	24.75	960	J
7.		UNKNOWN	26.90	470	J
8.		UNKNOWN	27.17	180	J
9.		UNKNOWN PAH DERIVATIVE	27.43	360	J
10.		POLYCHLORINATED COMPOUND	28.48	260	J
11.		UNKNOWN	28.73	270	J
12.		POLYCHLORINATED COMPOUND	29.40	400	J
13.		UNKNOWN	29.78	960	J
14.		UNKNOWN ALCOHOL	30.83	1200	J
15.		UNKNOWN	32.88	560	J
16.		UNKNOWN ALKANE	36.88	240	J
17.		UNKNOWN	38.77	130	J
18.		UNKNOWN	39.33	200	J
19.		UNKNOWN	40.18	440	J

11-29-95

NYSDEC-ASP

000064

1 NYSDEC SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

~~201~~ 229-BF01-5CS-002-01

Lab Name: RECRA_ENVIRONMENTAL_INC._ Contract: NY94-393__
Lab Code: RECNY_ Case No.: 151SR SAS No.: _____ SDG No.: 229F1_
Matrix (soil/water): SOIL_ Lab Sample ID: 0585
Level (low/med): LOW__ Date Received: 07/19/95
% Solids: _88.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11200			P
7440-36-0	Antimony	2.2	~~U~~	~~N~~ UJ	P
7440-38-2	Arsenic	8.8			P
7440-39-3	Barium	46.6			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	1590		~~*~~ J	P
7440-47-3	Chromium	11.2			P
7440-48-4	Cobalt	6.8	B	J	P
7440-50-8	Copper	35.9			P
7439-89-6	Iron	20400			P
7439-92-1	Lead	16.7			P
7439-95-4	Magnesium	2120		~~*~~ J	P
7439-96-5	Manganese	729		~~E*~~ J	P
7439-97-6	Mercury	0.06		J	CV
7440-02-0	Nickel	13.3			P
7440-09-7	Potassium	964	B	J	P
7782-49-2	Selenium	0.90	U		F
7440-22-4	Silver	2.2	~~U~~	~~N~~ UJ	P
7440-23-5	Sodium	225	U		P
7440-28-0	Thallium	0.90	~~U~~	~~N~~ UJ	F
7440-62-2	Vanadium	18.1			P
7440-66-6	Zinc	97.2		~~N*~~ J	P
	Cyanide	1.0	U		C
	Hexchrom	0.22	~~U~~	UJ	A

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:
LAB_SAMPLE_ID: A5385805-CG000755
CLIENT_SAMPLE_ID: 229-BF0Z-5CS-002-01
5/10/95
dms

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 000056

~~5CS00201~~
229-BFC-1.5CS-00201-01

Lab Name: RECRA ENVIRON Contract: NY94-393

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385805

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 07/19/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/21/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 07/31/95

Injection Volume: 1.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.6	U
319-85-7	beta-BHC	9.6	U
319-86-8	delta-BHC	9.6	U
58-89-9	gamma-BHC (Lindane)	9.6	U
76-44-8	Heptachlor	9.6	U
309-00-2	Aldrin	9.6	U
1024-57-3	Heptachlor epoxide	9.6	U
959-98-8	Endosulfan I	9.6	U
60-57-1	Dieldrin	15	J
72-55-9	4,4'-DDE	260	
72-20-8	Endrin	19	U
33213-65-9	Endosulfan II	19	U
72-54-8	4,4'-DDD	R ~~84~~	~~P~~
1031-07-8	Endosulfan sulfate	19	U
50-29-3	4,4'-DDT	580	~~P~~ J
72-43-5	Methoxychlor	96	U
53494-70-5	Endrin ketone	19	U
7421-93-4	Endrin aldehyde	19	U
5103-71-9	alpha-Chlordane	9.6	U
5103-74-2	gamma-Chlordane	9.6	U
8001-35-2	Toxaphene	960	U
12674-11-2	Aroclor-1016	190	U
11104-28-2	Aroclor-1221	380	U
11141-16-5	Aroclor-1232	190	U
53469-21-9	Aroclor-1242	190	U
12672-29-6	Aroclor-1248	190	U
11097-69-1	Aroclor-1254	190	U
11096-82-5	Aroclor-1260	190	U

12-5-95

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

000024

Client No.

229-BF02-5CS-003-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393301

Sample wt/vol: 5.06 (g/mL) G Lab File ID: H7892.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: not dec. 0.2 Heated Purge: Y Date Analyzed: 07/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

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

FORM I - GC/MS VOA

11-25-95

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000025

Client No.

