SITE INVESTIGATION REPORT
for the TARRYTOWN SITE
Tarrytown, New York

PREPARED BY

PARSONS ENGINEERING SCIENCE, INC.

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PARSONS

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SITE INVESTIGATION REPORT FOR THE TARRYTOWN SITE
Tarrytown, New York

Prepared For:

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EXECUTIVE SUMMARY

PROJECT BACKGROUND

Anchor Motor Freight, Inc. (Anchor), a subsidiary of Leaseway Transportation Corporation, owned and operated a trucking terminal located in Tarrytown, New York (site). Anchor terminated operations at the terminal in 1996 and is in the process of selling the property.

In 1990, Anchor discovered a fuel release from its underground storage tank (UST) system. During the investigation, constituents were detected in an upgradient monitoring well that suggested the possible presence of another source. Further investigation into historical uses of the site indicated that a manufactured gas plant (MGP) had been operated on a portion of the site by Westchester Lighting Company, a predecessor of Consolidated Edison Company of New York, Inc. (Con Edison). In the summer of 1996, a sheen was observed by NYSDEC and the U.S. Coast Guard (USCG) in the Hudson River approximately 100 yards west of the site. A boom was installed in July 1996 by Anchor to contain the sheen until further action could be evaluated. In November 1996, Con Edison took over operation of the boom.

Con Edison agreed to conduct a site investigation to determine if the former MGP has impacted the site and to identify the potential extent of the impacted area. This report presents results of the site investigation.

PROJECT OBJECTIVES

The objectives of this project were to:

- Determine if sources of MGP residuals are present in the vicinity of former MGP structures, and if present, characterize the source material;
- Determine if soils and groundwater have been impacted by operations of the former MGP, and if impacted, characterize the nature and extent of the impacts;
- Determine how constituents detected in the former MGP area differ from other potential on-site and off-site sources and background conditions.
- Characterize sediments in a localized portion of the Hudson River west of the site to determine the potential source of the sheen.

FIELD INVESTIGATION PROGRAM

The investigation at the site was conducted in two parts and consisted of the following activities:

- Excavation of 11 test pits

- Conducting 30 soil borings
- Installation of 7 monitoring wells
- Measuring water levels
- Collection of 62 soil samples
- Collection of 6 groundwater samples
- Conducting 12 river sediment borings
- Collection of 25 sediment samples
- Surveying

PHYSICAL CHARACTERISTICS OF THE SITE

The site is located in an industrialized and commercial area approximately one-half mile south of a former General Motors plant. It is located on portions of land that was filled in and built out into the Hudson River beginning in the early 1900's. Subsurface soils at the site consist of fill, which overlies silt with fine sand, which overlies a clayey silt. The fill is thinnest (5 feet) in the eastern portion of the site and thickest (19 feet) in the western portion of the site. Groundwater occurs at depths between 3 to 7 feet and flows to the west, discharging to the Hudson River. Groundwater is not used as a source of potable water in the vicinity of the site.

NATURE AND EXTENT OF IMPACTS

Soils

Soils above the water table do not appear to be significantly impacted by dense nonaqueous phase liquid (DNAPL), benzene, toluene, ethylbenzene and xylene (BTEX) or polynuclear aromatic hydrocarbons (PAHs). This finding is consistent with findings at other former manufactured gas plant (MGP) sites. Subsurface soils at and below the water table on the site and on the County Asphalt property have been impacted primarily by light nonaqueous phase liquid (LNAPL), DNAPL, BTEX, and PAHs. DNAPL was visually observed in varying amounts in soils on the northern portion of the site and on a portion of the County Asphalt property. DNAPL was observed at depths between 6 and 14 feet on site and at depths between 10 and 25 feet on County Asphalt property. The distribution of DNAPL appears to be coincident with the location of the former MGP. Zones saturated with DNAPL were observed within two former gas holders, in the vicinity of a former tar well, and in the northwest corner of the site extending under the County Asphalt building. Only traces of DNAPL were observed in limited intervals in soils surrounding the potential source areas. This distribution suggests that DNAPL has not migrated horizontally a significant distance from its source area. This is consistent with the DNAPL mobility assessment which indicates that the none of the samples were found to contain mobile DNAPL. Fingerprinting results indicate that the DNAPL is characteristic of MGP-related coal tar residues.

LNAPL was visually observed in the southern portion of the site and in an area south of the asphalt plant. The LNAPL in the southern portion of the site is located in the vicinity of Anchor's former USTs and pump island. LNAPL in the area south of the

asphalt plant is coincident with the location of a former diesel fuel UST owned by Valente Industries. Fingerprinting results indicate that the LNAPL is characteristic of a weathered middle weight fuel oil. There is no significant MGP residue associated with the LNAPL at the site.

The distribution of BTEX and PAHs in soils appears to be consistent with the distribution of LNAPL and DNAPL. Highest BTEX and PAH concentrations were detected in the northern portion of the site in the vicinity of the two former gas holders, the former tar well, and in the northwest corner of the site extending under the County Asphalt building. Slightly lower BTEX and PAH concentrations were detected in areas where LNAPL was observed. Significantly lower BTEX and PAH concentrations were detected in surrounding soils where only traces of DNAPL were observed.

Groundwater

Groundwater at the site has been impacted primarily by BTEX and PAHs. The distribution of BTEX and PAHs appears to be consistent with the distribution of LNAPL and DNAPL. Highest concentrations were detected in the vicinity of the former MGP. Slightly lower concentrations were detected in the vicinity where fuel oil was observed. Low concentrations were detected in the downgradient wells near the Hudson River. As noted in Section 4 groundwater migrating from the site does not have any significant impact on the surface water quality in the Hudson River.

Sediments

Visual observations and analytical results indicate that sediments in a localized area within the Hudson River along the retaining wall have been impacted by DNAPL, BTEX and PAHs. The impacted area is approximately 150 feet long by 30 feet wide and 4 to 7 feet deep, and coincides with the area where sheens have been observed on the water surface. This relationship suggests that DNAPL in the sediments may be the source of the sheens observed at the water surface. Fingerprinting results indicate that the DNAPL is similar to the DNAPL observed onsite and is characteristic of MGP-related tar. The distribution of DNAPL onsite and on the County Asphalt property indicates that the DNAPL has not migrated to the river sediments through the soils. The 4-inch and 6-inch pipes encountered in the test pits on County Asphalt property are not a continuing pathway or source of contaminants to the river at the present time.

CONCLUSIONS

- DNAPL was observed in varying amounts in soils at depths between 6 to 14 feet on the northern portion of the site and at depths between 10 and 25 feet on a portion of the County Asphalt property.
- Zones saturated with DNAPL were observed within two former gas holders, in the vicinity of a former tar well, and in the northwest corner of the site extending under the County Asphalt building. The DNAPL does not appear to have migrated horizontally a significant distance from its source. Only traces of

DNAPL were observed in limited intervals in soils surrounding the potential sources. Fingerprint results indicate that DNAPL in the soils is characteristic of MGP-related tars

- LNAPL was observed in the southern portion of the site in the vicinity of Anchor's former USTs and pump island at depths between 3 and 10 feet. LNAPL was also observed in an area south of the County Asphalt Plant in the vicinity of a former diesel fuel UST owned by Valente Industries. Fingerprint results indicate that the LNAPL is characteristic of weathered middle weight fuel oil and does not appear to be related to the former MGP operation.
- The distribution of BTEX and PAHs in soils is generally consistent with the distribution of visual LNAPL and DNAPL. Highest BTEX and PAH concentrations were detected in the vicinity of the former gas holders, tar well, and in the northwest corner of the site extending under the County Asphalt building. Slightly lower BTEX and PAH concentrations were detected in the areas where fuel oil was observed.
- The distribution of BTEX and PAHs in groundwater is similar to what is seen in the saturated subsurface soils. Low concentrations of BTEX and PAHs were detected in the downgradient wells near the Hudson River. Groundwater discharging to the Hudson River is not significantly impacting surface water quality.
- DNAPL was observed in sediments in a localized area of the Hudson River adjacent to County Asphalt property. The impacted area is approximately 150 feet long by 30 feet wide and 4 to 7 feet deep, and coincides with the approximate area where sheens have been observed on the water surface. This relationship suggests that localized DNAPL in the river sediments appears to be the source of the sheens observed on the water surface.
- Fingerprint analysis indicates that DNAPL in the river sediments is similar to DNAPL observed on the site and is characteristic of MGP-related tars. The distribution of DNAPL onsite and on the County Asphalt property indicates that DNAPL has not migrated to the river sediments through the soils. The 4-inch and 6-inch pipes encountered in the test pits on County Asphalt property are not a continuing pathway or source of contaminants to the river at the present time.
- BTEX and PAHs were detected primarily in the area where sediments containing DNAPL were observed.
- The impact of subsurface soils and groundwater on public health is limited by several factors: (1) the entire site is paved and soils above the water table are not significantly impacted by DNAPL, BTEX or PAHs, (2) although a portion of the County Asphalt property is not paved, DNAPL was found at depths greater than 10 feet, (3) access to saturated subsurface soils can be controlled, (4) groundwater near the site is not being used as a source of potable water, (5) groundwater does not appear to be impacting surface water quality in the Hudson River, and (6) DNAPL in the soils is not mobile.

- River sediment containing MGP-related tar may be affecting aquatic life within a very localized portion of the river bottom.

SECTION 1

INTRODUCTION

1.1 PROJECT BACKGROUND

Anchor Motor Freight, Inc. (Anchor), a subsidiary of Leaseway Transportation Corporation, owned and operated a trucking terminal located in Tarrytown, New York (site) from approximately 1940 to 1996. The terminal was dedicated to the transportation of automobiles manufactured by the nearby General Motors plant. In 1990, Anchor discovered a fuel release from its underground storage tank (UST) system and initiated investigation and remedial activities. During the investigation, constituents were detected in an upgradient monitoring well that suggested the possible presence of another subsurface source. Further investigation into historical uses of the site indicated that a manufactured gas plant (MGP) had been operated on a portion of the site from approximately 1873 to 1938. The MGP was operated by Westchester Lighting Company, a predecessor of Consolidated Edison Company of New York, Inc. (Con Edison).

In the summer of 1996, NYSDEC and the U.S. Coast Guard (USCG) observed an oil sheen in the Hudson River approximately 100 yards west of the Tarrytown site. The sheen occurred primarily during low tide and was localized to an area of approximately 300 feet long by 50 feet wide. A boom was installed in July 1996 by Anchor to contain the sheen at the water surface until further action could be evaluated. Samples of the oil sheen and the river bottom sediments were obtained by USCG, Parsons ES and Anchor. All samples exhibited contaminant signatures consistent with coal tar. In November 1996, Con Edison took over operation of the boom.

The local General Motors plant was closed in 1996. Accordingly, Anchor terminated operations at the terminal in 1996 and is in the process of selling the property. Anchor has requested that an amicable agreement be reached between Con Edison and Anchor to address the portion of the site potentially impacted by the former MGP. Con Edison agreed to conduct a site investigation to determine if the former MGP has impacted the site and to identify the potential extent of the impacted area. This report presents results of the Con Edison site investigation.

1.2 PROJECT OBJECTIVES

The objectives of this project were to:

- Determine if sources of MGP residuals are present in the vicinity of former MGP structures, and if present, characterize the source material;

- Determine if soils and groundwater have been impacted by operations of the former MGP, and if impacted, characterize the nature and extent of the impacts;
- Determine how constituents detected in the former MGP area differ from other potential on-site and off-site sources and background conditions.
- Characterize sediments in a localized portion of the Hudson River west of the site to determine the potential source of the sheen.

1.3 SITE BACKGROUND

1.3.1 Site Description

The site is located at One River Street in Tarrytown, New York approximately 100 yards from the east bank of the Hudson River (Figure 1.1). The site is currently abandoned and consists of two parcels of land that cover approximately 10 acres. One building, the maintenance garage, is located in the southeastern portion of the site (Figure 1.2). The remainder of the site is covered by asphalt pavement and is completely surrounded by a chain-link fence.

The site is located in an industrial/commercial area of Tarrytown approximately one-half mile south of the former General Motors plant. The site is bordered on the north by commercial properties, on the east by Railroad Avenue and the New York Central Railroad, on the south by West Main Street and Barrier Oil Company, and on the west by the County Asphalt Plant which is adjacent to the Hudson River.

To support the trucking operations, the Anchor facility contained a number of UST systems. Four 10,000-gallon USTs, two pump islands, and two wells for leak detection were located in the west-central portion of the site (Figure 1.2). Three of the USTs were reportedly installed in 1980 and were used to store diesel fuel. The other UST was reportedly installed in 1987 and was used to store gasoline. Five 8,000-gallon USTs were also located adjacent to the southwestern corner of the maintenance building. These were used to store antifreeze, gear oil, waste oil, motor oil, and hydraulic oil.

1.3.2 Site History

Sanborn Fire Insurance maps indicate that between 1873 and 1940 portions of the site and surrounding areas were occupied by various industries including an MGP; lumber, porcelain tile, pottery and paint shops; brickyards; coal storage; meat processing plants; a planning mill; distilling and bottling companies; hotels; livery stables; and bulk oil storage facilities.

The Sanborn maps also indicate that the shoreline of the Hudson River in the vicinity of the site has moved westward by as much as 680 feet since 1903. Figure 1.3 illustrates the various shoreline locations since 1903. In 1903, the shoreline of the Hudson River was located in the western part of the site and consisted of a number of boat slips and

docks. Land was gradually added to the west by filling in the river until it reached its present location in approximately 1924.

The MGP was located on an east-west oriented parcel of land extending across the north-central portion of the site (Figure 1.2). The Tarrytown and Irvington Union Gas Light Company began manufactured coal gas production at the MGP in 1873. The 1887 Sanborn map indicates the MGP contained two large gas holders, a retort house, four retorts, a condenser building, a lime storage shed, a purifier house, and a coal shed. In 1893, Excelsior Electric Company added boilers and an electric house in the middle of the MGP.

The Sanborn map from 1898 indicates that ownership of the MGP and the electric house had changed to the Hudson River Gas and Electric Company. Additional retorts and an iron gas holder were added to the MGP in 1903. In 1909, the retorts were no longer present and were replaced by a generator house. A small oil tank was also present north of the easternmost gas holder. These features suggest a change in the gas manufacturing process from coal gas to oil gas production.

The 1915 Sanborn map indicates that ownership of the MGP had changed to the Westchester Lighting Company. The MGP has expanded to include oil tanks and a second iron gasholder to the west. In 1924, the two oldest gas holders were apparently converted to oil storage tanks suggesting continued oil gas production. A large new holder was also present at the corner of Railroad Avenue. The 1929-1931 map reflects a decline in production at the MGP and by 1938, the MGP was no longer operating (Rust, 1995).

The Standard Oil Company owned and operated a bulk oil storage facility on a portion of the site located east of the present maintenance garage from approximately 1903 to sometime after 1924 (Figure 1.2). Up to six large above ground oil storage tanks were located on this property in 1924. Ownership of the tank farm had changed to the Petroleum Heat & Power Company sometime prior to 1951. The tanks were no longer present on the 1970 Sanborn map.

Anchor Motor Freight Corporation occupied the property, which included the former MGP, in approximately 1940 and operated a trucking terminal at the site from approximately 1940 to 1996. The 1950 Sanborn map indicates that the area currently occupied by the maintenance garage, contained two buildings. One building was occupied by Unal Knitting and Weaving Corporation and the other by Watkins Auto Body Corporation. The 1970 Sanborn map indicates that a third building was added adjacent to the other two, and that all three buildings were now occupied by Tensulite Insulated Wire Company.

1.3.3 Summary of Previous Investigations on the Anchor Property

Seven site investigation, sampling, and/or remedial efforts have been conducted for Anchor at the site since discovery of the fuel release in 1990. These investigations are summarized below. Results from these efforts were used to develop the rationale for this investigation.

January 1991 Site Assessment

A site assessment was conducted in August 1990 following initiation of product recovery efforts for the fuel release (Metcalf & Eddy, 1991a). The site assessment included a soil gas survey, soil borings, monitoring well installation, and soil and groundwater sampling.

Forty-two on-site and forty-one off-site soil gas samples were collected and screened with an organic vapor analyzer (OVA) and an HNu photoionization detector (PID). Ten soil borings were installed at depths ranging from 5 feet to 31.5 feet below ground surface. Nine subsurface soil samples were collected and analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by USEPA Method 8020, and total petroleum hydrocarbons (TPH) by USEPA Method 503. Seven monitoring wells (MW-1 to MW-7) were installed in soil borings B-1 through B-7. Well MW-6 was installed adjacent to the release location, well MW-7 was installed in an assumed upgradient location, and wells MW-1 through MW-5 were installed along the east, south, and west boundaries of the site. Groundwater samples were collected from the only three wells (MW-4, MW-5, and MW-7) where no free product was observed. The groundwater samples were analyzed for BTEX and TPH.