229-BF02-5CS-003-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393301

Sample wt/vol: 5.06 (g/mL) G Lab File ID: H7892.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: not dec. 0.2 Date Analyzed: 07/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NO.	Compound Name	RT	Est. Conc.	Q
1.		~~ORGANOSILICON COMPOUND~~	~~21.98~~	R ~~7~~	~~J~~

MJ 11-28-95

FORM IE - GC/MS VOA TIC

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

Client No.
000046
229-BF02-SCS-003-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393301

Sample wt/vol: 30.22 (g/mL) G Lab File ID: Z23927.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: 0.1 decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/01/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 11.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,3,5-Trichlorophenol	800	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	800	U

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000047 No.

229-BF02-5CS-003-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393301

Sample wt/vol: 30.22 (g/mL) G Lab File ID: Z23927.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: 0.1 decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/01/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 11.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	800	U
100-02-7	4-Nitrophenol	800	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	110	J
7005-72-3	4-Chlorophenyl-phenyl ether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	800	U
534-52-1	4,6-Dinitro-2-methylphenol	800	U
86-30-6	N-Nitrosodiphenylamine	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	800	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	440	~~B~~ U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	~~U~~ UJ
191-24-2	Benzo(g,h,i)perylene	330	~~U~~ UJ

8-9-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000048
Client No.

229-BF02-5CS-003-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393301

Sample wt/vol: 30.22 (g/mL) G Lab File ID: Z23927.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: 0.1 decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/01/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 11.2

Number TICs found: 17 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	Compound Name	RT	Est. Conc.	Q
1.	SUSPECTED ALDOL COND. PROD.	4.10	R ~~170~~	~~ABJ~~
2.	UNKNOWN	4.35	R ~~150~~	~~BJ~~
3.	UNKNOWN ALKANE	7.73	79	J
4.	UNKNOWN ALKANE	9.50	100	J
5.	UNKNOWN ALKANE	10.38	160	J
6.	UNKNOWN ALKANE	12.10	120	J
7.	UNKNOWN ALKANE	12.90	110	J
8.	UNKNOWN ALKANE	13.68	110	J
9.	UNKNOWN ALKANE	15.17	200	J
10.	UNKNOWN ALKANE	15.85	180	J
11.	UNKNOWN ALKANE	16.52	190	J
12.	UNKNOWN ALKANE	17.17	170	J
13.	UNKNOWN ALKANE	17.80	200	J
14.	UNKNOWN ALKANE	18.40	200	J
15.	UNKNOWN ALKANE	18.98	140	J
16.	UNKNOWN ALKANE	19.55	97	J
17.	UNKNOWN ALKANE	20.12	76	J

11-29-95

NYSDEC-ASP

000065

1

NYSDEC SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

~~301~~ 229-BF02-5CS-003-01

Lab Name: RECRA_ENVIRONMENTAL_INC._ Contract: NY94-393__
Lab Code: RECNY_ Case No.: 151SR SAS No.: _____ SDG No.: 229F1_
Matrix (soil/water): SOIL_ Lab Sample ID: 0586
Level (low/med): LOW__ Date Received: 07/24/95
% Solids: _99.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	193			P
7440-36-0	Antimony	1.9	U	~~N~~ UJ	P
7440-38-2	Arsenic	0.97	U		P
7440-39-3	Barium	3.9	U		P
7440-41-7	Beryllium	0.58	U		P
7440-43-9	Cadmium	0.97	U		P
7440-70-2	Calcium	220000		~~*~~ J	P
7440-47-3	Chromium	1.9	U		P
7440-48-4	Cobalt	1.9	U		P
7440-50-8	Copper	0.97	U		P
7439-89-6	Iron	818			P
7439-92-1	Lead	1.0			P
7439-95-4	Magnesium	3650		~~*~~ J	P
7439-96-5	Manganese	55.0		~~E*~~ J	P
7439-97-6	Mercury	0.27			CV
7440-02-0	Nickel	1.9	U		P
7440-09-7	Potassium	460	B	J	P
7782-49-2	Selenium	0.79	U		F
7440-22-4	Silver	1.9	~~U~~	~~N~~ UJ	P
7440-23-5	Sodium	325	B	J	P
7440-28-0	Thallium	0.79	~~U~~	~~WN~~ UJ	F
7440-62-2	Vanadium	1.9	U		P
7440-66-6	Zinc	24.2		~~N*~~ UJ	P
	Cyanide	0.99		J	C
	Hexchrom	0.19	~~U~~	UJ	A

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:
LAB_SAMPLE_ID: A5393301-CG000755
CLIENT_SAMPLE_ID: 229-BF02-5CS-003-01

1D

EPA S000057

PESTICIDE ORGANICS ANALYSIS DATA SHEET

229-BFO2-SCS-003-[illegible]
~~5CS00301~~
~~229-BFO2-SCS-003~~

Lab Name: RECRA ENVIRON Contract: NY94-393

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393301

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 07/24/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/27/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/01/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 11.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

12-5-95

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

000020

Client No.