Elevated soil gas concentrations were detected in the vicinity of the fuel release and west towards the boundary of the site. Elevated concentrations were also detected beyond the southwest boundary of the site along a buried utility trench along West Main Street. Soil borings indicated that a majority of contamination was observed in the upper five feet of the subsurface (the estimated depth to groundwater), with some visible soil contamination observed to a depth of 10 feet below grade at B-1 and B-2. BTEX and TPH were detected in the soil samples.

Free product was observed in monitoring MW-1, MW-2, MW-3, and MW-6. Free product thickness ranged from 0.16 feet in MW-3 to 2.4 feet in MW-6. BTEX was detected in groundwater samples from wells with no free product. The highest BTEX concentration was detected in MW-7.

March-July 1991 Remedial Action

A remedial action program was developed and implemented to address the free product associated with the fuel spill (Metcalf & Eddy, 1991b). To obtain hydraulic information, slug tests were conducted in six monitoring wells and a pump test was

conducted in one well. Results of the slug tests and pump test indicate that the fill and silty sand have a low hydraulic conductivity. The recommended remedial action at the site included installation of a trench drain system.

A trench drain system was installed along the western property line in July 1991 (Figure 1.2). The trench drain was 490 feet long and consisted of three 6-inch perforated PVC pipes set at different elevations in the trench (Metcalf & Eddy, 1991c). The 6-inch pipes drained to a collection manhole which was equipped with a floating product skimmer. Fluid pumped from the manhole was processed through an oil/water separator and carbon filtration system and the effluent was discharged to the sanitary sewer.

July 1994 Record Review

A Phase I record review of the site was conducted in 1991 for Anchor (Huntingdon, 1994). The record search included review of Sanborn Fire Insurance Maps, aerial photographs, interviews with persons familiar with site activities, and New York State Department of Environmental Conservation (NYSDEC) Spills Database review.

The record review data indicated the site has been used for a number of commercial and industrial applications since the mid- to late 1800's as documented in Section 1.3.2. An MGP occupied a portion of the site from the late 1880's to approximately 1938 (Figure 1.2). Anchor has occupied the site since approximately 1940. The data also indicate that a portion of the site was used for storage of petroleum products by the Standard Oil Company and for manufacturing of insulated wire products. The spill database identified one on-site release and two releases at Robinson Oil Company located north of the site.

July 1994 Geophysical Survey

An EM-31 geophysical survey was conducted across the site in July 1994 (Woodward-Clyde, 1994). The survey covered the entire site, with particular focus on the area west of the terminal building where refueling operations occurred, and north of the terminal building where the former MGP was located. The survey was conducted with a grid spacing ranging from 40-feet by 40-feet to 20-feet by 20-feet. Readings were taken at 10-foot intervals.

The survey identified several anomalies, including the pump island fueling components, the potential "foot print" of the former MGP facility in the north portion of the site, and the potential foot print of the former Standard Oil facility in the southeast portion of the site.

September 1994 Geoprobe® Subsurface Investigation

A Geoprobe® investigation was conducted across the site on July 28 and 29, 1994 (Metcalf & Eddy, 1994). The investigation included collection of eight down hole soil vapor samples and 24 soil head-space samples, 19 subsurface soil samples, and 9

groundwater samples. The 19 subsurface soil samples were analyzed for BTEX by Method 8020. Sixteen of the subsurface soil samples were also analyzed for polynuclear aromatic hydrocarbons (PAHs) and phenols by Method 8270. Four of the groundwater samples were analyzed for BTEX and methyltertiary butyl ether (MTBE), and four of the samples were analyzed for PAHs and phenols.

Results of the investigation suggested that four areas of elevated volatile organic compounds (VOCs) and PAHs were present at the site; one along the south half of the western site boundary, one near the northwest corner of the site, one directly north of the maintenance building, and one southwest of the maintenance building. Free-product was observed in two points north of the maintenance building and in two points along the western site boundary (south portion). Coal and/or ash were observed in subsurface soil samples at several locations in the northern half of the site. Maximum BTEX and PAH concentrations in soil and groundwater were detected in the northwest portion of the site. MTBE was detected at a point southwest of the maintenance building adjacent to Barrier Oil.

1993-1995 Monitoring Program

Anchor conducted monthly/quarterly well inspection and quarterly groundwater sampling at the site between 1993 and 1996. The well inspection efforts included inspection of monitoring well physical condition, water level and free-product measurements, and documentation of odor, if any. A review of quarterly groundwater sampling data indicates sampling focused primarily on wells MW-4, MW-5, and MW-7. Several samples were also collected from well MW-1. No data were collected for wells MW-2, MW-3, or MW-6. Sample analysis was limited primarily to BTEX and MTBE. Several sampling rounds also included analysis for dichlorobenzenes and TPH.

The analytical data indicate that maximum BTEX and TPH concentrations occur in well MW-7. Maximum MTBE concentrations were detected in well MW-5. Well MW-1 has shown the greatest reduction in BTEX and TPH concentrations since the inception of the remedial efforts.

July 1996 UST Removal

During the week of July 23, 1996, five 8,000-gallon USTs located near the southwest corner of the maintenance building and one 10,000-gallon UST located near the fuel island were excavated, cleaned, and disposed by Kleen Resources Inc. (Figure 1.2) (Rust, 1996). The five 8,000-gallon tanks formerly contained motor oil, hydraulic oil, waste oil, gear oil, and antifreeze. The 10,000-gallon tank formerly contained diesel fuel. Soil samples were collected from the excavation and analyzed for the NYSDEC STARS Memo #1 Petroleum-Contaminated Soil Guidance Policy (August 1992) compound list analytes.

A thin sheen was observed beneath the hydraulic oil tank and the diesel oil tank during excavation. No significant visible staining was observed on excavated soils.

Toluene, xylene, and naphthalene were detected at concentrations below the STARS TCLP Alternative Guidance values in analytical samples collected from the walls of the excavation with the five USTs. Naphthalene, n-butylbenzene, p-isopropyltolune, 1,2,3-trimethylbenzene, 1,3,5-trimethylbenzene, xylenes, and several PAHs were detected at concentrations above the STARS TCLP Alternative Guidance values in analytical samples collected from the walls of the diesel tank excavation.

September-October 1996 Geoprobe® Investigation

During September and October 1996, a site investigation was conducted for Anchor on the central and southern half of the site (RETEC, 1996). The investigation included gauging ten wells (MW-1 through MW-9 and MW-15) for oil and water elevations, conducting 19 Geoprobe® borings (G-202 through G-222), conducting four soil borings (SB-201 through SB-204), and installing one monitoring well (MW-15). A total of 20 soil samples were collected from the Geoprobe® and soil borings and analyzed for BTEX, SVOCs, As, Pb, Hg, Zn, and cyanide. Fifteen soil samples, a sediment and water sample from the Hudson River, and NAPL samples from MW-1, MW-3, MW-6, and MW-7 were submitted for fingerprint analyses. Groundwater samples were collected from ten monitoring wells (MW-1 through MW-9 and MW-15) and analyzed for As, Pb, Hg, Zn, and cyanide. In addition, samples from wells MW-2, MW-4, MW-5, and MW-15 were analyzed for BTEX and SVOCs.

Fingerprint analyses identified nine soil samples to be consistent with fuel oil (with a minor contribution of coal tar material in one sample), and four samples to be consistent with coal tar. The sediment sample and floating NAPL sample from MW-7 were characteristic of coal tar. NAPL samples from MW-3, MW-1, and MW-6 were characteristic of fuel oil. BTEX and/or PAHs were detected in soils almost throughout the area of the study and in groundwater at two locations (MW-2 and MW-5). Cyanide was detected in soil samples collected in the west-central portion and south-west corner of the property. Cyanide was also detected in groundwater from all but two of the wells sampled.

1.3.4 Summary of Previous Investigations on the County Asphalt Property

Two site investigations and one tank removal effort have also been conducted on the County Asphalt property. These investigations are summarized below.

December 1990 Subsurface Investigation

During December 1990, a subsurface investigation was conducted in the vicinity of a 5,000-gallon diesel fuel UST owned by Valente Industries (Metcalf & Eddy, 1991c). The UST was located just north of the corrugated metal Quonset hut (Figure 1.2). As part of the investigation, 15 soil borings were completed and one monitoring well was installed. The results of the soil borings indicated the presence of petroleum hydrocarbon

contamination in the area. A groundwater sample collected from the monitoring well contained BTEX at 169 parts per billion (ppb).

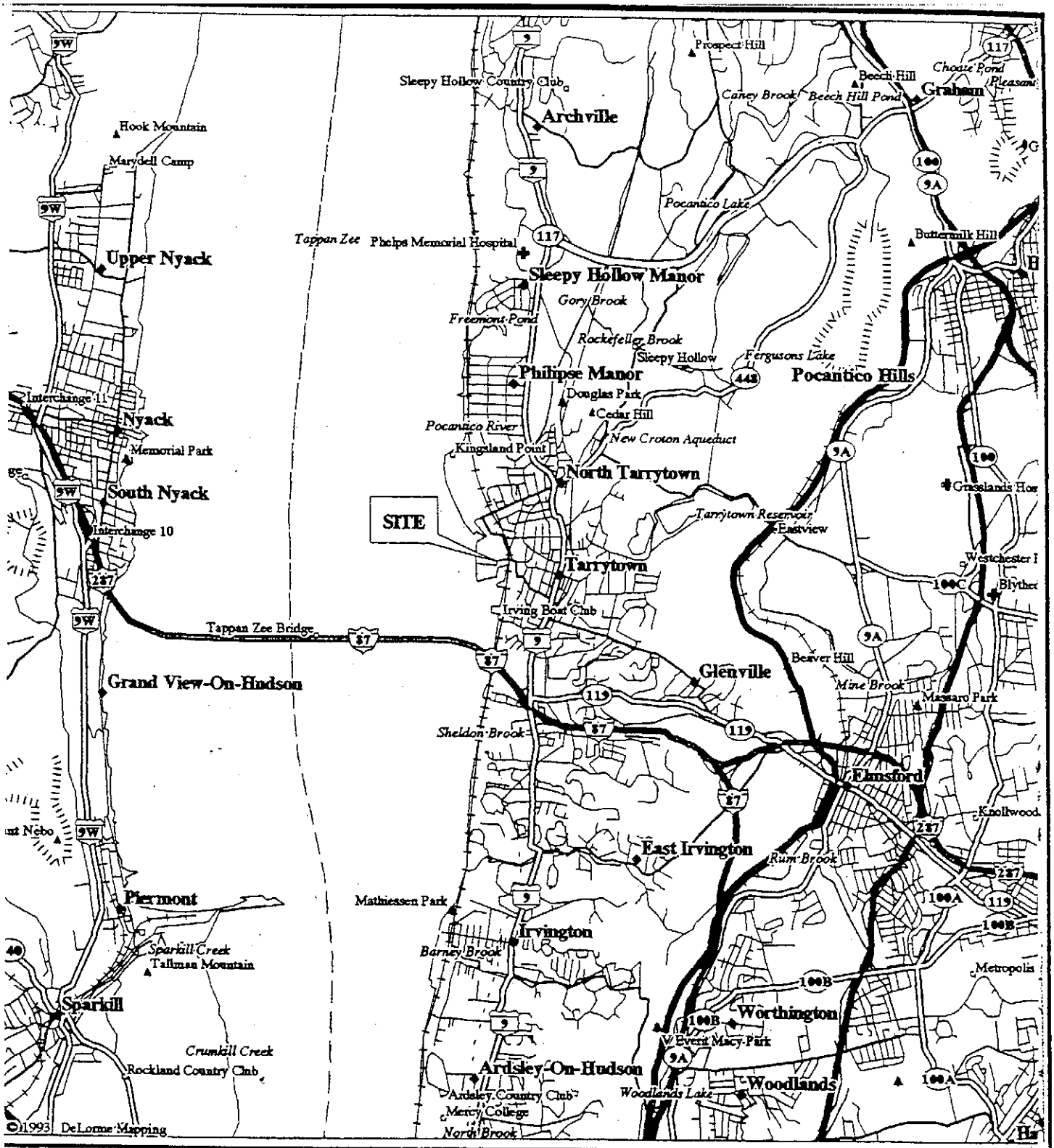
March 1991 UST Removal

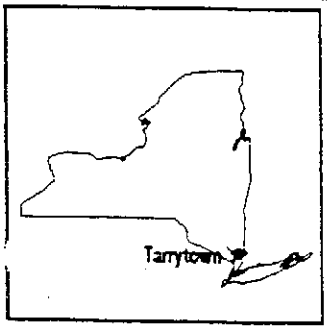
On March 8, 1991, the 5,000-gallon UST located just north of the corrugated metal Quonset hut was removed (Metcalf & Eddy, 1991d). During the excavation, approximately 3,000 yards of fuel-oil contaminated soil were removed from the tank excavation. In addition, a sheen of product was observed on the groundwater table encountered at a depth of about ten feet. A sample of the sheen was collected and fingerprinted. The fingerprinting analyses indicated that the sample was characteristic of diesel fuel. A total of 1,103 gallons of floating product were reportedly recovered from the excavation by a vacuum tanker. In order to continue the product recovery efforts, a trench drain system was subsequently installed north of the former UST location (Figure 1.2).

August 1996 Limited Investigation

During August 1996, Anchor performed a limited investigation in the area south of the asphalt plant. The investigation effort included conducting three soil borings, with two borings completed as monitoring wells (MW-8 and MW-9), and collection of soil and groundwater samples for BTEX and SVOC analyses. In addition, a sediment sample was collected from the Hudson River for fingerprint analyses.

No free-phase product was observed during the drilling. The analytical data for the soil samples indicated the presence of PAHs in all three borings, with the highest concentrations measured in MW-8. Ethylbenzene and xylenes were detected in a deeper soil sample from MW-9. Low levels of benzene, toluene, and xylenes and several PAHs were detected in the groundwater samples from MW-8 and MW-9. The sediment sample exhibited characteristics consistent with coal tar.





NEW YORK
QUADRANGLE LOCATION

LATITUDE: N41° 04' 43"
LONGITUDE: W73° 52' 00"

Scale 1:62,500 (at center)

1 Miles

2 KM

FIGURE 1.1

CONSOLIDATED EDISON COMPANY
OF NEW YORK

SITE LOCATION MAP

Tarrytown, New York

PARSONS ENGINEERING SCIENCE, INC.

DESIGN • RESEARCH • PLANNING

SECTION 2

FIELD INVESTIGATION PROGRAM

This section describes the field investigation program conducted at the Tarrytown site. The field investigation was conducted in two parts. The initial investigation was focused on the former MGP area on Anchor's property. After results of the initial investigation indicated potential offsite impacts, an access agreement was obtained and a second investigation was conducted on County Asphalt's property and in the Hudson River adjacent to the County Asphalt's property. The investigation was conducted in accordance with the NYSDEC-approved August 1996 Work Plan, Field Sampling Plan, Quality Assurance Project Plan, and Health and Safety Plan and the December 13, 1996 Work Plan for additional investigation activities. Any changes to the Work Plan were discussed with and approved by Con Edison prior to implementation.

The first part of the field investigation was initiated on September 9, 1996 and completed on September 20, 1996. The investigation consisted of the following activities:

- Test pit excavation
- Soil borings
- Monitoring well installation
- Groundwater sampling
- Non-aqueous phase liquid sampling
- Sediment sampling
- Water level measurements
- Surveying

The second part of the field investigation was conducted in accordance with the NYSDEC-approved January 1997 Work Plan Addendum. The field work was initiated on January 15, 1997 and completed on January 24, 1997, with the exception of the river sediment borings, which were initiated on April 21, 1997 and completed on April 25, 1997. River sediment borings were delayed until April due to cold weather and ice on the Hudson River. The investigation consisted of the following activities:

- Test pit excavation
- Geoprobe soil borings
- Monitoring well installation
- Groundwater sampling
- River sediment borings
- Surveying

Each of the tasks are described in the following sections.

2.1 TEST PIT EXCAVATIONS

Five test pits (TP01, TP02, TP2a, TP03, and TP04) were excavated during the initial investigation in the vicinity of the former gas holders (Figure 2.1). The objectives of the test pits were to determine if concentrated sources of MGP residuals are present and to collect samples to characterize the source material. Six additional test pits (TP05 through TP10) were excavated during the second investigation on the County Asphalt property (Figure 2.1). The objective of these test pits was to locate previously reported pipes which may lead to the river and may provide a pathway for contamination to migrate to the river.