229-BF01-5CS-004-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385804

Sample wt/vol: 5.08 (g/mL) G Lab File ID: H7876.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. 5.7 Heated Purge: Y Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

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

11-23-95

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000021
Client No.

229-BF01-5CS-004-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385804

Sample wt/vol: 5.08 (g/mL) G Lab File ID: H7876.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. 5.7 Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	Compound Name	RT	Est. Conc.	Q
1.	~~ORGANOSILICON COMPOUND~~	~~21.98~~	R ~~6~~	~~BJ~~

FORM IE - GC/MS VOA TIC

11-23-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000040

Client No.

229-BF01-SCS-004-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385804

Sample wt/vol: 30.36 (g/mL) G Lab File ID: 23010X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 6.4 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,3,5-Trichlorophenol	840	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	840	U

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000041
Client No.

229-BF01-5CS-004-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385804

Sample wt/vol: 30.36 (g/mL) G Lab File ID: 23010X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 6.4 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	840	U J
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenyl ether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350 ~~46~~	~~B~~ U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	350 ~~50~~	~~B~~ U
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

11-29-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

C00042
Client No.

229-BF01-5CS-004-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385804

Sample wt/vol: 30.36 (g/mL) G Lab File ID: 23010X.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: 6.4 decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.8

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NO.	Compound Name	RT	Est. Conc.	Q
1.		CYCLOHEXENOL ISOMER	6.22	R ~~430~~	~~BJ~~
2.		CHLOROCYCLOHEXENE ISOMER	6.57	R ~~640~~	~~BJ~~
3.		UNKNOWN	6.77	R ~~470~~	~~BJ~~
4.		UNKNOWN	7.42	R ~~780~~	~~BJ~~
5.		UNKNOWN	7.67	R ~~320~~	~~BJ~~
6.		CHLORINATED COMPOUND	9.35	R ~~7800~~	~~BJ~~
7.		UNKNOWN	9.87	R ~~240~~	~~BJ~~
8.		DICHLOROCYCLOHEXANE ISOMER	10.15	R ~~4000~~	~~BJ~~
9.		UNKNOWN	18.03	160	J
10.		UNKNOWN	19.62	210	J
11.		UNKNOWN ALKANE	21.12	330	J
12.		UNKNOWN	22.53	220	J
13.		UNKNOWN	23.88	260	J
14.		UNKNOWN	25.18	260	J
15.		UNKNOWN	26.42	270	J
16.		UNKNOWN	28.73	250	J
17.		UNKNOWN ACID	29.68	160	J
18.		UNKNOWN	29.83	250	J
19.		UNKNOWN HYDROCARBON	30.87	490	J
20.		UNKNOWN	31.88	210	J

11-29-95

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

~~401~~ 229-BF01-5CS-004-01

Lab Name: RECRA_ENVIRONMENTAL_INC._ Contract: NY94-393__
Lab Code: RECNY_ Case No.: 151SR SAS No.: _____ SDG No.: 229F1_
Matrix (soil/water): SOIL_ Lab Sample ID: 0582
Level (low/med): LOW__ Date Received: 07/19/95
% Solids: _93.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7580			P
7440-36-0	Antimony	2.1	U	N J	P
7440-38-2	Arsenic	10.1			P
7440-39-3	Barium	42.2	B	J	P
7440-41-7	Beryllium	0.63	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	26700		* J	P
7440-47-3	Chromium	9.3			P
7440-48-4	Cobalt	7.4	B	J	P
7440-50-8	Copper	36.9			P
7439-89-6	Iron	22100			P
7439-92-1	Lead	10.9			P
7439-95-4	Magnesium	7170		* J	P
7439-96-5	Manganese	792		E* J	P
7439-97-6	Mercury	0.03	U	U J	CV
7440-02-0	Nickel	22.9			P
7440-09-7	Potassium	1390			P
7782-49-2	Selenium	0.85	U	W UJ	F
7440-22-4	Silver	2.1	U	N UJ	P
7440-23-5	Sodium	218	B	J	P
7440-28-0	Thallium	0.85	U	W UJ	F
7440-62-2	Vanadium	13.0			P
7440-66-6	Zinc	147		N* J	P
	Cyanide	1.1	U		C
	Hexchrom	0.21	U	UJ	A

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

12-5-95

LAB_SAMPLE_ID: A5385804-CG000755
CLIENT_SAMPLE_ID: 229-BF02-5CS-004-01

8/10/95 amo

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

~~5CS00401~~
229-GFC1-5CS

Lab Name: RECRA ENVIRON Contract: NY94-393

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5385804

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 6 decanted: (Y/N) N Date Received: 07/19/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/21/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 07/29/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	3.5	U
72-55-9	4,4'-DDE	3.5	U
72-20-8	Endrin	3.5	U
33213-65-9	Endosulfan II	3.5	U
72-54-8	4,4'-DDD	3.5	U
1031-07-8	Endosulfan sulfate	3.5	U
50-29-3	4,4'-DDT	3.5	U
72-43-5	Methoxychlor	18	U
53494-70-5	Endrin ketone	3.5	U
7421-93-4	Endrin aldehyde	3.5	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	1.8	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

12-5-95

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

000022
Client No.

229-BF01-5DB-005-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5385801

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H7872.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. _____ Heated Purge: Y Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

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

11-29-95

000023

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

229-BF01-5DB-005-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5385801

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H7872.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. _____ Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	Compound Name	RT	Est. Conc.	Q
1.	UNKNOWN	9.03	8	J

FORM IE - GC/MS VOA TIC

11-23-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000043
Client No.

229-BF01-5DB-005-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5385801

Sample wt/vol: 890.00 (g/mL) ML Lab File ID: Z23884.RR

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/25/95

Injection Volume: 2.00(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl) ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,3,5-Trichlorophenol	28	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	28	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	28	U

7-9-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

C00044
Client No.

229-BF01-5DB-005-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5385801

Sample wt/vol: 890.00 (g/mL) ML Lab File ID: Z23884.RR

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/25/95

Injection Volume: 2.00(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	28	U
100-02-7	4-Nitrophenol	28	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenyl ether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	28	U
534-52-1	4,6-Dinitro-2-methylphenol	28	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	28	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

1-29-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000045
Client No.

229-BF01-5DB-005-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5385801

Sample wt/vol: 890.00 (g/mL) ML Lab File ID: Z23884.RR

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/21/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/25/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NO.	Compound Name	RT	Est. Conc.	Q
1.		UNKNOWN	6.17	R ~~3~~	~~BJ~~

11-29-95

NYSDEC-ASP

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

~~501~~ 229-BF01-5DB-005-01-R

Lab Name: RECRA_ENVIRONMENTAL_INC._ Contract: NY94-393__
Lab Code: RECNY_ Case No.: 151SR SAS No.: _____ SDG No.: 229F1_
Matrix (soil/water): WATER Lab Sample ID: 0611
Level (low/med): LOW__ Date Received: 07/19/95
% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	5.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	40.0	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	300	U		P
7439-96-5	Manganese	5.0	U		P
7439-97-6	Mercury	0.20	~~U~~	UJ	CV
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	4.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	5.0	U		P
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	10.0	U		P
	Cyanide				NR
	Hexchrom	10.0	~~U~~	UJ	A

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
LAB_SAMPLE_ID: _A5385801-CG000756_____
CLIENT_SAMPLE_ID: _229-BF01-5DB-005-01-RS_____
REDIGESTION_NUMBER: _0863_____ D 8/10/95 imo

000060

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

229-BFG1-5DB-~~5GB00501~~ D 8/10/95 dmo

Lab Name: RECRA ENVIRON Contract: NY94-393

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5385801

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/19/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/21/95

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/28/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

000028
Client No.

229-BF02-5DB-006-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5393302

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H7891.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: not dec. _____ Heated Purge: Y Date Analyzed: 07/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

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

#CJ

11-29-95

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

Q00029
Client No.

229-BF02-5DB-006-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5393302

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H7891.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: not dec. _____ Date Analyzed: 07/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	Compound Name	RT	Est. Conc.	Q
1.	~~ORGANOSILICON COMPOUND~~	~~21.95~~	R ~~9~~	~~J~~

FORM IE - GC/MS VOA TIC

11-28-95

000052

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

Client No.
229-BF02-5DB-006-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5393302

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: Z23921.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/28/95

Injection Volume: 2.00(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U CJ
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,3,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U

MT 8-9-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000053

Client No.

229-BF02-5DB-006-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5393302

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: Z23921.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/28/95

Injection Volume: 2.00(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	~~U~~ UJ
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenyl ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	~~U~~ UJ
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	~~U~~ UJ
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

11-29-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000054

Client No.