Test pits were excavated with a backhoe to the top of the water table which was encountered at depths of 6 to 8 feet. The excavations were approximately 3 to 4 feet wide and varied in length from 8 to 25 feet. A photoionization detector (PID) and an oxygen meter/explosimeter were used during the excavation to monitor the breathing zone and the zone just above the excavation. Excavated material from each test pit was placed on plastic sheeting adjacent to the test pit. Each excavation was then visually described to document relevant horizons and other features, soil type, texture, moisture content, and staining. After completion, the removed material was placed back into the excavation and compacted. Test pits located in Anchor's parking lot were repaved. Test pit logs are presented in Appendix A.

One soil and five liquid samples were collected from the test pits and submitted to the laboratory for gas chromatography/flame ionization detector (GC/FID) fingerprint analysis and source characterization. Two soil samples were also collected and submitted to the laboratory for Toxicity Characteristic Leaching Procedure (TCLP) analysis of volatile organic compounds (VOCs).

2.2 SOIL BORING INSTALLATION AND SAMPLING

Thirteen soil borings (SB-01 to SB-13) were conducted on the Anchor property during the initial investigation (Figure 2.1). The objective of the borings was to characterize the horizontal and vertical extent of soil potentially impacted by the former MGP operations. Seventeen additional offsite borings (SB-14 to SB-30) were conducted on the County Asphalt property during the second investigation (Figure 2.1). The objective of these borings was to define the extent of offsite impacts related to the former MGP operations.

Borings were advanced to the top of the gray-green silty clay which was encountered at a depth of approximately 16 to 24 feet. Soil borings on the Anchor property were advanced with 4.25-inch, inner diameter (ID), hollow stem augers and standard penetration sampling techniques. Split-spoon samples were collected continuously from the ground surface to the bottom of the boring. Offsite soil borings on the County Asphalt property were advanced using a truck-mounted Geoprobe® sampling unit. Continuous soil samples were collected using a hydraulically-driven, three-inch diameter, four-foot

long macrocore sampler. Soil samples retrieved from each borehole were visually classified for soil type, grainsize, texture, moisture content, and visible evidence of staining. Each split-spoon sample was screened for the evolution of volatile organic compounds with a PID. Field screening results are summarized on the drilling records presented in Appendix A.

Two soil samples were selected from each boring for laboratory analysis. One sample was selected from the visibly impacted zone or zone with the highest PID readings. The second sample was selected near the bottom of the boring to define the vertical extent of impacted soils. The samples were analyzed for benzene, ethylbenzene, toluene, and xylene (BTEX), semivolatile organic compounds (SVOCs), arsenic, lead, mercury, zinc, and cyanide. A summary of the samples and the analytical parameters is presented in Table 2.1.

At the completion of drilling, all borings not converted to monitoring wells were grouted to the surface with a cement/bentonite grout. Holes in the pavement were repaired with asphalt patch. All downhole drilling equipment was decontaminated between each boring by steam cleaning. Drill cuttings and decontamination water were contained in 55-gallon drums and staged on-site for subsequent disposal.

2.3 MONITORING WELL INSTALLATION

Five soil borings were converted to monitoring wells (MW-10 to MW-14) on Anchor property during the initial investigation (Figure 2.1). The objective of the monitoring wells was to characterize the groundwater quality upgradient, close to, and downgradient of potential source areas. Two offsite soil borings were converted to monitoring wells (MW-15 and MW-16) on County Asphalt property during the second investigation (Figure 2.1). The objective of these wells was to characterize groundwater quality downgradient of the area impacted by the former MGP operations. The monitoring wells were installed at depths ranging from 14 to 20 feet and screened within the fill and gray-green silt and sand unit.

Monitoring wells were constructed with two-inch ID, flush joint PVC riser and 10 to 15 feet of 0.01-inch slotted screen. The screens were placed across the water table interface to allow for monitoring of light nonaqueous phase liquids (LNAPL). The annulus around the outside of the screen was backfilled with a filter pack consisting of clean silica sand. The filter pack extended approximately 0.5 to one foot above the top of the screen. Bentonite pellets were placed above the filter pack to form a minimum two-foot thick seal. The remainder of the annulus was filled with a bentonite/cement grout. Wells were contained in flush-mounted vaults to maintain accessibility to the area after completion. Monitoring well specifications are summarized on Table 2.2. Monitoring well construction logs are presented in Appendix A.

All newly-installed monitoring wells were developed using a peristaltic pump and dedicated, disposable tubing. The pH, temperature, conductivity and turbidity were

ieasured at various times during the development of each well and recorded in the field book. Each well was developed until the turbidity was 50 NTU or less, or until the pH, temperature and conductivity stabilized.

Drill cuttings and decontamination and development water were contained in 55-gallon drums and staged on-site for subsequent disposal.

2.4 GROUNDWATER SAMPLING

One groundwater sample was collected from each of four monitoring wells with no LNAPL (MW-7, MW-10, MW-11, and MW-12) during the initial investigation. The purpose of the sampling was to characterize shallow groundwater quality. Groundwater samples were collected from two new monitoring wells MW-15 and MW-16 during the second investigation. The purpose of this sampling was to characterize downgradient groundwater quality. Monitoring well locations are shown on Figure 2.1.

Prior to sample collection, the wells were purged by removing a minimum of three well volumes. Groundwater samples were collected with a dedicated, disposable, polyethylene bailer and dedicated polypropylene line. Prior to filling sample containers, the turbidity, pH, conductivity and temperature were measured and recorded in the field book. Samples were transferred directly from the bailer into labeled laboratory sample bottles. Following sample collection, groundwater samples were logged on a chain-of-custody form, placed in a cooler with ice, and shipped to NYTEST Environmental for analysis.

Groundwater samples were analyzed for BTEX, SVOCs, arsenic, lead, mercury, zinc, and cyanide. A summary of the samples and the analytical parameters is presented in Table 2.3. Groundwater sampling records are presented in Appendix B.

2.5 NON-AQUEOUS PHASE LIQUID SAMPLING

Non-aqueous phase liquid (NAPL) samples were collected from three monitoring wells (MW-03, MW-13, and MW-14) and one soil boring (SB-10). The objective of the sampling was to characterize and fingerprint the NAPL and compare it with potential source material.

NAPL samples from the monitoring wells were collected with a clear dedicated, disposable, polyethylene bailer and dedicated polypropylene line. Following sample collection, groundwater samples were logged on a chain-of-custody form, placed in a cooler with ice, and shipped to the Meta Environmental, Inc. for analysis. The LNAPL and DNAPL phases were separated in the laboratory. The samples were analyzed by GC/FID for monocyclic aromatic hydrocarbons (MAHs), polycyclic aromatic hydrocarbons (PAHs), and GC/FID fingerprint.

2.6 WATER LEVEL MEASUREMENTS

Groundwater levels in monitoring wells and surface water levels in the Hudson River adjacent to the site were measured at various times of the day during September 19 and 20, 1996. The objective was to determine the effect of tidal fluctuations in the river on site groundwater. Water levels were measured with an electronic water level indicator relative to the top of the PVC well casings or reference point on the stream gauge.

2.7 RIVER SEDIMENT BORINGS AND SAMPLING

A surface sediment grab sample (SED-1) was collected from the Hudson River adjacent to the site during the initial investigation. The objective was to characterize the sediments adjacent to the site and determine the potential source of the sheen. The sediment grab sample was collected using the County Asphalt Company's crane and clamshell bucket. A sample from the sheen on top of the water within the clamshell bucket was also collected. Both samples were analyzed by GC/FID for MAHs, PAHs, and GC/FID fingerprint.

During the second investigation, twelve river sediment borings (RB01 to RB12) were conducted in the area where surface sheens occur in the Hudson River adjacent to the Tarrytown site (Figure 2.1). The objective of the sediment borings was to determine if the source of the sheens in the river are caused by NAPL in the sediments, and if present, to determine the horizontal and vertical extent. Two background sediment samples (BA01 and BA02) were collected upstream of the County Asphalt property to characterize background sediment concentrations.

River sediment borings were conducted using a barge-mounted drilling rig. Boring locations were marked along the shore line and a rope was used to measure the distance from the shore. The barge was stabilized over each drilling location by anchors. A tripod and cat-head were used to advance the sampling apparatus into the sediments. Continuous sediment samples were collected with two and three-inch diameter, two-foot long split-spoon samplers. After collecting each sample, a temporary three-inch casing was advanced in two-foot increments to the next sampling depth to insure the hole remained open for subsequent samples and to minimize any cross-contamination. The inside of the casing was flushed free of sediments by pumping river water into the casing. When the casing was free of sediment, split-spoons were advanced to collect a sample from the next interval. Sediment samples retrieved from each boring were visually classified for sediment type, grainsize, texture, moisture content, and visible evidence of staining. Each split-spoon sample was screened for the evolution of volatile organic compounds with a PID. Screening results are presented on the drilling records in Appendix C.

Two sediment samples were selected from each river sediment boring for laboratory analysis. One sample was selected from the upper two feet of sediments and the second sample was selected near the bottom of the boring to confirm the vertical

extent of impacted sediments. These samples and the background samples were analyzed for BTEX, SVOCs, arsenic, lead, mercury, zinc, cyanide and total organic carbon (TOC). Four samples were also analyzed by GC/FID using microscale solvent extraction for MAHs, PAHs, and GC/FID fingerprint. A summary of the samples and the analytical parameters is presented in Table 2.4.

After completion, the temporary casing was removed and the hole were allowed to collapse. Absorbent booms were maintained around the barge to contain any sheen that may have been generated during the drilling. Any excess sediments and decontamination water were contained in 55-gallon drums and staged onsite for subsequent disposal.

2.8 SURVEY

The locations and elevations of all monitoring wells, soil borings, and river sediment borings were surveyed after completion to allow for accurate depiction on the site map. Elevation measurements for monitoring wells included the ground surface, top of monitoring well casing, and top of protective well casing.

2.9 DATA COMPLIANCE SCREENING

Analytical data received from the laboratory was reviewed to identify any potential deviations from specified protocols. The compliance screening consisted of an assessment of whether or not holding times were met and a review of laboratory QC blank results in accordance with the United States Environmental Protection Agency (USEPA) Region II Standard Operating Procedures (SOPs) for Organic and Inorganic Data Review. Data compliance screening reports are included in Appendix D.

TABLE 2.1
SUMMARY OF SOIL SAMPLES AND ANALYTICAL PARAMETERS
TARRYTOWN SITE

SAMPLE ID	DEPTH	DATE SAMPLED	CHAIN	LAB	SDG	LAB SAMPLE ID	BTEX	SVOCs	As	Pb	Hg	Zn	Cn-
MW11F	10-12'	9/11/96	9051	NYTEST	TARRY1	2905101	X	X	X	X	X	X	X
MW11I	14-18'	9/11/96	9051	NYTEST	TARRY1	2905102	X	X	X	X	X	X	X
MW12B	02-04'	9/12/96	9068	NYTEST	TARRY2	2906801	X	X	X	X	X	X	X
MW12J	18-20'	9/12/96	9068	NYTEST	TARRY2	2906802	X	X	X	X	X	X	X
MW12JMS	18-20'	9/12/96	9068	NYTEST	TARRY2	2906803	X	X	X	X	X	X	X
MW12JMSD	18-20'	9/12/96	9068	NYTEST	TARRY2	2906804	X	X	X	X	X	X	X
SB01E	08-10'	9/16/96	9097	NYTEST	TARRY2	2909609	X	X	X	X	X	X	X
SB01H	14-16'	9/16/96	9097	NYTEST	TARRY2	2909610	X	X	X	X	X	X	X
SB02E	08-10'	9/10/96	9031	NYTEST	TARRY1	2903101	X	X	X	X	X	X	X
SB03E	08-10'	9/10/96	9031	NYTEST	TARRY1	2903102	X	X	X	X	X	X	X
SB03J	18-20'	9/10/96	9031	NYTEST	TARRY1	2903103	X	X	X	X	X	X	X
SB103J(DUP)	18-20'	9/10/96	9031	NYTEST	TARRY1	2903104	X	X	X	X	X	X	X
SB04E	08-10'	9/11/96	9031	NYTEST	TARRY1	2903105	X	X	X	X	X	X	X
SB04J	18-20'	9/11/96	9031	NYTEST	TARRY1	2903106	X	X	X	X	X	X	X
SB04JMS	18-20'	9/11/96	9031	NYTEST	TARRY1	2903107	X	X	X	X	X	X	X
SB04JMSD	18-20'	9/11/96	9031	NYTEST	TARRY1	2903108	X	X	X	X	X	X	X
SB05F	08-10'	9/12/96	9051	NYTEST	TARRY1	2905103	X	X	X	X	X	X	X
SB05J	16-20'	9/12/96	9051	NYTEST	TARRY1	2905104	X	X	X	X	X	X	X
SB06E	08-10'	9/12/96	9051	NYTEST	TARRY1	2905105	X	X	X	X	X	X	X
SB06H	12-16'	9/12/96	9051	NYTEST	TARRY1	2905106	X	X	X	X	X	X	X
SB07G	12-14'	9/13/96	9068	NYTEST	TARRY2	2906805	X	X	X	X	X	X	X
SB07M	24-26'	9/13/96	9068	NYTEST	TARRY2	2906806	X	X	X	X	X	X	X
SB08G	12-14'	9/13/96	9068	NYTEST	TARRY2	2906807	X	X	X	X	X	X	X
SB09F	10-12'	9/16/96	9097	NYTEST	TARRY2	2909612	X	X	X	X	X	X	X
SB09J	18-20'	9/16/96	9097	NYTEST	TARRY2	2909611	X	X	X	X	X	X	X
SB10E	08-10'	9/16/96	9097	NYTEST	TARRY2	2909614	X	X	X	X	X	X	X
SB10I	16-18'	9/16/96	9097	NYTEST	TARRY2	2909613	X	X	X	X	X	X	X
SB11F	10-12'	9/16/96	9096	NYTEST	TARRY2	2909603	X	X	X	X	X	X	X
SB11H	14-16'	9/16/96	9096	NYTEST	TARRY2	2909604	X	X	X	X	X	X	X
SB12B	02-04'	9/17/96	9096	NYTEST	TARRY2	2909605	X	X	X	X	X	X	X
SB12G	12-14'	9/17/96	9096	NYTEST	TARRY2	2909606	X	X	X	X	X	X	X
SB13D	06-08'	9/17/96	9096	NYTEST	TARRY2	2909607	X	X	X	X	X	X	X
SB13I	16-18'	9/17/96	9096	NYTEST	TARRY2	2909608	X	X	X	X	X	X	X
SB14I	14-18'	1/20/97	30377	NYTEST	TARRY4	3037701	X	X	X	X	X	X	X
SB14J	18-20'	1/20/97	30377	NYTEST	TARRY4	3037702	X	X	X	X	X	X	X
SB15J	19-21'	1/20/97	30377	NYTEST	TARRY4	3037703	X	X	X	X	X	X	X
SB15K	21-23'	1/20/97	30377	NYTEST	TARRY4	3037704	X	X	X	X	X	X	X
SB16G	12-14'	1/21/97	30377	NYTEST	TARRY4	3037705	X	X	X	X	X	X	X
SB16I	16-18'	1/21/97	30377	NYTEST	TARRY4	3037706	X	X	X	X	X	X	X
SB17D	06-08'	1/21/97	30377	NYTEST	TARRY4	3037707	X	X	X	X	X	X	X
SB17H	12-16'	1/21/97	30377	NYTEST	TARRY4	3037708	X	X	X	X	X	X	X
SB17HMS	12-16'	1/21/97	30377	NYTEST	TARRY4	3037709	X	X	X	X	X	X	X
SB17HMSD	12-16'	1/21/97	30377	NYTEST	TARRY4	3037710	X	X	X	X	X	X	X
SB117H(DUP)	12-16'	1/21/97	30377	NYTEST	TARRY4	3037711	X	X	X	X	X	X	X
SB18B	02-04'	1/21/97	30377	NYTEST	TARRY4	3037712	X	X	X	X	X	X	X
SB18G	12-14'	1/21/97	30377	NYTEST	TARRY4	3037713	X	X	X	X	X	X	X
SB19G	12-14'	1/21/97	30377	NYTEST	TARRY4	3037714	X	X	X	X	X	X	X
SB19J	18-20'	1/21/97	30377	NYTEST	TARRY4	3037715	X	X	X	X	X	X	X
SB20I	14-18'	1/21/97	30385	NYTEST	TARRY5	3038501	X	X	X	X	X	X	X
SB20K	20.5-22'	1/21/97	30385	NYTEST	TARRY5	3038502	X	X	X	X	X	X	X
SB20KMS	20.5-22'	1/21/97	30385	NYTEST	TARRY5	3038512	X	X	X	X	X	X	X
SB20KMSD	20.5-22'	1/21/97	30385	NYTEST	TARRY5	3038513	X	X	X	X	X	X	X
SB21H	14-16'	1/21/97	30385	NYTEST	TARRY5	3038503	X	X	X	X	X	X	X
SB21K	20-22'	1/21/97	30385	NYTEST	TARRY5	3038504	X	X	X	X	X	X	X
SB22G	12-14'	1/21/97	30385	NYTEST	TARRY5	3038505	X	X	X	X	X	X	X
SB22I	16-18'	1/21/97	30385	NYTEST	TARRY5	3038506	X	X	X	X	X	X	X
SB23B	02-04'	1/22/97	30385	NYTEST	TARRY5	3038507	X	X	X	X	X	X	X
SB23G	12-14'	1/22/97	30385	NYTEST	TARRY5	3038508	X	X	X	X	X	X	X
SB24E	08-10'	1/22/97	30402	NYTEST	TARRY5	3040203	X	X	X	X	X	X	X
SB24J	18-20'	1/22/97	30402	NYTEST	TARRY5	3040204	X	X	X	X	X	X	X
SB24K	20-22'	1/22/97	30402	NYTEST	TARRY5	3040205	X	X	X	X	X	X	X
SB25I	16-18'	1/22/97	30402	NYTEST	TARRY5	3040206	X	X	X	X	X	X	X
SB25K	20-22'	1/22/97	30402	NYTEST	TARRY5	3040207	X	X	X	X	X	X	X
SB28I	16-18'	1/23/97	30402	NYTEST	TARRY5	3040208	X	X	X	X	X	X	X
SB29H	14-16'	1/23/97	30416	NYTEST	TARRY4	3041601	X	X	X	X	X	X	X
SB30I	16-18'	1/24/97	30416	NYTEST	TARRY4	3041602	X	X	X	X	X	X	X
SB30K	21.5-22'	1/24/97	30416	NYTEST	TARRY4	3041603	X	X	X	X	X	X	X
SB213E	04-10'	1/22/97	30385	NYTEST	TARRY5	3038511	X	X	X	X	X	X	X
SB217D	07-09'	1/22/97	30385	NYTEST	TARRY5	3038509	X	X	X	X	X	X	X
SB218C	04-06'	1/22/97	30385	NYTEST	TARRY5	3038510	X	X	X	X	X	X	X
SB220C	04-06'	1/22/97	30402	NYTEST	TARRY5	3040201	X	X	X	X	X	X	X
SB220G	12-14'	1/22/97	30402	NYTEST	TARRY5	3040202	X	X	X	X	X	X	X
RB01		9/17/96	9096	NYTEST	TARRY2	2909601	X	X	X	X	X	X	X
RB02		1/22/97	30402	NYTEST	TARRY5	3040209	X	X	X	X	X	X	X
TB01		9/17/96	9096	NYTEST	TARRY2	2909602	X						