229-BF02-5DB-006-01-RS

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5393302

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: Z23921.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	Compound Name	RT	Est. Conc.	Q

11-29-95

NYSDEC-ASP

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

~~601~~ 229-BF02-5DB-006-01-RS

Lab Name: RECRA_ENVIRONMENTAL_INC._ Contract: NY94-393__
Lab Code: RECNY_ Case No.: 151SR SAS No.: _____ SDG No.: 229F1_
Matrix (soil/water): WATER Lab Sample ID: 0612
Level (low/med): LOW__ Date Received: 07/24/95
% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	5.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	3060	B		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	40.0	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	300	U		P
7439-96-5	Manganese	5.0	U		P
7439-97-6	Mercury	0.20	~~U~~	UJ	CV
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	4.0	~~U~~	MUJ	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	5.0	U		P
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	54.4			P
	Cyanide				NR
	Hexchrom	10.0	~~U~~	UJ	A

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
LAB_SAMPLE_ID:_A5393302-SG000756
CLIENT_SAMPLE_ID:_229-BF02-5DB-006-01-RS
REDIGESTION_NUMBER:_0862

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 000061

229-BF02-5DB ~~5DB00601~~

Lab Name: RECRA ENVIRON Contract: NY94-393

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5393302

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/24/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/28/95

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.015	J
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.019	~~JP~~ J
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

12-5-97

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

000026

Client No.

229-BF02-5CS-007-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393303

Sample wt/vol: 5.03 (g/mL) G Lab File ID: H7893.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: not dec. 6.8 Heated Purge: Y Date Analyzed: 07/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
108-88-3	Toluene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethyl Benzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylenes (total)	11	U

#5

11-28-95

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000027

Client No.

229-BF02-5CS-007-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393303

Sample wt/vol: 5.03 (g/mL) G Lab File ID: H7893.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: not dec. 6.8 Date Analyzed: 07/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	Compound Name	RT	Est. Conc.	Q

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000049
Client No.

229-BF02-5CS-007-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393303

Sample wt/vol: 30.27 (g/mL) G Lab File ID: Z23928.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: 7.1 decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/01/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,3,5-Trichlorophenol	850	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	850	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	850	U

TENNECO GAS
ASP91-2 - SEMIVOLATILES
ANALYSIS DATA SHEET

000050
Client No.

229-BF02-5CS-007-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393303

Sample wt/vol: 30.27 (g/mL) G Lab File ID: Z23928.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: 7.1 decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/01/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	850	U
100-02-7	4-Nitrophenol	850	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenyl ether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	850	U
534-52-1	4,6-Dinitro-2-methylphenol	850	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	850	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	350 ~~40~~	~~BJ~~ U
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	~~U~~ UJ
191-24-2	Benzo(g,h,i)perylene	350	~~U~~ UJ

11-24-95

TENNECO GAS
ASP91-2 - SEMIVOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000051
Client No.

229-BF02-5CS-007-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: AS393303

Sample wt/vol: 30.27 (g/mL) G Lab File ID: Z23928.RR

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: 7.1 decanted: (Y/N) N Date Extracted: 07/27/95

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/01/95

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NO.	Compound Name	RT	Est. Conc.	Q
1.		SUSPECTED ALDOL COND. PROD.	4.10	R ~~180~~	~~ABJ~~
2.		UNKNOWN	4.37	R ~~180~~	~~BJ~~
3.		UNKNOWN ALKANE	6.92	94	J
4.		UNKNOWN ALKANE	7.73	120	J
5.		UNKNOWN ACID	9.42	110	J
6.		UNKNOWN ALKANE	9.50	160	J
7.		UNKNOWN ALKANE	9.92	99	J
8.		UNKNOWN ALKANE	10.40	260	J
9.		UNKNOWN ALKANE	12.10	150	J
10.		UNKNOWN ALKANE	12.92	140	J
11.		UNKNOWN ALKANE	13.68	130	J
12.		UNKNOWN ALKANE	15.17	230	J
13.		UNKNOWN ALKANE	15.87	200	J
14.		UNKNOWN ALKANE	16.53	230	J
15.		UNKNOWN	16.60	110	J
16.		UNKNOWN ALKANE	17.17	160	J
17.		UNKNOWN ALKANE	17.80	180	J
18.		UNKNOWN ALKANE	18.40	150	J
19.		UNKNOWN ALKANE	18.98	130	J
20.		UNKNOWN ALKANE	19.55	84	J

11-29-95

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

~~701~~ 229-BF02-5CS-007-01

Lab Name: RECRA_ENVIRONMENTAL_INC._ Contract: NY94-393__
Lab Code: RECNY_ Case No.: 151SR SAS No.: _____ SDG No.: 229F1_
Matrix (soil/water): SOIL_ Lab Sample ID: 0587
Level (low/med): LOW__ Date Received: 07/24/95
% Solids: _92.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6580			P
7440-36-0	Antimony	2.1	~~U~~	~~N~~ J	P
7440-38-2	Arsenic	7.8			P
7440-39-3	Barium	40.7	B	J	P
7440-41-7	Beryllium	0.64	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	27700		~~*~~ J	P
7440-47-3	Chromium	7.9			P
7440-48-4	Cobalt	5.3	B	J	P
7440-50-8	Copper	25.6			P
7439-89-6	Iron	18600			P
7439-92-1	Lead	9.2			P
7439-95-4	Magnesium	5440		~~*~~ J	P
7439-96-5	Manganese	575		~~E*~~ J	P
7439-97-6	Mercury	0.04	~~U~~	U J	CV
7440-02-0	Nickel	13.2			P
7440-09-7	Potassium	1270			P
7782-49-2	Selenium	0.87	U	~~W~~	F
7440-22-4	Silver	2.1	~~U~~	~~N~~ U J	P
7440-23-5	Sodium	249	B	J	P
7440-28-0	Thallium	0.87	~~U~~	~~WN~~ U J	F
7440-62-2	Vanadium	9.6	B	J	P
7440-66-6	Zinc	95.2		~~N*~~ U J	P
	Cyanide	0.93	U		C
	Hexchrom	0.20	~~U~~	U J	A

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:
LAB_SAMPLE_ID: A5393303-CG000755
CLIENT_SAMPLE_ID: 229-BF02-5CS-007-01

000059

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

~~5CS00701~~
229-BFG2-5CS-007-01

Lab Name: RECRA ENVIRON Contract: NY94-393

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) SOIL Lab Sample ID: A5393303

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) N Date Received: 07/24/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/27/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/01/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	3.5	U
72-55-9	4,4'-DDE	3.5	U
72-20-8	Endrin	3.5	U
33213-65-9	Endosulfan II	3.5	U
72-54-8	4,4'-DDD	3.5	U
1031-07-8	Endosulfan sulfate	3.5	U
50-29-3	4,4'-DDT	3.5	U
72-43-5	Methoxychlor	18	U
53494-70-5	Endrin ketone	3.5	U
7421-93-4	Endrin aldehyde	3.5	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	1.8	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

12-5-95

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

000030

Client No.

~~229-TRIP BLANK~~
229-BFQ1-SDB-008-TB

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5385803

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H7873.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. _____ Heated Purge: Y Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

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

11-28-95

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000031
Client No.

~~229-TRIP BLANK~~
229-BF01-5DB-0005-TB

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5385803

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H7873.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/19/95 07/19/95

% Moisture: not dec. _____ Date Analyzed: 07/20/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NO.	Compound Name	RT	Est. Conc.	Q
1.		UNKNOWN	5.78	11	J
2.		UNKNOWN	9.10	8	J
3.		~~ORGANOSILICON COMPOUND~~	~~21.97~~	R ~~7~~	~~BJ~~

FORM IE - GC/MS VOA TIC

11-29-95

TENNECO GAS
ASP91-1 - VOLATILES
ANALYSIS DATA SHEET

000032
Client No.

~~Trip Blank~~
229-BFC2-506-009-TB

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5393304

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H7890.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: not dec. _____ Heated Purge: Y Date Analyzed: 07/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

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

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

11-29-95

TENNECO GAS
ASP91-1 - VOLATILES
TENTATIVELY IDENTIFIED COMPOUNDS

000033

~~Trip Blank~~
229-BFC2-50B-009-TB

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229F1

Matrix: (soil/water) WATER Lab Sample ID: A5393304

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H7890.MSQ

Level: (low/med) LOW Date Samp/Recv: 07/24/95 07/24/95

% Moisture: not dec. _____ Date Analyzed: 07/25/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	Compound Name	RT	Est. Conc.	Q

Attachment 3

TENNECO GAS
METHOD 8240 - TCLP HSL LIST VOLATILE ORGANICS
ANALYSIS DATA SHEET

000006

Client No.

229-MH01-SDD-056-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229

Matrix: (soil/water) SOIL Lab Sample ID: A5451001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: K9406.MSQ