TABLE 2.2
SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
TARRYTOWN SITE

Monitoring Well	Measuring Point (ft AMSL)	Ground Surface (ft AMSL)	Well Diameter (inches)	Well Depth (ft BGS)	Screened Interval (ft BGS)	Date Installed
MW-1	6.63	6.93	2	19	4 - 19	10/22/90
MW-2	8.83	6.33	2	19	4 - 19	10/22/90
MW-3	9.16	6.56	2	19.5	4.5 - 19.5	10/24/90
MW-4	7.79	5.26	2	19	4 - 19	10/23/90
MW-5	8.83	6.65	2	19	4 - 19	10/24/90
MW-6	9.23	6.93	6	33	3 - 33	10/26/90
MW-7	11.73	9.24	2	19	4 - 19	10/25/90
MW-8	10.91	8.58	4	22	3 - 20	8/28/96
MW-9	10.67	7.67	4	22	3 - 19	9/3/96
MW-10	10.71	11.02	2	20	4 - 19	9/10/96
MW-11	9.81	10.51	2	16	5 - 15	9/11/96
MW-12	11.38	11.66	2	20	4 - 19	9/12/96
MW-13	8.91	9.15	2	13.5	4.5 - 12.5	9/13/96
MW-14	7.39	8.11	2	15	4 - 14	9/16/96
MW-15	11.49	9.68	4	13	4 - 12	10/10/96
MW-15/SB-25	7.81	8.32	2	19	4 - 19	1/23/97
MW-16	9.25	9.67	2	19	4 - 19	1/23/97

TABLE 2.3
SUMMARY OF GROUNDWATER SAMPLES AND ANALYTICAL PARAMETERS
TARRYTOWN SITE

SAMPLE ID	DATE SAMPLED	CHAIN	LAB	SDG	LAB SAMPLE ID	BTEX	SVOCs	As	Pb	Hg	Zn	Cu
MW07	9/19/96	9143	NYTEST	TARRY3	2914307	X	X	X	X	X	X	X
MW10	9/19/96	9143	NYTEST	TARRY3	2914305	X	X	X	X	X	X	X
MW101	9/19/96	9143	NYTEST	TARRY3	2914304	X	X	X	X	X	X	X
MW11	9/19/96	9143	NYTEST	TARRY3	2914306	X	X	X	X	X	X	X
MW115	2/5/97	30512	NYTEST	TARRY6	3051204	X	X	X	X	X	X	X
MW12	9/19/96	9143	NYTEST	TARRY3	2914301	X	X	X	X	X	X	X
MW12MS	9/19/96	9143	NYTEST	TARRY3	2914302	X	X	X	X	X	X	X
MW12MSD	9/19/96	9143	NYTEST	TARRY3	2914303	X	X	X	X	X	X	X
MW15	2/5/97	30512	NYTEST	TARRY6	3051201	X	X	X	X	X	X	X
MW15MS	2/5/97	30512	NYTEST	TARRY6	3051202	X	X	X	X	X	X	X
MW15MSD	2/5/97	30512	NYTEST	TARRY6	3051203	X	X	X	X	X	X	X
MW16	2/5/97	30512	NYTEST	TARRY6	3051205	X	X	X	X	X	X	X
TB02	9/19/96	9143	NYTEST	TARRY3	2914308	X						
TB02	2/5/97	30512	NYTEST	TARRY6	3051206	X						

TABLE 2.4
SUMMARY OF RIVER SEDIMENT SAMPLES AND ANALYTICAL PARAMETERS
TARRYTOWN SITE

SAMPLE ID	DEPTH	DATE SAMPLED	CHAIN	LAB	SDG	LAB SAMPLE ID	BTEX	SVOCs	As	Pb	Hg	Zn	Cu	TOC
BA0101	0'-1'	4/24/97	31132	NYTEST	TARRY7	3113208	X	X	X	X	X	X	X	X
BA0201	0'-1'	4/24/97	31132	NYTEST	TARRY7	3113209	X	X	X	X	X	X	X	X
BA0201MS	0'-1'	4/24/97	31132	NYTEST	TARRY7	3113210	X	X	X	X	X	X	X	X
BA0201MSD	0'-1'	4/24/97	31132	NYTEST	TARRY7	3113211	X	X	X	X	X	X	X	X
RB0104	0'-4'	4/21/97	31119	NYTEST	TARRY6	3111901	X	X	X	X	X	X	X	X
RB0148	4'-8'	4/21/97	31119	NYTEST	TARRY6	3111902	X	X	X	X	X	X	X	X
RB01810	8'-10'	4/21/97	31119	NYTEST	TARRY6	3111903	X	X	X	X	X	X	X	X
RB0204	0'-4'	4/22/97	31119	NYTEST	TARRY6	3111904	X	X	X	X	X	X	X	X
RB02810	8'-10'	4/22/97	31119	NYTEST	TARRY6	3111905	X	X	X	X	X	X	X	X
RB021012	8'-10'	4/22/97	31119	NYTEST	TARRY6	3111906	X	X	X	X	X	X	X	X
RB03610	6'-10'	4/22/97	31119	NYTEST	TARRY6	3111907	X	X	X	X	X	X	X	X
RB0402	0'-2'	4/22/97	31119	NYTEST	TARRY6	3111908	X	X	X	X	X	X	X	X
RB04810	8'-10'	4/22/97	31119	NYTEST	TARRY6	3111909	X	X	X	X	X	X	X	X
RB0504	0'-4'	4/23/97	31131	NYTEST	TARRY6	3113101	X	X	X	X	X	X	X	X
RB0568	6'-8'	4/23/97	31131	NYTEST	TARRY6	3113104	X	X	X	X	X	X	X	X
RB0602	0'-2'	4/23/97	31131	NYTEST	TARRY6	3113105	X	X	X	X	X	X	X	X
RB0668	6'-8'	4/23/97	31131	NYTEST	TARRY6	3113106	X	X	X	X	X	X	X	X
RB0702	0'-2'	4/23/97	31131	NYTEST	TARRY6	3113107	X	X	X	X	X	X	X	X
RB7810	8'-10'	4/23/97	31131	NYTEST	TARRY6	3113108	X	X	X	X	X	X	X	X
RB0804	0'-4'	4/23/97	31131	NYTEST	TARRY6	3113109	X	X	X	X	X	X	X	X
RB0868	6'-8'	4/23/97	31131	NYTEST	TARRY6	3113110	X	X	X	X	X	X	X	X
RB0924	2'-4'	4/24/97	31131	NYTEST	TARRY6	3113111	X	X	X	X	X	X	X	X
RB91214(DUP)	2'-4'	4/24/97	31132	NYTEST	TARRY7	3113201	X	X	X	X	X	X	X	X
RB9810	8'-10'	4/24/97	31132	NYTEST	TARRY7	3113202	X	X	X	X	X	X	X	X
RB1068	6'-8'	4/24/97	31132	NYTEST	TARRY7	3113203	X	X	X	X	X	X	X	X
RB10810	8'-10'	4/24/97	31132	NYTEST	TARRY7	3113204	X	X	X	X	X	X	X	X
RB1106	0'-6'	4/24/97	31132	NYTEST	TARRY7	3113205	X	X	X	X	X	X	X	X
RB1204	0'-4'	4/24/97	31132	NYTEST	TARRY7	3113206	X	X	X	X	X	X	X	X
RB1246	4'-6'	4/24/97	31132	NYTEST	TARRY7	3113207	X	X	X	X	X	X	X	X

SECTION 3

PHYSICAL CHARACTERISTICS OF THE SITE

3.1 TOPOGRAPHY

The site is located in a flat area, approximately 400 feet long, along the eastern shore of the Hudson River which has been filled in and built out into the river. Land elevation rises several hundred feet within one quarter mile east of the site in the Village of Tarrytown.

The land surface at the site is flat and slopes gently to the south towards West Main Street. Ground surface elevations range from approximately 10 to 12 feet above sea level in the northern portion of the site to 5 to 6 feet above sea level in the southern portion of the site. The shore of the Hudson River is located approximately 100 yards west of the site and consists of a vertical concrete retaining wall. The retaining wall is approximately eight feet high and is on pilings which are only visible during low tide.

3.2 CLIMATE

Despite the close proximity to the Atlantic Ocean, Westchester County is characterized by a continental climate. The climate is also humid and primarily affected by major circulation patterns which carry moisture towards the northeastern United States. The maritime influence plays a secondary but important role in the climate. The Atlantic Ocean moderates the winter temperatures and adds considerable moisture to the atmosphere. The winters are short but moderately cold with an average temperature of 27 degrees F. Summers are warm and include occasional periods of uncomfortable hot and humid weather. The average temperature during the summer is 70 degrees F with an average daily maximum of 82 degrees. The average total annual precipitation ranges from 44 to 48, about 50 percent of which usually falls in April through September. The average seasonal snowfall ranges from 35 to 45 inches (USDA, 1994).

3.3 DEMOGRAPHY AND LAND USE

The site is located at One River Street in an industrialized and commercial area of Tarrytown, New York approximately one-half mile south of the General Motors Tarrytown plant. The site is located approximately 100 yards from the Hudson River on land that was filled in and built out into the river. The site encompasses approximately 10 acres and is currently abandoned. One building, the maintenance garage, is located in the southeastern portion of the site. The remainder of the site is covered by asphalt pavement and is completely enclosed by a locked chain-link fence.

The site is bordered on the north by a parking lot and commercial properties. A bulk oil storage facility is located approximately 400 feet north of the site. Railroad Avenue

and the New York Central Railroad border the site on the east. Barrier Oil Company and West Main Street border the site on the south. The site is bordered on the west by the County Asphalt Plant which is adjacent to the Hudson River. A ferry dock is located at the southern border of the County Asphalt property.

3.4 SURFACE WATER HYDROLOGY

The western portion of Westchester County is drained by streams which flow into the Hudson River. The Hudson River flows into the Atlantic Ocean approximately 35 miles south of the site. The river is estuarine in the vicinity of the site and has a normal tidal range of three to four feet.

The site is located approximately 100 yards east of the Hudson River. Surface water at the site drains across the pavement into a catch basin located at the southern end of the property. The catch basin drains into a storm sewer line, located south of the property, which ultimately discharges into the Hudson River.

3.5 GEOLOGY

3.5.1 Regional Geology

Westchester County is located in the New England upland phsyiographic province. The New England upland physiographic province is geologically complex and exhibits moderate relief. The regional geology is characterized by glacial deposits which overly a heavily metamorphosed complex of Precambrian and Paleozoic sedimentary and igneous rocks.

The thickest glacial deposits are found in the Hudson River Valley. Glacial deposits consist of up to 50 feet of post-glacial varved clays and organic tidal silts, which overly glacial till. The till ranges in thickness from 30 to 90 feet. The glacial till overlies Precambrian age Fordham Gneiss bedrock. The Fordham Gneiss consists of a biotite-hornblende-quartz-plagioclase gneiss (NYSMSC, 1970). Bedrock has been found at depths of approximately 140 feet beneath the east bank of the Hudson River near the Tappan Zee Bridge (Metcalf & Eddy, 1991).

3.5.2 Site Geology

The shallow stratigraphy of the site can be divided into three geologic units: fill, silt with fine sand, and clayey silt. The subsurface stratigraphy is illustrated on the three geologic cross sections (Figures 3.1 to 3.3) and is described below.

The uppermost unit encountered in the borings consists of fill. The fill varies in thickness from five feet in the eastern portion of the site to greater than 19 feet in the western portion of the site and on County Asphalt property. This is consistent with the map of the former shore lines (Figure 1.3) which indicates that the western portion of the site and all of the County Asphalt property was filled in and built out into the Hudson River. The fill consists of black, fine to coarse sand, silt, gravel, asphalt, bricks, wood,

cinders, slag, ash and other construction-related debris. Heavy wood pilings have also been noted in the fill.

The fill is generally underlain by a tan, gray to green, thixotropic silt and fine grained sand with some interbeds of medium grained sand. The silt and fine sand unit ranges in thickness from 10 feet in the eastern portion of the site to several feet thick in the western portion of the site and on the County Asphalt property.

The lowermost unit encountered in the borings consists of gray to greenish-gray, interbedded silt and clay. The clay lenses vary from less than 0.25-inches to greater than one-inch in thickness. The base of this unit has not been penetrated in any of the borings.

3.6 HYDROGEOLOGY

3.6.1 Regional Hydrogeology

Groundwater in the region is found in the unconsolidated glacial deposits and in the metamorphic bedrock. Regional groundwater flow is generally to the west towards the Hudson River.

Groundwater in the Tarrytown area is not used as a source of potable water. Groundwater yields in the unconsolidated glacial deposits are generally low. Few, if any, wells in the unconsolidated deposits provide substantial amounts of water. The quality and quantity of groundwater in individual bedrock wells varies. However, yields from bedrock wells are not adequate to supply community needs. Towns in the vicinity of the site obtain drinking water from the Tarrytown Reservoir surface water source located approximately 1.5 miles east and upgradient of the site. To our knowledge, there are no municipal water supply wells located within one mile of the site.

3.6.2 Site Hydrogeology

The water table at the site generally ranges in depth from approximately three to seven feet below the ground surface (Table 3.1). Groundwater levels at the site appear to be affected by tidal fluctuations in the Hudson River. Tidal fluctuations up to five feet have been measured in the river adjacent to the site. Historical groundwater data indicate that water levels at the site fluctuate by 0.5 to 2 feet. The concrete retaining wall along the Hudson River may form a partial boundary to groundwater flow and lengthen the response time of the tidal impacts in onsite groundwater.

Groundwater elevation contours measured on February 6, 1997 for the water table aquifer are shown on Figure 3.4. These water levels were measured when the tide in the Hudson River was half way between low and high tide. The average groundwater flow direction is to the west and groundwater discharges to the Hudson River. Tidal fluctuations result in local reversals in flow direction along the edge of the river. The shallow aquifer is recharged by lateral groundwater flow from the east.

Slug tests were performed on six monitoring wells screened across the fill and silty sand in 1991 (Metcalf & Eddy, 1991). Results indicated that the fill and silty sand has a low permeability (Table 3.2). Hydraulic conductivity values determined from the slug tests range from 1.22×10^{-6} centimeters per second (cm/sec) (0.105 feet per day) to 4.6×10^{-7} cm/sec (0.036 feet per day.