Level: (low/med) LOW Date Samp/Recv: 08/23/95 08/23/95

% Moisture: not dec. 100.0 Heated Purge: N Date Analyzed: 08/31/95

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 10.00

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

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

CAS NO.	COMPOUND		Q
67-64-1	Acetone	50	U
71-43-2	Benzene	8	U
75-27-4	Bromodichloromethane	8	U
75-25-2	Bromoform	8	U
74-83-9	Bromomethane	10	U
78-93-3	2-Butanone	R ~~56~~	U
75-15-0	Carbon Disulfide	8	U
56-23-5	Carbon Tetrachloride	8	U
108-90-7	Chlorobenzene	8	U
75-00-3	Chloroethane	10	U
67-66-3	Chloroform	8	U
74-87-3	Chloromethane	10	U
124-48-1	Dibromochloromethane	8	U
75-34-3	1,1-Dichloroethane	8	U
107-06-2	1,2-Dichloroethane	8	U
75-35-4	1,1-Dichloroethene	8	U
540-59-0	1,2-Dichloroethene (total)	8	U
78-87-5	1,2-Dichloropropane	8	U
10061-01-5	cis-1,3-Dichloropropene	8	U
10061-02-6	trans-1,3-Dichloropropene	8	U
100-41-4	Ethyl Benzene	8	U
591-78-6	2-Hexanone	50	U
75-09-2	Methylene Chloride	13	
108-10-1	4-Methyl-2-pentanone	40	U
100-42-5	Styrene	8	U
79-34-5	1,1,2,2-Tetrachloroethane	8	U
127-18-4	Tetrachloroethene	8	U
108-88-3	Toluene	8	U
71-55-6	1,1,1-Trichloroethane	8	U
79-00-5	1,1,2-Trichloroethane	8	U
79-01-6	Trichloroethene	8	U
108-05-4	Vinyl acetate	10	U
75-01-4	Vinyl Chloride	10	U
1330-20-7	Xylenes (total)	8	U

11-27-95

TENNECO GAS

METHOD 8270 - TCLP HSL LIST SEMI-VOLATILE ORGANICS
ANALYSIS DATA SHEET

000007
Client No.

229-MH01-SDD-056-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229

Matrix: (soil/water) SOIL Lab Sample ID: A5451001

Sample wt/vol: 250.00 (g/mL) ML Lab File ID: 22041Y.MSQ

Level: (low/med) LOW Date Samp/Recv: 08/23/95 08/23/95

% Moisture: 100.0 decanted: (Y/N) N Date Extracted: 08/28/95

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/30/95

Injection Volume: 1.00(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
83-32-9	Acenaphthene	R ~~10~~	U
208-96-8	Acenaphthylene	R ~~10~~	U
120-12-7	Anthracene	R ~~10~~	U
56-55-3	Benzo(a)anthracene	R ~~10~~	U
205-99-2	Benzo(b)fluoranthene	R ~~10~~	U
207-08-9	Benzo(k)fluoranthene	R ~~10~~	U
191-24-2	Benzo(g,h,i)perylene	R ~~10~~	U
50-32-8	Benzo(a)pyrene	R ~~10~~	U
65-85-0	Benzoic acid	50	U
100-51-6	Benzyl alcohol	16	U
111-91-1	bis(2-Chloroethoxy)methane	R ~~16~~	U
111-44-4	bis(2-Chloroethyl) ether	R ~~10~~	U
108-60-1	2,2'-oxybis(1-Chloropropane)	R ~~10~~	U
117-81-7	bis(2-Ethylhexyl)phthalate	R ~~10~~	U
101-55-3	4-Bromophenyl-phenylether	R ~~16~~	U
85-68-7	Butylbenzylphthalate	R ~~10~~	U
106-47-8	4-Chloroaniline	R ~~10~~	U
59-50-7	4-Chloro-3-methylphenol	16	U
91-58-7	2-Chloronaphthalene	R ~~10~~	U
95-57-8	2-Chlorophenol	16	U
7005-72-3	4-Chlorophenyl-phenyl ether	R ~~16~~	U
218-01-9	Chrysene	R ~~10~~	U
53-70-3	Dibenz(a,h)anthracene	R ~~10~~	U
132-64-9	Dibenzofuran	R ~~10~~	U
84-74-2	Di-n-butylphthalate	R ~~10~~	U
95-50-1	1,2-Dichlorobenzene	R ~~10~~	U
541-73-1	1,3-Dichlorobenzene	R ~~10~~	U
106-46-7	1,4-Dichlorobenzene	R ~~10~~	U
91-94-1	3,3'-Dichlorobenzidine	R ~~20~~	U
120-83-2	2,4-Dichlorophenol	16	U
84-66-2	Diethylphthalate	R ~~10~~	U
105-67-9	2,4-Dimethylphenol	8	J N

FORM I - GC/MS BNA

11-27-95

TENNECO GAS
METHOD 8270 - TCLP HSL LIST SEMI-VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.: 229-MH01-5DD-056-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229