TABLE 3.1
WATER LEVEL MEASUREMENTS
TARRYTOWN SITE

Well Number	TOC Elevation (feet AMSL)	Date Measured	Time Measured	Depth to Groundwater (ft below from TO	Groundwater Elevation (feet AMSL)	Comments
MW-01	6.63	09/19/96	NA	4.38	2.25	0.12" LNAPL
	6.63	02/05/97	NM	NM	NM	
	6.63	02/06/97	NM	NM	NM	
MW-02	6.03	09/19/96	NA	3.25	2.78	
	8.83	02/05/97	4:54 PM	8.62	0.21	
	8.83	02/06/97	11:18 AM	8.67	0.16	
MW-03	6.13	09/19/96	NA	4.86	2.38	18.24" LNAPL
	9.16	02/05/97	NM	NM	NM	
	9.16	02/06/97	NM	NM	NM	
MW-04	4.81	09/19/96	NA	2.07	2.74	
	7.79	02/05/97	4:52 PM	6.56	1.23	
	7.79	02/06/97	11:15 AM	6.66	1.13	
MW-05	6.02	09/19/96	NA	2.94	3.08	
	8.83	02/05/97	4:50 PM	7.09	1.74	
	8.83	02/06/97	11:13 AM	7.16	1.67	
MW-06	6.48	09/19/96	NA	2.24	4.24	0.48" LNAPL
	9.23	02/05/97	NM	NM	NM	
	9.23	02/06/97	NM	NM	NM	
MW-07	8.97	09/19/96	NA	4.97	4.00	
	11.73	02/05/97	NM	NM	NM	1" DNAPL
	11.73	02/06/97	NM	NM	NM	
MW-08	10.91	02/05/97	5:00 PM	10.91	0.00	
	10.91	02/06/97	11:20 AM	10.9	0.01	
MW-09	10.67	02/05/97	5:10 PM	8.61	2.06	
	10.67	02/06/97	7:15 AM	9.6	1.07	
MW-10	10.71	09/18/96	12:45 PM	5.66	5.05	
	10.71	09/19/96	9:00 AM	4.66	6.05	
	10.71	09/19/96	2:43 PM	5.74	4.97	
	10.71	09/19/96	4:15 PM	5.70	5.01	
	10.71	09/20/96	7:27 AM	5.67	5.04	
	10.71	09/20/96	10:37 AM	5.67	5.04	
	10.71	02/05/97	3:20 PM	7.14	3.57	
	10.71	02/06/97	10:35 AM	7.16	3.55	

TABLE 3.1
WATER LEVEL MEASUREMENTS
TARRYTOWN SITE

Well Number	TOC Elevation (feet AMSL)	Date Measured	Time Measured	Depth to Groundwater (ft below from TO	Groundwater Elevation (feet AMSL)	Comments
MW-11	9.81	09/18/96	2:30 PM	7.40	2.41	
	9.81	09/19/96	10:00 AM	7.38	2.43	
	9.81	09/19/96	2:45 PM	7.38	2.43	
	9.81	09/19/96	4:18 PM	7.37	2.44	
	9.81	09/20/96	7:29 AM	7.38	2.43	
	9.81	09/20/96	10:40 AM	7.34	2.47	
	9.81	02/05/97	3:26 PM	8.94	0.87	1" DNAPL
	9.81	02/06/97	10:40 AM	9.04	0.77	Black DNAPL
MW-12	11.38	09/18/96	10:30 AM	3.72	7.66	
	11.38	09/19/96	7:00 AM	3.80	7.58	
	11.38	09/19/96	2:40 PM	3.77	7.61	
	11.38	09/19/96	4:10 PM	3.77	7.61	
	11.38	09/20/96	7:22 AM	3.86	7.52	
	11.38	09/20/96	10:35 AM	3.82	7.56	
	11.38	02/05/97	3:10 PM	5.14	6.24	
	11.38	02/06/97	10:50 AM	5.32	6.06	
MW-13	8.91	09/18/96	3:45 PM	6.68	2.23	
	8.91	09/19/96	7:00 AM	NM	NM	
	8.91	09/19/96	2:47 PM	6.78	2.13	
	8.91	09/19/96	4:22 PM	6.79	2.12	
	8.91	09/20/96	7:32 AM	6.79	2.12	
	8.91	09/20/96	10:45 AM	6.76	2.15	
	8.91	02/05/97	3:35 PM	8.60	0.31	Trace DNAPL
	8.91	02/06/97	11:05 AM	8.64	0.27	Trace DNAPL
MW-14	7.39	09/18/96	4:40 PM	5.20	2.19	
	7.39	09/19/96	9:00 AM	NM	NM	
	7.39	09/19/96	2:50 PM	5.12	2.27	Trace DNAPL
	7.39	09/19/96	4:26 PM	5.15	2.24	
	7.39	09/20/96	7:34 AM	5.14	2.25	
	7.39	09/20/96	10:50 AM	5.10	2.29	
	7.39	02/05/97	3:46 PM	7.04	0.35	
	7.39	02/06/97	11:10 AM	7.04	0.35	
MW-15/SB-25	7.81	02/05/97	5:20 PM	9.04	-1.23	
	7.81	02/06/97	11:35 AM	8.52	-0.71	
16/SB-28	9.25	02/05/97	5:26 PM	9.56	-0.31	
	9.25	02/06/97	11:28 AM	9.84	-0.59	

TABLE 3.1
WATER LEVEL MEASUREMENTS
TARRYTOWN SITE

Well Number	TOC Elevation (feet AMSL)	Date Measured	Time Measured	Depth to Groundwater (ft below from TO	Groundwater Elevation (feet AMSL)	Comments
ES-1	6.02	09/18/96	4:40 PM	NM	NM	
	6.02	09/19/96	9:00 AM	NM	NM	
	6.02	09/19/96	2:35 PM	3.10	2.92	
	6.02	09/19/96	4:50 PM	3.40	2.62	
	6.02	09/20/96	7:44 AM	8.15	-2.13	
	6.02	09/20/96	11:15 AM	6.80	-0.78	
	6.02	02/05/97	5:14 PM	5.50	0.52	
	6.02	02/06/97	11:26 AM	5.20	0.82	

AMSL - Above mean sea level
TOC - Top of PVC casing
NA - Not available, data provided by RETEC, 1996
NM - Not measured
ES-1 River level elevation measuring point

BLE 3.2
SUMMARY OF HORIZONTAL HYDRAULIC CONDUCTIVITIES
TARRYTOWN SITE

Monitoring Well No.	Screened Interval (ft BGS)	Horizontal K (cm/sec)	Horizontal K (ft/day)	Formation Tested
MW-1	4 - 19	4.23×10^{-7}	0.036	Fill and the silt and fine sand unit
MW-2	4 - 19	2.22×10^{-7}	0.019	Primarily fill and some silt and fine sand
MW-3	4.5 - 19.5	2.62×10^{-6}	0.226	Primarily fill and some silt and fine sand
MW-4	4 - 19	1.60×10^{-6}	0.138	Fill and the silt and fine sand unit
MW-5	4 - 19	1.22×10^{-6}	0.105	Silt and fine sand unit and interbedded silt and clay unit
MW-7	4 - 19	4.60×10^{-7}	0.036	Fill and the silt and fine sand unit

(1) From Metcalf & Eddy, 1991

SECTION 4

NATURE AND EXTENT OF IMPACTS

This section summarizes the nature and extent of observed and measured impacts to soil, groundwater, and sediments at the Tarrytown site. Visual observations and analytical results for each media are discussed in the following sections.

4.1 SOILS

Surficial soils are not exposed at the Tarrytown site since the entire site is paved with asphalt (except in the area where USTs were excavated). Therefore, surficial soils were not characterized.

Eleven test pits and 30 soil borings were conducted during this investigation to characterize the subsurface soils. A total of 62 subsurface soil samples were collected and analyzed for BTEX, SVOCs, arsenic, lead mercury, zinc, and cyanide. Drilling logs documenting field observations are presented in Appendix A. Laboratory analytical results for detected compounds are summarized on Table 4.1. Complete laboratory analytical results are presented in Appendix E.

A total of 23 additional soil borings were conducted during a previous investigation on the southern portion of the site (RETEC, 1996). A total of 18 subsurface soil samples were collected and analyzed for BTEX, SVOCs, arsenic, lead mercury, zinc, and cyanide.

4.1.1 Unsaturated Subsurface Soils

Unsaturated soils above the water table consist of fill and occur at depths up to 4 to 5 feet below the ground surface in the eastern portion of the site and up to 7 feet below the ground surface on County Asphalt property west of the site. No visible evidence of staining or NAPL was observed in the unsaturated soils. Slight odors were observed in four borings located in the vicinity of former MGP structures.

Three soil samples (SB12B, SB23B, and MW12B) and a background sample (SB18B) were collected and analyzed from the unsaturated zone (depths of 2 to 4 feet) primarily from borings along the fringes of the site. BTEX was not detected in the soil samples or the background sample. PAHs were detected in all three samples at total concentrations ranging from 3.17 mg/kg in SB23B to 56.9 mg/kg in MW12B. PAHs were also detected in the background sample at a total concentration of 0.846 mg/kg.

Arsenic (1.7 mg/kg to 10.7 mg/kg), lead (14.5 mg/kg to 578 mg/kg), mercury (0.08 mg/kg to 2.4 mg/kg), and zinc (37.5 mg/kg to 427 mg/kg) were detected in the soil samples. Arsenic, lead, and zinc was also detected in the background sample at

concentrations of 3.3 mg/kg, 38.5 mg/kg and 49.4 mg/kg, respectively. Mercury was not detected in the background sample. Cyanide was not detected in any of the samples.

4.1.2 Saturated Subsurface Soils

Visual observations from soil borings and test pits indicate that soils at and below the water table have been impacted by LNAPL and DNAPL. The extent of visual LNAPL in soils is illustrated on Figure 4.1. The visual extent of DNAPL in soils is illustrated on Figure 4.2.

LNAPL in the form of fuel oil was observed in soil borings and monitoring wells in the southwest portion of the site (Figure 4.1). Fuel oil or sheen was observed in the soil borings at depths of 3 to 10 feet. Fuel oil was also observed in monitoring wells MW-1, MW-3 and MW-6. The thickest amount of fuel oil measured was 1.52 feet in monitoring well MW-3 in September 1996 (RETEC, 1996). This area corresponds to the location of Anchor Motor's former USTs and pump island. Anchor discovered a diesel fuel release in this area in August 1990. In July 1991, Anchor installed a trench drain recovery system along the western property boundary to recover the diesel fuel. The southern and western extent of fuel oil in soils has not been completely defined. A previous soil gas survey conducted in 1990 suggests that fuel oil may have migrated offsite along West Main Street towards the Hudson River (Metcalf & Eddy, 1991).

Dark, olive-green colored fuel oil was also observed in soils in a localized area south of the County Asphalt Plant (Figure 4.1). Fuel oil was observed at a depth of 8 feet in test pits TP05 to TP08 and at a depth of 7 to 10 feet in soil boring SB-24. This area is located downgradient of Anchor's diesel fuel release and also corresponds to the location of a former diesel fuel UST owned by Valente Industries, a former sub-tenant of County Asphalt. The UST was excavated and removed in 1991. Free product was reportedly observed on the groundwater table during the excavation. An east-west oriented trench drain system was installed in 1991 in this area to recover the free product.

DNAPL was observed in varying amounts in soil borings, monitoring wells, and test pits on the northern portion of the site and on the northern portion of County Asphalt's property (Figure 4.2). Some DNAPL was also observed in the central portion of the site overlapping with areas where LNAPL was observed. The DNAPL was characterized as viscous, dark-amber in color, with a naphthalene-like odor. In general, the depth at which DNAPL was observed increased to the west. The DNAPL in each boring and test pit was visually grouped into three categories based on the thickness and the amount present:

- Zones saturated with DNAPL - denotes areas in soils where DNAPL was observed throughout a continuous vertical interval greater than six-inches in thickness.
- Lenses saturated with DNAPL - denotes areas in soils where DNAPL was observed in discontinuous lenses, one to six inches in thickness.

- Traces of blebs of DNAPL - denotes areas in soils where a few very small, discontinuous droplets or spots of DNAPL were observed in a limited interval.

Zones saturated with DNAPL were observed in the vicinity of two former gas holders, a former tar well, and in the northwest corner of the site extending under the County Asphalt building (Figure 4.2). DNAPL was encountered in the former gas holders below the water table interface at a depth of 5 to 6 feet below the ground surface. Test pits indicate that much of the DNAPL is contained within the former holder foundations which extent to at least 7 feet below the ground surface. DNAPL was not encountered at the water table interface in test pits directly outside of the former brick foundations. Zones saturated with DNAPL were also encountered in the vicinity of the former tar well located near test pit TP01. The DNAPL in this area was encountered at a depth of 6 to 11 feet below the ground surface. Zones saturated with DNAPL were encountered in a larger area in the northwest corner of the site. This area extends offsite and under the County Asphalt building. Zones of DNAPL in the northwest corner of the site were encountered at a depths between 8 and 15 feet below the ground surface. This area does not appear to be directly related to any former MGP structures.

Lenses saturated with DNAPL were observed in the area between the two former holders, the tar well and the northwest corner of the site. Lenses of DNAPL were encountered at depths between 6 and 14 feet below the ground surface.

Traces of blebs (i.e., very small, discontinuous droplets or spots) of DNAPL were observed in a halo surrounding the areas where zones and lenses saturated with DNAPL were observed (see Figure 4.2). Traces of DNAPL were observed in limited, discrete zones at depths between 7 and 12 feet onsite to between 10 and 25 feet offsite. The presence of zones saturated with DNAPL primarily in the vicinity of the former gas holders, the tar well, and the potential disposal area, suggests that DNAPL has not migrated horizontally a significant distance from its original source.

A total of 20 LNAPL and DNAPL samples from monitoring wells and soils containing visible LNAPL and DNAPL were submitted for GC/FID fingerprinting analysis. Results of the fingerprint analyses are summarized on Table 4.2. Detailed fingerprinting analytical results are presented in Appendix F. The fingerprint results indicate that most of the DNAPL is characteristic of MGP-related tars. It is dominated by unsubstituted MAHs and PAHs, with relatively large amounts of naphthalene, and contains no significant paraffinic or major isoprenoid hydrocarbons typical of diesel range petroleum products. In addition to MGP tar, unknown petroleum product is present in DNAPL from samples SB19G, SB20I and SB07G. In areas where traces of blebs (i.e., very small, discontinuous droplets or spots) of DNAPL were observed, fingerprint results also indicate that MGP tars are weathered. Fingerprinting results indicate that LNAPL samples collected on the southern portion of the site and the County Asphalt property are characteristic of a weathered middle weight fuel oil.

BTEX was detected in the soil samples at total concentrations ranging from 0.002 mg/kg to 241.28 mg/kg (Table 4.1 and Figure 4.3). BTEX is a residual from both the fuel oil release and the former MGP operations. The distribution of BTEX appears to be consistent with locations where LNAPL or DNAPL were visually observed in the soils. BTEX was not detected or detected at significantly lower concentrations in samples collected below the zones where LNAPL or DNAPL were observed. These serve to define the lower extent of impacted soils. Highest BTEX concentrations (0.215 mg/kg to 241.28 mg/kg) were generally detected in the vicinity of the two former gas holders, the former tar well, and in the northwest corner of the site extending under the County Asphalt building. These correlate well with areas where zones saturated with DNAPL were observed. Slightly lower BTEX concentrations (37.9 mg/kg to 145.2 mg/kg) were detected in areas where lenses saturated with DNAPL were observed. Significantly lower BTEX concentrations (non detect to 20.8 mg/kg) were detected in areas where traces of blebs (i.e., very small, discontinuous droplets or spots) of DNAPL were observed. BTEX concentrations in area where fuel oil was observed ranged from 0.971 mg/kg to 33.79 mg/kg.

SVOCs detected in the soil samples consisted predominantly of PAHs. Low concentrations of several phthalates, furans and phenols were sporadically detected in the soil samples. A total of 17 PAHs were detected in the soil samples. PAHs are present in fuel oils and MGP residuals. PAHs can also be present in the fill material found on site which contains asphalt, cinders, ash, slag, and other construction related debris. Total PAH concentrations ranged from 0.374 mg/kg to 40,190 mg/kg (Table 4.1 and Figure 4.4). PAHs exhibited a similar distribution pattern to BTEX. Higher concentrations of total PAHs where detected at locations where LNAPL and DNAPL were visually observed in the soils. PAHs were detected at significantly lower concentrations in samples collected below the zones where LNAPL and DNAPL were observed. Highest total PAH concentrations (158.56 mg/kg to 40,190 mg/kg) were detected in the vicinity of the two former gas holders, the former tar well, and in the northwest corner of the site extending under the County Asphalt building where zones saturated with DNAPL were observed. Slightly lower total PAH concentrations (881 mg/kg to 1,335.8 mg/kg) were detected in areas where lenses saturated with DNAPL were observed. Significantly lower total PAH concentration (6.879 mg/kg to 443 mg/kg) were detected in areas where traces of blebs of DNAPL were observed. Total PAH concentrations in area where fuel oil was observed ranged from 13.3 mg/kg to 4,246.5 mg/kg.

Arsenic was detected in all but three of the soil samples at concentrations ranging from 0.76 mg/kg to 20.9 mg/kg. Lead was detected in all of the soil samples at concentrations ranging from 3.2 mg/kg to 1,760 mg/kg. Mercury was detected in approximately half of the soil samples at concentrations ranging from 0.08 mg/kg to 3.0 mg/kg. Zinc was detected in all of the soil samples at concentrations ranging form 26.5 mg/kg to 1,540 mg/kg. Similar metals concentrations were also detected in soil samples collected during a previous investigation (RETEC, 1996). Arsenic, lead, and zinc were also detected in the background soil sample (SB18G) at concentrations of 1,3 mg/kg, 3.2 mg/kg, and 34.9 mg/kg, respectively. In general, metals concentrations decreased with

depth. The presence of these metals is likely related to the industrial nature of the area and the material used as fill (i.e. asphalt, cinders, slag, ash, and other construction debris).

Cyanide was detected in three soil samples, SB02E, SB03E, and SB29H at concentrations ranging from 0.7 mg/kg to 3.2 mg/kg. The highest concentration was detected in the vicinity of the two former gas holders. Cyanide was also detected in seven soil samples from the southern portion of the site during a previous investigation at concentrations ranging from 0.3 mg/kg to 1.9 mg/kg (RETEC, 1996).

TCLP analyses for VOCs were conducted on two soil samples (TP03SO and TP04SO) collected from the test pits. The samples were collected within the two former gas holders from soils containing DNAPL. TCLP results are summarized on Table 4.3. The TCLP benzene concentrations (0.58 mg/l and 0.59 mg/l) in both samples slightly exceeded the toxicity characteristic concentration of 0.5 mg/l (40 CFR 261.24). No other VOCs were detected in the samples.

4.2 GROUNDWATER

Groundwater samples were collected from six monitoring wells (MW-07, MW-10 through MW-12, MW-15/SB-25 and MW-16) during this investigation. Samples were analyzed for BTEX, SVOCs, arsenic, lead mercury, zinc, and cyanide. Laboratory analytical results for detected compounds are summarized on Table 4.4. Complete laboratory analytical results are presented in Appendix E.

Groundwater samples were also collected from ten monitoring wells (MW-01 through MW-09 and MW-15) during a previous investigation (RETEC, 1996). Six wells were analyzed for BTEX, SVOCs, arsenic, lead mercury, zinc, and cyanide, and four wells were analyzed only for arsenic, lead mercury, zinc, and cyanide. Analytical results for all groundwater samples are graphically illustrated on Figure 4.5.

BTEX was detected in groundwater from ten monitoring wells at total concentrations ranging from 8 µg/l to 1,409 µg/l (Table 4.4 and Figure 4.5). BTEX was also detected in groundwater from upgradient monitoring well MW-12 at a concentration of 10 µg/l. The distribution of BTEX in groundwater appears to be consistent with the distribution of LNAPL and DNAPL observed in the soils. Highest BTEX concentrations (468 µg/l to 1,409 µg/l) were detected in groundwater samples in the vicinity of the two former gas holders, the former tar well, and in the northwest corner of the site extending under the County Asphalt building where zones and lenses saturated with DNAPL were observed in the soils. BTEX concentrations in groundwater samples from the area where fuel oil was observed ranged from 69 µg/l to 241 µg/l. BTEX concentrations in downgradient groundwater samples ranged from 8 µg/l in MW-15/SB-25 to 26 µg/l in MW-16.

SVOCs detected in the groundwater samples consisted predominantly of PAHs. Low concentrations of dibenzofuran, bis(2-ethylhexyl)phthalate, 2,4-dimethylphenol, 4-methylphenol, and phenol were sporadically detected in the groundwater samples. A total

of 11 PAHs were detected in groundwater samples from eight monitoring wells. Total PAH concentrations ranged from 18 µg/l to 1,204 µg/l (Table 4.4 and Figure 4.5). PAHs were also detected in groundwater from upgradient monitoring well MW-12 at a total concentration of 32 µg/l. PAHs exhibited a similar distribution pattern to BTEX and appear to be consistent with the distribution of LNAPL and DNAPL observed in the soils. Highest total PAH concentrations (940 µg/l to 1,204 µg/l) were detected in groundwater samples in the vicinity of the two former gas holders, the former tar well, and in the northwest corner of the site extending under the County Asphalt building where zones and lenses saturated with DNAPL were observed in the soils. A total PAH concentration of 142 µg/l was detected in the groundwater sample from the area where fuel oil was observed. Total PAH concentrations in downgradient groundwater samples ranged from 53 µg/l in MW-15/SB-25 to 175 µg/l in MW-16.

Arsenic was detected in four groundwater samples at concentrations ranging from 5.4 µg/l to 45.5 µg/l. Lead was detected in all of the groundwater samples at concentrations ranging from 2.6 µg/l to 297 µg/l. Mercury was detected in three groundwater samples at concentrations ranging from 0.14 µg/l to 1.0 µg/l. Zinc was detected in all of the groundwater samples at concentrations ranging from 4.6 µg/l to 734 µg/l. Arsenic, lead and zinc were also detected in groundwater from upgradient monitoring well MW-12. Results from a previous investigation in the southern portion of the site detected arsenic at concentrations ranging from 17 µg/l to 30 µg/l, lead at concentrations ranging from 11.1 µg/l to 232 µg/l, mercury at concentrations ranging from 0.83 µg/l to 6.1 µg/l, and zinc was detected at concentrations ranging from 51 µg/l to 741 µg/l (RETEC,1996).

Cyanide was detected in groundwater samples from nine monitoring wells at concentrations ranging from 0.009 mg/l to 0.66 mg/l. Cyanide was not detected in groundwater from upgradient monitoring well MW-12. Cyanide also exhibited a similar concentration distribution pattern to BTEX and PAHs.

4.3 RIVER SEDIMENTS

A total of 12 river sediment borings were conducted in a localized area of the Hudson River adjacent to the County Asphalt property to characterize the sediments and determine the potential source of the sheen observed at the water surface. Two background sediment samples were also collected upstream of the County Asphalt property to characterize background sediment concentrations. A total of 25 sediment samples were collected and analyzed for BTEX, SVOCs, arsenic, lead mercury, zinc, cyanide, and TOC. Drilling logs documenting field observations are presented in Appendix C. Laboratory analytical results for detected compounds are summarized on Table 4.5 and graphically illustrated on Figures 4.6 and 4.7. Complete laboratory analytical results are presented in Appendix E.

Visual observations indicate that DNAPL was present in three river sediment borings, RB01, RB03, and RB12 located along the retaining wall. The location of these borings is consistent with the area where sheens were observed on the water surface. DNAPL was

observed in lenses and saturated zones in RB01 at depths from 0 to 7 feet below the sediment/water interface. DNAPL was observed in lenses at depths from 2 to 6 feet below the sediment/water interface in RB03. A few blebs (i.e., very small, discontinuous droplets or spots) and globules of DNAPL were observed at depths from 0 to 4 feet below the sediment/water interface in RB12. DNAPL was not observed in the other surrounding borings. The distribution of DNAPL on site and on the County Asphalt property indicates that the DNAPL has not migrated to the river sediments through the soils.

Test pits conducted on the County Asphalt property encountered two east-west oriented steel pipes, one 4-inches in diameter and one 6-inches in diameter. Fuel oil was encountered on the groundwater table beneath the pipes in test pits TP05, TP07, and TP08. The 6-inch pipe was found to be intact where encountered. The 4-inch diameter pipe was found to be leaking clear water through a small hole in test pit TP07. A low concentration of benzene (0.02 mg/L) was detected in a sample of the leaking water. The 4-inch pipe was found to be broken in test pit TP08. The pipe was empty and had no visible NAPL inside. Results of the test pits indicate that the pipes are not a continuing pathway or source of contamination to the river at the present time.

One sediment sample containing DNAPL (RB12 0-4') and three sediment samples with slight sheens (RB09 2-4', RB10 6-8', and RB11 0-6') were collected for GC/FID fingerprint analyses. Results of the fingerprint analyses are summarized on Table 4.2. Detailed fingerprinting analytical results are presented in Appendix F. The fingerprint results indicate that the sample with DNAPL contains MAHs and PAHs at the concentrations and relative proportions indicative of an MGP-related tar. Fingerprint results from the other samples containing a slight sheen indicate MAHs and PAHs are present in a pattern typical from a pyrogenic source, such as MGP-related tar. In addition, two of the samples (RB09 2-4' and RB11 0-6') also indicate the possible presence of severely weathered petroleum hydrocarbons.

BTEX was detected in 11 of the sediment samples at total concentrations ranging from 0.005 mg/kg to 36.41 mg/kg (Table 4.5 and Figure 4.6). BTEX was not detected in the two background upstream sediment samples BA01 and BA02. The distribution of BTEX appears to be consistent with locations where DNAPL was visually observed in the sediments. Highest BTEX concentrations (0.511 mg/kg to 36.41 mg/kg) were detected in zones where DNAPL was observed. BTEX was detected at significantly lower concentrations (0.004 mg/kg to 0.194 mg/kg) in samples collected below the zones where DNAPL was observed. These serve to define the lower extent of impacted sediments. BTEX was not detected or detected at low concentrations in the surrounding sediment borings where DNAPL was not observed.

SVOCs detected in the sediment samples consisted predominantly of PAHs. Low estimated concentrations of several phthalates and furans were sporadically detected in the sediment samples. A total of 16 PAHs were detected in the sediment samples. Total PAH concentrations ranged from 0.129 mg/kg to 836.97 mg/kg (Table 4.5 and Figure 4.7). PAHs were also detected in the two background upstream sediment samples at total

PAHs were also detected in the two background upstream sediment samples at total concentrations of 1.68 mg/kg and 2.02 mg/kg. PAHs exhibited a similar distribution pattern to BTEX. Highest concentrations (107.1 mg/kg to 836.97 mg/kg) were detected in zones where DNAPL was observed. PAHs were detected at significantly lower concentrations (5.212 mg/kg to 7.47 mg/kg) in samples collected below the zones where DNAPL was observed. These serve to define the lower extent of impacted sediments. PAHs were detected at low concentrations in the surrounding shallow sediments (0 to 4 feet) where DNAPL was not observed. PAHs were not detected in any of the surrounding deeper sediment samples.

Arsenic was detected in all of the sediment samples at concentrations ranging from 0.7 mg/kg to 11.4 mg/kg. Lead was detected in all of the sediment samples at concentrations ranging from 5 mg/kg to 170 mg/kg. Mercury was detected primarily in the shallow sediment samples at concentrations ranging form 0.28 mg/kg to 1.2 mg/kg. Zinc was detected in all of the sediment samples at concentrations ranging from 24.2 mg/kg to 371 mg/kg. Metals concentrations were generally at or below the concentrations detected in the two background upstream samples. In general, metals concentrations decreased with depth in the sediments.

Cyanide was not detected in any of the sediment samples. TOC concentrations in the sediment samples ranged from 2,210 mg/kg to 84,200 mg/kg.

4.4 DNAPL MOBILITY ASSESSMENT

The mobility of DNAPL at the site was evaluated by calculating organic compound saturations and comparing that value with published retention factors for coal tar. The organic compound saturation was calculated by summing organic compound (BTEX and PAH) concentrations, calculating the organic compound volume using an estimated density for DNAPL, and then calculating the volume of organic compounds as a percent of soil porosity. Because the DNAPL was typically found in fill, the organic compound saturation was calculated over a wide range of porosities. BTEX and PAH concentrations were measured in 92 soil borings and river borings. Seventy-five samples contained one or more organic compounds above the detection limit. The organic compound concentrations in each of these 75 samples were summed and the mass in grams was calculated by assuming a 1 Kg mass of soil. The volume of organic compounds was calculated by dividing the mass of organic compounds by a density of 1.11 g/cm^3. The DNAPL density was estimated from the organic compound concentration in SB16G, the sample that contained the highest concentration of organic compounds. The organic compound saturation was then calculated for each of four soil porosity measurements by dividing the volume of the organic compounds by the volume of the voids. The calculated saturations ranged from zero (less than 0.01 percent) to 0.7 percent (Table 4.6).

Organic compounds are potentially mobile as DNAPL when the organic compound saturation exceeds the DNAPL retention factor. Retention factors have been measured and published for "coal tar" in unsaturated siltstone (1% to 3%) and unsaturated

sandstone (17% to 24%, Cohen and Mercer, 1993). Cohen and Mercer also note that retention factors for saturated media are larger than retention factors for unsaturated media; the examples presented in Cohen and Mercer use saturated retention factors three times the value of unsaturated retention factors. Using the lowest porosity value (0.2) and the lowest retention factor (1%), the DNAPL at the site is not mobile.

4.5 SUMMARY OF RESULTS

4.5.1 Soils

Soils above the water table do not appear to be significantly impacted by DNAPL, BTEX or PAHs. This finding is consistent with findings at other former MGP sites. Subsurface soils at and below the water table on the site and on the County Asphalt property have been impacted primarily by LNAPL, DNAPL, BTEX, and PAHs. DNAPL was visually observed in varying amounts in soils on the northern portion of the site and on a portion of the County Asphalt property. DNAPL was observed at depths between 6 and 14 feet on site and at depths between 10 and 25 feet on County Asphalt property. The distribution of DNAPL appears to be coincident with the location of the former MGP. Zones saturated with DNAPL were observed within two former gas holders, in the vicinity of a former tar well, and in the northwest corner of the site extending under the County Asphalt building. Only traces of DNAPL were observed in limited intervals in soils surrounding the potential source areas. This distribution suggests that DNAPL has not migrated horizontally a significant distance from its source area. This is consistent with the DNAPL mobility assessment which indicates that the none of the samples were found to contain mobile DNAPL.

LNAPL was visually observed in the southern portion of the site and in an area south of the asphalt plant. The LNAPL in the southern portion of the site is located in the vicinity of Anchor's former USTs and pump island. LNAPL in the area south of the asphalt plant is coincident with the location of a former diesel fuel UST owned by Valente Industries. Fingerprinting results indicate that the DNAPL is characteristic of MGP-related tar and the LNAPL is characteristic of a weathered middle weight fuel oil.

The distribution of BTEX and PAHs in soils appears to be consistent with the distribution of LNAPL and DNAPL. Highest BTEX and PAH concentrations were detected in the northern portion of the site in the vicinity of the two former gas holders, the former tar well, and in the northwest corner of the site extending under the County Asphalt building. Slightly lower BTEX and PAH concentrations were detected in areas where LNAPL was observed. Significantly lower BTEX and PAH concentrations were detected in surrounding soils where only traces of DNAPL were observed.

4.5.2 Groundwater

Groundwater at the site has been impacted primarily by BTEX and PAHs. The distribution of BTEX and PAHs appears to be consistent with the distribution of LNAPL and DNAPL. Highest concentrations were detected in the vicinity of the former MGP.

Slightly lower concentrations were detected in the vicinity where fuel oil was observed. Low concentrations were detected in the downgradient wells near the Hudson River.

Groundwater migrating from the site, as measured in MW-15 and MW-16, should not have any significant impact on the Hudson River. New York State surface water standards and guidance values for BTEX, PAHs, arsenic, lead, mercury, zinc, and cyanide have been compared to groundwater quality results presented in Table 4.4. This portion of the Hudson River has a Class SD designation. The parameter with groundwater concentrations that most significantly exceed surface water standards or guidance values is zinc based on 461 µg/l measured at MW-16 and a surface water quality standard of 170 µg/l. Assuming conservatively that all of the zinc in groundwater at MW-16 is acid soluble, the surface water standard for zinc is approximately three times the groundwater concentration. A mixing of approximately three parts of surface water with one part of MW-16 groundwater would therefore be needed to meet the surface water standard.

The flow of groundwater from the site reaching the Hudson River can be estimated based on a Darcy equation: the hydraulic conductivity (based on previous slug test results) times the cross-sectional area (i.e. 30 feet in depth times 300 feet parallel to the shoreline) times the hydraulic gradient (approximately one foot per 100 feet based on Figure 3.4). Flow of groundwater to the river is thus estimated to be 9 cubic feet per day based on a hydraulic conductivity of 0.105 feet per day (based on the highest slug test result) times a 30-foot depth times a 300-foot width times a hydraulic gradient of 0.01. To achieve a mixing of three, the flow of water in the Hudson River would need to be at least 9 cubic feet per day times a three-fold mixing or 270 cubic feet per day. Such a flow is achieved, assuming a typical low-flow river water velocity of 0.1 foot per second, from a cross section 10 feet deep by less than 1 foot in width. Hence, only an infinitesimally small portion of the Hudson River cross section is needed to achieve a three-fold mixing.