Matrix: (soil/water) SOIL Lab Sample ID: A5451001

Sample wt/vol: 250.00 (g/mL) ML Lab File ID: 22041Y.MSQ

Level: (low/med) LOW Date Samp/Recv: 08/23/95 08/23/95

% Moisture: 100.0 decanted: (Y/N) N Date Extracted: 08/28/95

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/30/95

Injection Volume: 1.00(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
131-11-3	Dimethylphthalate	R ~~10~~	~~U~~
534-52-1	4,6-Dinitro-2-methylphenol	50	U
51-28-5	2,4-Dinitrophenol	50	U
121-14-2	2,4-Dinitrotoluene	R ~~10~~	~~U~~
606-20-2	2,6-Dinitrotoluene	R ~~10~~	~~U~~
117-84-0	Di-n-octylphthalate	R ~~10~~	~~U~~
206-44-0	Fluoranthene	R ~~10~~	~~U~~
86-73-7	Fluorene	R ~~10~~	~~U~~
118-74-1	Hexachlorobenzene	R ~~10~~	~~U~~
87-68-3	Hexachlorobutadiene	R ~~10~~	~~U~~
77-47-4	Hexachlorocyclopentadiene	R ~~10~~	~~U~~
67-72-1	Hexachloroethane	R ~~10~~	~~U~~
193-39-5	Indeno(1,2,3-cd)pyrene	R ~~10~~	~~U~~
78-59-1	Isophorone	R ~~10~~	~~U~~
91-57-6	2-Methylnaphthalene	R ~~10~~	~~U~~
95-48-7	2-Methylphenol	16	U
106-44-5	4-Methylphenol	8	J N
91-20-3	Naphthalene	R ~~10~~	~~U~~
88-74-4	2-Nitroaniline	R ~~50~~	~~U~~
99-09-2	3-Nitroaniline	R ~~50~~	~~U~~
100-01-6	4-Nitroaniline	R ~~50~~	~~U~~
98-95-3	Nitrobenzene	R ~~10~~	~~U~~
88-75-5	2-Nitrophenol	16	U
100-02-7	4-Nitrophenol	50	U
86-30-6	N-Nitrosodiphenylamine	R ~~10~~	~~U~~
621-64-7	N-Nitroso-di-n-propylamine	R ~~10~~	~~U~~
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	R ~~10~~	~~U~~
108-95-2	Phenol	10	U
129-00-0	Pyrene	R ~~10~~	~~U~~
120-82-1	1,2,4-Trichlorobenzene	R ~~10~~	~~U~~
95-95-4	2,4,5-Trichlorophenol	25	U

MB 8-27-95

TENNECO GAS
METHOD 8270 - TCLP HSL LIST SEMI-VOLATILE ORGANICS
ANALYSIS DATA SHEET

000009
Client No.

229-MH01-SDD-056-01

Lab Name: Recra Environmental Contract: _____

Lab Code: RECNY Case No.: 151SR SAS No.: _____ SDG No.: 229

Matrix: (soil/water) SOIL Lab Sample ID: A5451001

Sample wt/vol: 250.00 (g/mL) ML Lab File ID: 22041Y.MSQ

Level: (low/med) LOW Date Samp/Recv: 08/23/95 08/23/95

% Moisture: 100.0 decanted: (Y/N) N Date Extracted: 08/28/95

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/30/95

Injection Volume: 1.00(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
88-06-2	2,4,6-Trichlorophenol	16	U

TENNECO

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

229-~~01~~ MH01-SD0-056-01

Lab Name: RECRA_ENVIRONMENTAL_INC._ Contract: NY94-393__

Lab Code: RECNY_ Case No.: 5017_ SAS No.: _____ SDG No.: 229___

Matrix (soil/water): WATER Lab Sample ID: 2214

Level (low/med): LOW__ Date Received: 08/23/95

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_		_		NR
7440-36-0	Antimony_		_		NR
7440-38-2	Arsenic__	4.0_	U		F_
7440-39-3	Barium___	865_	_		P_
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__	21.0_	_	J	P_
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_	257_	_		P_
7440-48-4	Cobalt___		_		NR
7440-50-8	Copper___		_		NR
7439-89-6	Iron____		_		NR
7439-92-1	Lead____	30.0_	U		P_
7439-95-4	Magnesium		_		NR
7439-96-5	Manganese		_		NR
7439-97-6	Mercury__	0.20_	U		CV
7440-02-0	Nickel___		_		NR
7440-09-7	Potassium		_		NR
7782-49-2	Selenium_	4.0_	U		F_
7440-22-4	Silver___	0.50_	U		F_
7440-23-5	Sodium___		_		NR
7440-28-0	Thallium_		_		NR
7440-62-2	Vanadium_		_		NR
7440-66-6	Zinc____		_		NR
_____	Cyanide__		_		NR
_____	_____		_		___

Color Before: YELLOW___ Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID: __A5451001-CGA00180_____

CLIENT_SAMPLE_ID: __229-MH01-056-01_____

TCLP_EXTRACT_____

_____

FORM I - IN

11-27-95


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