4.5.3 Sediments

Visual observations and analytical results indicate that sediments in a localized area within the Hudson River along the retaining wall have been impacted by DNAPL, BTEX and PAHs. The impacted area is approximately 150 feet long by 30 feet wide and 4 to 7 feet deep, and coincides with the area where sheens have been observed on the water surface. This relationship suggests that DNAPL in the sediments may be the source of the sheens observed at the water surface. Fingerprinting results indicate that the DNAPL is similar to the DNAPL observed onsite and is characteristic of MGP-related tar. Based on the distribution of DNAPL onsite and on the County Asphalt property, it does not appear that the DNAPL has migrated to the river sediments through the soils, nor is there a continuing source or discharge of DNAPL material to the river from the property.

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	MW11F	MW11I	MW12B	MW12J	SB01E
		DEPTH:	10-12'	14-18'	02-04'	18-28'	08-10'
		LAB ID:	2905101	2905102	2906801	2906802	2909609
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY1	TARRY1	TARRY2	TARRY2	TARRY2
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/11/96	9/11/96	9/12/96	9/12/96	9/16/96
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		15 JD	ND	ND	ND	ND
100-41-4	Ethylbenzene		68 D	ND	ND	ND	ND
108-88-3	Toluene		0.26 J	ND	ND	ND	ND
1330-20-7	Xylene (total)		72 D	ND	ND	0.003 J	ND
	Total BTEX		155.26	ND	ND	0.003	ND
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		12 J	ND	1 J	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	ND	ND
	PAHs						
83-32-9	Acenaphthene		170	0.27 J	1.1 J	ND	ND
208-96-8	Acenaphthylene		16 J	ND	1.3 J	ND	ND
120-12-7	Anthracene		75	0.12 J	1.8 J	ND	ND
56-55-3	Benzo(a)anthracene		40 J	0.068 J	2.7	0.051 J	ND
50-32-8	Benzo(a)pyrene		24 J	ND	3.2	0.064 J	ND
205-99-2	Benzo(b)fluoranthene		11 J	ND	2.3	0.046 J	ND
191-24-2	Benzo(g,h,i)perylene		8.2 J	ND	2.5	0.066 J	ND
207-08-9	Benzo(k)fluoranthene		14 J	ND	2.1	ND	ND
218-01-9	Chrysene		41 J	0.074 J	3.5	0.059 J	ND
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		65	0.13 J	7.6	0.057 J	ND
-7	Fluorene		120	0.16 J	1.4 J	ND	ND
9-5	Indeno(1,2,3-cd)pyrene		6.8 J	ND	2.3	0.056 J	ND
91-57-6	2-Methylnaphthalene		290	0.55	2.1	ND	ND
91-20-3	Naphthalene		620 D	0.97	5.2	ND	ND
85-01-8	Phenanthrene		210	0.41 J	9.7	ND	ND
129-00-0	Pyrene		130	0.23 J	8.1	0.083 J	ND
	Total PAHs		1841	2.982	56.9	0.482	ND
	INORGANICS						
7440-38-2	Arsenic		0.76 J	3.7	10.7	0.96 J	3.9
7439-92-1	Lead		12.4	15.4	578 J	18.1 J	8.8 J
7439-97-6	Mercury		ND	ND	2.4	ND	ND
7440-66-6	Zinc		41.4	80.9	427	72.2 J	47.6 J
57-12-5	Cyanide		ND	ND	ND	ND	R

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB01H	SB02E	SB03E	SB03J	SB103J (1)
		DEPTH:	12-14'	08-10'	08-10'	18-20'	18-20'
		LAB ID:	2909610	2903101	2903102	2903103	2903104
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY2	TARRY1	TARRY1	TARRY1	TARRY1
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/16/96	9/10/96	9/10/96	9/10/96	9/10/96
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	16	6.2	ND	0.002 J
100-41-4	Ethylbenzene		ND	33	11	ND	ND
108-88-3	Toluene		ND	27	4.7	ND	0.002 J
1330-20-7	Xylene (total)		ND	51	16	ND	0.01 J
	Total BTEX		ND	127	37.9	ND	0.014
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		ND	ND	15 J	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	ND	ND
	PAHs						
83-32-9	Acenaphthene		ND	6 J	88	ND	ND
208-96-8	Acenaphthylene		ND	ND	16 J	ND	ND
120-12-7	Anthracene		ND	ND	52	ND	ND
56-55-3	Benzo(a)anthracene		ND	ND	32 J	ND	ND
50-32-8	Benzo(a)pyrene		ND	ND	17 J	ND	ND
205-99-2	Benzo(b)fluoranthene		ND	ND	8.6 J	ND	ND
191-24-2	Benzo(g,h,i)perylene		ND	ND	8.8 J	ND	ND
207-08-9	Benzo(k)fluoranthene		ND	ND	14 J	ND	ND
218-01-9	Chrysene		ND	ND	34 J	ND	ND
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		ND	6.5 J	58	ND	ND
[illegible]-7	Fluorene		ND	7.1 J	90	ND	ND
[illegible]-5	Indeno(1,2,3-cd)pyrene		ND	ND	7.4 J	ND	ND
[illegible]7-6	2-Methylnaphthalene		ND	280	280	0.08 J	ND
91-20-3	Naphthalene		ND	890 D	330	0.23 J	0.08 J
85-01-8	Phenanthrene		ND	17 J	190	0.077 J	ND
129-00-0	Pyrene		ND	12 J	110	0.055 J	ND
	Total PAHs		ND	1218.6	1335.8	0.442	0.08
	INORGANICS						
7440-38-2	Arsenic		4.8	3.8	6.9	3.7	2.1
7439-92-1	Lead		3.9 J	870	34.9	9.5	11.7
7439-97-6	Mercury		ND	0.53	ND	ND	ND
7440-66-6	Zinc		40.2 J	833	69.4	58.3	69.6
57-12-5	Cyanide		R	0.7	3.2	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB04E	SB04J	SB05F	SB05J	SB06E
		DEPTH:	08-10'	18-20'	08-10'	16-20'	08-10'
		LAB ID:	2903105	2903106	2905103	2905104	2905105
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY1	TARRY1	TARRY1	TARRY1	TARRY1
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/10/96	9/10/96	9/12/96	9/12/96	9/12/96
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	12	0.007 J	1.6 JD
100-41-4	Ethylbenzene		ND	ND	9.2	0.007 J	38 D
108-88-3	Toluene		ND	ND	62 D	0.004 J	0.19 J
1330-20-7	Xylene (total)		ND	ND	62	0.012 J	45 D
	Total BTEX		ND	ND	145.2	0.03	84.79
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		ND	ND	4.1 J	ND	16 J
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	ND	ND
	PAHs						
83-32-9	Acenaphthene		ND	ND	10 J	0.062 J	130
208-96-8	Acenaphthylene		ND	ND	74	0.063 J	14 J
120-12-7	Anthracene		ND	ND	34	0.062 J	61
56-55-3	Benzo(a)anthracene		ND	ND	21	0.045 J	36 J
50-32-8	Benzo(a)pyrene		ND	ND	15 J	ND	24 J
205-99-2	Benzo(b)fluoranthene		ND	ND	5.4 J	ND	10 J
191-24-2	Benzo(g,h,i)perylene		ND	ND	7.8 J	ND	9.4 J
207-08-9	Benzo(k)fluoranthene		ND	ND	9.2 J	ND	16 J
218-01-9	Chrysene		ND	ND	19	ND	35 J
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		ND	ND	38	0.089 J	70
86-73-7	Fluorene		ND	ND	57	0.092 J	97
193-39-5	Indeno(1,2,3-cd)pyrene		ND	ND	5.6 J	ND	8.1 J
91-57-6	2-Methylnaphthalene		ND	ND	130	0.22 J	200
91-20-3	Naphthalene		ND	ND	270 D	0.44 J	300
85-01-8	Phenanthrene		ND	ND	110	0.25 J	180
129-00-0	Pyrene		ND	ND	75	0.17 J	120
	Total PAHs		ND	ND	881	1.493	1310.5
	INORGANICS						
7440-38-2	Arsenic		0.89 J	ND	ND	1.2 J	ND
7439-92-1	Lead		6.2	7.7	6.9	6.5	14.8
7439-97-6	Mercury		ND	ND	ND	ND	ND
7440-66-6	Zinc		52.5	47.7	38.6	52.8	28.2
57-12-5	Cyanide		ND	ND	ND	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	SB06H	SB07G	SB07M	SB08G	SB09F
		DEPTH:	12-16'	12-14'	24-26'	12-14'	10-12'
		LAB ID:	2905106	2906805	2906806	2906807	2909612
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY1	TARRY2	TARRY2	TARRY2	TARRY2
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/12/96	9/13/96	9/13/96	9/13/96	9/16/96
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	0.009 J	ND	1.8 JD	0.054
100-41-4	Ethylbenzene		ND	0.06	ND	49 D	0.62 JD
108-88-3	Toluene		ND	0.006 J	0.002 J	0.065	0.007 J
1330-20-7	Xylene (total)		ND	0.14	0.008 J	31 D	0.29
	Total BTEX		ND	0.215	0.01	81.865	0.971
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		ND	6	ND	12	0.82 J
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	ND	ND
	PAHs						
83-32-9	Acenaphthene		0.12 J	68 D	ND	240 D	2.4
208-96-8	Acenaphthylene		ND	9.5	ND	12	0.27 J
120-12-7	Anthracene		0.061 J	40	ND	89 JD	1.9
56-55-3	Benzo(a)anthracene		ND	35	0.054 J	45 JD	1.4 J
50-32-8	Benzo(a)pyrene		ND	25	ND	29	1 J
205-99-2	Benzo(b)fluoranthene		ND	14	ND	11	0.7 J
191-24-2	Benzo(g,h,i)perylene		ND	5 J	ND	4.7	0.72 J
207-08-9	Benzo(k)fluoranthene		ND	13	ND	17	0.68 J
218-01-9	Chrysene		ND	50 D	0.052 J	42 JD	1.2 J
53-70-3	Dibenz(a,h)anthracene		ND	0.78 J	ND	0.86 J	ND
206-44-0	Fluoranthene		0.086 J	66 D	0.08 J	88 JD	3.1
[illegible]-7	Fluorene		0.093 J	70 D	ND	120 D	2
[illegible]-5	Indeno(1,2,3-cd)pyrene		ND	5.2	ND	5.1	0.61 J
[illegible]-6	2-Methylnaphthalene		0.2 J	120 D	ND	480 D	3.1
91-20-3	Naphthalene		0.51	79 D	ND	620 D	5
85-01-8	Phenanthrene		0.25 J	140 D	0.13 J	260 D	5.1
129-00-0	Pyrene		0.14 J	130 D	0.12 J	150 D	3.7
	Total PAHs		1.46	871.48	0.436	2213.66	32.88
	INORGANICS						
7440-38-2	Arsenic		3.5	16.3	1.4	4.7	1.4
7439-92-1	Lead		10.9	297 J	7.5 J	1760 J	10.5 J
7439-97-6	Mercury		ND	2.4	ND	0.76	0.12
7440-66-6	Zinc		69.8	370 J	63 J	348 J	60 J
57-12-5	Cyanide		ND	ND	ND	ND	R

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB09J	SB10E	SB10I	SB11F	SB11H
		DEPTH:	18-20'	08-10'	16-18'	10-12'	14-16'
		LAB ID:	2909611	2909614	2909613	2909603	2909604
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY2	TARRY2	TARRY2	TARRY2	TARRY2
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/16/96	9/16/96	9/16/96	9/16/96	9/16/96
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		0.003 J	2.6	0.061	9.9	0.069
100-41-4	Ethylbenzene		0.005 J	21	0.62 JD	20	0.046
108-88-3	Toluene		ND	ND	0.003 J	0.82 J	ND
1330-20-7	Xylene (total)		0.004 J	2.6	0.25	28	0.003 J
	Total BTEX		0.012	26.2	0.934	58.72	0.118
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		0.057 J	4.6 J	0.62 J	110	ND
84-66-2	Diethylphthalate		ND	69	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	ND	ND
	PAHs						
83-32-9	Acenaphthene		0.17 J	68	6.6	150	0.063 J
208-96-8	Acenaphthylene		ND	ND	0.57 J	24 J	ND
120-12-7	Anthracene		0.1 J	22 J	3	160	0.087 J
56-55-3	Benzo(a)anthracene		0.078 J	9.2 J	1.7	160	0.082 J
50-32-8	Benzo(a)pyrene		0.058 J	5.5 J	1.1 J	120	0.055 J
205-99-2	Benzo(b)fluoranthene		ND	ND	0.56 J	72	0.042 J
191-24-2	Benzo(g,h,i)perylene		ND	ND	0.6 J	98	ND
207-08-9	Benzo(k)fluoranthene		0.042 J	ND	0.56 J	87	0.048 J
218-01-9	Chrysene		0.072 J	9.2 J	1.6 J	130	0.074 J
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	9.8 J	ND
206-44-0	Fluoranthene		0.18 J	19 J	3	320	0.19 J
[illegible]-7	Fluorene		0.13 J	30 J	3.9	160	0.08 J
9-5	Indeno(1,2,3-cd)pyrene		ND	ND	0.49 J	87	ND
[illegible]7-6	2-Methylnaphthalene		0.34 J	170	11	93	0.1 J
91-20-3	Naphthalene		0.62	280	12	440 D	0.42
85-01-8	Phenanthrene		0.36 J	74	9.2	480 D	0.28 J
129-00-0	Pyrene		0.22 J	34 J	5.1	410 D	0.24 J
	Total PAHs		2.37	720.9	60.98	3000.8	1.761
	INORGANICS						
7440-38-2	Arsenic		2.2	9.1	8.2	6.7	3.3
7439-92-1	Lead		7.1 J	472 J	439 J	82.6 J	10.4 J
7439-97-6	Mercury		ND	1.1	ND	0.22 J	ND
7440-66-6	Zinc		47.7 J	168 J	158 J	67.4	64.7 J
57-12-5	Cyanide		R	R	R	R	R

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB12B	SB12G	SB13D	SB13I	SB14I
		DEPTH:	02-04'	12-14'	06-08'	16-18'	14-18'
		LAB ID:	2909605	2909606	2909607	2909608	3037701
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY2	TARRY2	TARRY2	TARRY2	TARRY4
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/17/96	9/17/96	9/17/96	9/17/96	1/20/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	0.002 J	0.002 J	ND	1.3 J
100-41-4	Ethylbenzene		ND	ND	0.012 J	ND	3.6
108-88-3	Toluene		ND	ND	0.002 J	ND	ND
1330-20-7	Xylene (total)		ND	ND	0.005 J	ND	1.1 J
	Total BTEX		ND	0.002	0.021	ND	6
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		0.073 J	ND	0.85 J	ND	1 J
84-66-2	Diethylphthalate		0.42	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		0.047 J	ND	ND	ND	ND
	PAHs						
83-32-9	Acenaphthene		0.12 J	ND	18	0.063 J	16
208-96-8	Acenaphthylene		ND	ND	1.2 J	ND	1.2 J
120-12-7	Anthracene		0.31 J	ND	7.7	ND	7.1
56-55-3	Benzo(a)anthracene		0.6	ND	3.7 J	ND	2.7 J
50-32-8	Benzo(a)pyrene		0.52	ND	2.3 J	ND	2.4 J
205-99-2	Benzo(b)fluoranthene		0.37 J	ND	0.79 J	ND	1.2 J
191-24-2	Benzo(g,h,i)perylene		0.47	ND	1.2 J	ND	0.54 J
207-08-9	Benzo(k)fluoranthene		0.45	ND	1.3 J	ND	1.4 J
218-01-9	Chrysene		0.63	ND	3.6 J	ND	3.2 J
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		1.4	ND	6	ND	5.4
86-73-7	Fluorene		0.11 J	ND	11	ND	7.5
193-39-5	Indeno(1,2,3-cd)pyrene		0.4 J	ND	0.92 J	ND	ND
91-57-6	2-Methylnaphthalene		0.046 J	ND	15	0.05 J	5.2
91-20-3	Naphthalene		0.052 J	ND	19	0.068 J	8.8
85-01-8	Phenanthrene		1.4	ND	22	0.12 J	25
129-00-0	Pyrene		1.7	ND	12	0.073 J	7
	Total PAHs		8.578	ND	125.71	0.374	94.64
	INORGANICS						
7440-38-2	Arsenic		1.7	2.1	0.84 J	0.92 J	14.6
7439-92-1	Lead		187 J	5.2 J	7.2 J	4.2 J	798
7439-97-6	Mercury		ND	ND	ND	ND	0.52
7440-66-6	Zinc		101 J	47.7 J	51.9 J	42.3 J	672 J
57-12-5	Cyanide		R	R	R	R	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB14J	SB15J	SB15K	SB16G	SB16I
		DEPTH:	18-20'	19-21'	21-23'	12-14'	16-18'
		LAB ID:	3037702	3037703	3037704	3037705	3037706
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY4	TARRY4	TARRY4	TARRY4	TARRY4
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/20/97	1/20/97	1/20/97	1/21/97	1/21/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	0.63 J	ND	5.4	ND
100-41-4	Ethylbenzene		ND	9.4	0.02	140 D	0.008 J
108-88-3	Toluene		ND	ND	ND	0.88 J	ND
1330-20-7	Xylene (total)		ND	1.8	ND	95 D	ND
	Total BTEX		ND	11.83	0.02	241.28	0.008
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	54	1.2	700	0.4 J
117-84-0	Di-n-octylphthalate		0.063 J	ND	ND	ND	ND
132-64-9	Dibenzofuran		ND	ND	0.085 J	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	0.084 J	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		0.44 J	ND	ND	ND	0.12 J
	PAHs						
83-32-9	Acenaphthene		0.51	52	1.9	510	0.45 J
208-96-8	Acenaphthylene		0.057 J	ND	0.098 J	30 J	ND
120-12-7	Anthracene		0.26 J	19 J	0.8	180 J	0.2 J
56-55-3	Benzo(a)anthracene		0.18 J	8.9 J	0.33 J	72 J	0.094 J
50-32-8	Benzo(a)pyrene		0.14 J	6 J	0.24 J	50 J	0.065 J
205-99-2	Benzo(b)fluoranthene		0.09 J	ND	0.11 J	ND	ND
191-24-2	Benzo(g,h,i)perylene		ND	ND	ND	ND	ND
207-08-9	Benzo(k)fluoranthene		0.099 J	ND	ND	ND	ND
218-01-9	Chrysene		0.19 J	9.1 J	0.37 J	79 J	0.1 J
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		0.38 J	16 J	0.68 J	150 J	0.17 J
3-7	Fluorene		0.23 J	22 J	0.86	250 J	0.26 J
39-5	Indeno(1,2,3-cd)pyrene		ND	ND	ND	ND	ND
91-57-6	2-Methylnaphthalene		0.13 J	98	3	1000	0.77
91-20-3	Naphthalene		0.13 J	120	2.9	1600	0.9
85-01-8	Phenanthrene		1.4	66	2.8	660	0.76
129-00-0	Pyrene		0.45	26 J	1.1	210 J	0.26 J
	Total PAHs		4.246	443	15.188	4791	4.029
	INORGANICS						
7440-38-2	Arsenic		4.8	7	5.5	9	5.7
7439-92-1	Lead		7.7	67.8	3.4	589	7
7439-97-6	Mercury		ND	ND	ND	ND	0.45
7440-66-6	Zinc		46.2 J	181 J	26.5 J	502 J	52.2 J
57-12-5	Cyanide		ND	ND	ND	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB17D	SB17H	SB117H (2)	SB18B	SB18G
		DEPTH:	06-08'	12-16'	12-16'	02-04'	12-14'
		LAB ID:	3037707	3037708	3037711	3037712	3037713
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY4	TARRY4	TARRY4	TARRY4	TARRY4
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/21/97	1/21/97	1/21/97	1/21/97	1/21/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	ND	ND	ND
100-41-4	Ethylbenzene		ND	ND	ND	ND	ND
108-88-3	Toluene		ND	ND	ND	ND	ND
1330-20-7	Xylene (total)		ND	ND	ND	ND	ND
	Total BTEX		ND	ND	ND	ND	ND
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		0.24 J	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		ND	ND	ND	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	0.094 J	0.12 J	ND	0.1 J
	PAHs						
83-32-9	Acenaphthene		ND	ND	ND	ND	ND
208-96-8	Acenaphthylene		ND	ND	ND	ND	ND
120-12-7	Anthracene		0.48 J	ND	ND	ND	ND
56-55-3	Benzo(a)anthracene		1.2 J	ND	ND	0.071 J	ND
50-32-8	Benzo(a)pyrene		1.4 J	ND	ND	0.081 J	ND
205-99-2	Benzo(b)fluoranthene		1.7 J	ND	ND	0.11 J	ND
191-24-2	Benzo(g,h,i)perylene		ND	ND	ND	ND	ND
207-08-9	Benzo(k)fluoranthene		1.9	ND	ND	0.13 J	ND
218-01-9	Chrysene		1.3 J	ND	ND	0.077 J	ND
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		4.4	ND	0.041 J	0.18 J	ND
7	Fluorene		0.21 J	ND	ND	ND	ND
-5	Indeno(1,2,3-cd)pyrene		0.33 J	ND	ND	ND	ND
91-57-6	2-Methylnaphthalene		ND	ND	ND	ND	ND
91-20-3	Naphthalene		ND	ND	ND	ND	ND
85-01-8	Phenanthrene		1.5 J	ND	ND	0.057 J	ND
129-00-0	Pyrene		4.5	ND	0.05 J	0.14 J	ND
	Total PAHs		18.92	ND	0.091	0.846	ND
	INORGANICS						
7440-38-2	Arsenic		4.6	2.5	1.7	3.3	1.3
7439-92-1	Lead		92.3	16.1	5.6	38.5	3.2
7439-97-6	Mercury		0.29	ND	ND	ND	ND
7440-66-6	Zinc		98.6 J	49.3 J	30 J	49.4 J	34.9 J
57-12-5	Cyanide		ND	ND	ND	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB19G	SB19J	SB20I	SB20K	SB21H
		DEPTH:	12-14'	18-20'	14-18'	20.5-22	14-16'
		LAB ID:	3037714	3037715	3038501	3038502	3038503
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY4	TARRY4	TARRY5	TARRY5	TARRY5
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/21/97	1/21/97	1/21/97	1/21/97	1/21/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	ND	ND	ND
100-41-4	Ethylbenzene		1.8	18	ND	ND	ND
108-88-3	Toluene		ND	1.3 J	ND	ND	ND
1330-20-7	Xylene (total)		1.2 J	30	ND	ND	0.005 J
	Total BTEX		3	49.3	ND	ND	0.005
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		2.4 J	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		0.87 J	ND	0.048 J	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		1.1 J	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	ND	ND
	PAHs						
83-32-9	Acenaphthene		3.4 J	110	0.087 J	0.16 J	0.28 J
208-96-8	Acenaphthylene		4.1 J	12 J	ND	ND	0.24 J
120-12-7	Anthracene		14	68 J	0.17 J	0.1 J	3.1
56-55-3	Benzo(a)anthracene		9.5	39 J	0.48	0.065 J	5
50-32-8	Benzo(a)pyrene		6.8	30 J	0.81	0.049 J	4.5
205-99-2	Benzo(b)fluoranthene		5.3	17 J	0.88	ND	4.8
191-24-2	Benzo(g,h,i)perylene		ND	ND	0.11 J	0.037 J	0.41 J
207-08-9	Benzo(k)fluoranthene		7.3	32 J	0.93	ND	5.1
218-01-9	Chrysene		9.9	40 J	0.54	0.069 J	4.8
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		24	87 J	1	0.14 J	13
86-73-7	Fluorene		8.8	61 J	0.092 J	0.12 J	0.3 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.98 J	ND	0.11 J	ND	0.5 J
91-57-6	2-Methylnaphthalene		ND	230	ND	0.14 J	ND
91-20-3	Naphthalene		3.5 J	180	0.18 J	0.096 J	0.39 J
85-01-8	Phenanthrene		29	230	0.59	0.39 J	4.4
129-00-0	Pyrene		32 D	130	0.81	0.23 J	6.9
	Total PAHs		158.58	1266	6.789	1.596	53.72
	INORGANICS						
7440-38-2	Arsenic		6.2	14.5	4.4	0.97 J	7.6
7439-92-1	Lead		108	166	1160 J	4.2 J	27.8 J
7439-97-6	Mercury		0.14	1.9	0.32	0.1 J	1.1
7440-66-6	Zinc		95.9 J	1540 J	110	35.7	82.4
57-12-5	Cyanide		ND	ND	ND	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	SB21K	SB22G	SB22I	SB23B	SB23G
		DEPTH:	20-22'	12-14'	16-18'	02-04'	12-14'
		LAB ID:	3038504	3038505	3038506	3038507	3038508
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY5	TARRY5	TARRY5	TARRY5	TARRY5
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/21/97	1/21/97	1/21/97	1/22/97	1/22/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	0.016	ND	ND
100-41-4	Ethylbenzene		ND	0.004 J	0.049	ND	ND
108-88-3	Toluene		ND	ND	ND	ND	ND
1330-20-7	Xylene (total)		ND	ND	0.12	ND	ND
	Total BTEX		ND	0.004	0.185	ND	ND
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	0.048 J	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		ND	0.12 J	ND	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	0.13 J	0.071 J
	PAHs						
83-32-9	Acenaphthene		ND	1.1	0.24 J	ND	ND
208-96-8	Acenaphthylene		ND	0.075 J	ND	0.072 J	ND
120-12-7	Anthracene		ND	0.58 J	0.12 J	0.12 J	ND
56-55-3	Benzo(a)anthracene		ND	0.67 J	0.1 J	0.26 J	ND
50-32-8	Benzo(a)pyrene		ND	0.61 J	0.1 J	0.21 JD	ND
205-99-2	Benzo(b)fluoranthene		ND	0.49 J	0.07 J	0.26 JD	ND
191-24-2	Benzo(g,h,i)perylene		ND	0.52 J	ND	ND	ND
207-08-9	Benzo(k)fluoranthene		ND	0.48 J	0.085 J	0.27 JD	ND
218-01-9	Chrysene		ND	0.74 J	0.11 J	0.43	ND
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		ND	1.9	0.16 J	0.43	ND
[illegible]-7	Fluorene		ND	0.57 J	0.12 J	0.078 J	ND
[illegible]-5	Indeno(1,2,3-cd)pyrene		ND	0.4 J	ND	ND	ND
[illegible]-6	2-Methylnaphthalene		ND	0.29 J	ND	0.15 J	ND
91-20-3	Naphthalene		ND	0.57 J	1.9	0.13 J	ND
85-01-8	Phenanthrene		ND	2.3	0.38 J	0.4	ND
129-00-0	Pyrene		ND	1.9	0.19 J	0.36	ND
	Total PAHs		ND	13.195	3.575	3.17	ND
	INORGANICS						
7440-38-2	Arsenic		2.3	3.9	6.9	7.1	5.3
7439-92-1	Lead		8.3 J	462 J	17.2 J	14.5 J	41.1 J
7439-97-6	Mercury		ND	0.21	0.1 J	0.08 J	0.14
7440-66-6	Zinc		27.1	94.2	81.9	37.5	64.5
57-12-5	Cyanide		ND	ND	ND	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB24E	SB24J	SB24K	SB25I	SB25K
		DEPTH:	08-10'	18-20'	20-22'	16-18'	20-22'
		LAB ID:	3040203	3040204	3040205	3040206	3040207
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY5	TARRY5	TARRY5	TARRY5	TARRY5
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/22/97	1/22/97	1/22/97	1/22/97	1/22/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	ND	ND	ND
100-41-4	Ethylbenzene		ND	1.7 J	ND	ND	ND
108-88-3	Toluene		ND	0.3 J	ND	ND	ND
1330-20-7	Xylene (total)		ND	2.2	ND	ND	ND
	Total BTEX		ND	4.2	ND	ND	ND
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	0.1 J	0.059 J	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		ND	ND	ND	0.24 J	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	0.32 J	0.29 J	0.14 J	ND
	PAHs						
83-32-9	Acenaphthene		73	1.4	0.22 J	2.5	5.6
208-96-8	Acenaphthylene		12	0.39 J	ND	ND	1.2 J
120-12-7	Anthracene		41	1.1	0.13 J	0.96	7.6
56-55-3	Benzo(a)anthracene		22	0.63	0.079 J	0.5 J	8
50-32-8	Benzo(a)pyrene		12	0.4 J	ND	0.43 J	5.4
205-99-2	Benzo(b)fluoranthene		6.1 J	0.2 J	ND	0.34 J	2.4 J
191-24-2	Benzo(g,h,i)perylene		4.1 J	0.18 J	ND	0.25 J	2 J
207-08-9	Benzo(k)fluoranthene		7.6 J	0.3 J	ND	0.3 J	3.5 J
218-01-9	Chrysene		21	0.64	0.074 J	0.58 J	7.6
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		35	0.99	0.13 J	1.2	10
86-73-7	Fluorene		43	1.2	0.14 J	0.55 J	4 J
193-39-5	Indeno(1,2,3-cd)pyrene		3.7 J	0.15 J	ND	0.22 J	1.8 J
91-57-6	2-Methylnaphthalene		ND	0.39 J	0.32 J	0.14 J	1.5 J
91-20-3	Naphthalene		8.8 JD	0.72	0.33 J	0.73 J	1.2 J
85-01-8	Phenanthrene		87 D	3.5	0.48	3	21
129-00-0	Pyrene		59	1.8	0.23 J	ND	16
	Total PAHs		435.3	13.99	2.133	11.7	98.8
	INORGANICS						
7440-38-2	Arsenic		10.4	20.9	4.7	2.5	9.1
7439-92-1	Lead		373 J	1360 J	8.4 J	522 J	173 J
7439-97-6	Mercury		1.1	0.46	ND	0.81	1.7
7440-66-6	Zinc		461	642	54.2	150	147
57-12-5	Cyanide		ND	ND	ND	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB28I	SB29H	SB30I	SB30K	SB213E
		DEPTH:	16-18'	14-16'	16-18'	21.5-22'	04-10'
		LAB ID:	3040208	3041601	3041602	3041603	3038511
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY5	TARRY4	TARRY4	TARRY4	TARRY5
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/23/97	1/23/97	1/24/97	1/24/97	1/22/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	0.29 J	ND	0.038	5.4
100-41-4	Ethylbenzene		0.27 J	1.2 J	0.91 J	0.009 J	15
108-88-3	Toluene		ND	0.26 J	ND	ND	0.53 J
1330-20-7	Xylene (total)		ND	0.88 J	0.79 J	0.01 J	12
	Total BTEX		0.27	2.63	1.7	0.057	32.93
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		0.26 J	5.4 J	0.11 J	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	0.24 J	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND	6.8 J
108-95-2	Phenol		ND	ND	0.13 J	ND	ND
117-81-7	bis(2-Ethythexyl)phthalate		0.24 J	ND	ND	ND	ND
	PAHs						
83-32-9	Acenaphthene		3	60	0.78 J	4.6 J	2.5 J
208-96-8	Acenaphthylene		1 J	7.3 J	ND	ND	ND
120-12-7	Anthracene		1.9	44	0.75 J	1.9 J	2.1 J
56-55-3	Benzo(a)anthracene		4.1	23	0.85 J	2 J	1.9 J
50-32-8	Benzo(a)pyrene		3.4	15	0.55 J	1.5 J	2.2 J
205-99-2	Benzo(b)fluoranthene		2.6	7.4 J	0.43 J	0.91 J	2.3 J
191-24-2	Benzo(g,h,i)perylene		1.7	5.3 J	0.25 J	ND	ND
207-08-9	Benzo(k)fluoranthene		2.3	9.7	0.42 J	1.2 J	2.8 J
218-01-9	Chrysene		4.1	22	0.98 J	1.9 J	2.1 J
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND	ND
206-44-0	Fluoranthene		8.7	40	1.4	2.7 J	4.7 J
-7	Fluorene		1.7	39	0.45 J	2 J	5.5 J
3-5	Indeno(1,2,3-cd)pyrene		1.5 J	4.6 J	0.23 J	ND	ND
9--7-6	2-Methylnaphthalene		ND	4.3 J	0.49 J	5.8 J	54
91-20-3	Naphthalene		0.24 J	12	0.55 J	8.1 J	14
85-01-8	Phenanthrene		4.8	120 D	3.9	6.2 J	13
129-00-0	Pyrene		ND	2.3 J	1.9	3.7 J	4 J
	Total PAHs		41.04	415.9	13.93	42.51	111.1
	INORGANICS						
7440-38-2	Arsenic		6.3	3.5	16.1	5.1	4.6
7439-92-1	Lead		609 J	1380	418	58.5	287 J
7439-97-6	Mercury		0.76	ND	3	0.33	1.1
7440-66-6	Zinc		909	29.6 J	183 J	62.6 J	118
57-12-5	Cyanide		ND	1.2 J	R	R	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.1
SUMMARY OF SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB217D	SB218C	SB220C	SB220G
		DEPTH:	07-09'	04-06'	04-06'	12-14'
		LAB ID:	3038509	3038510	3040201	3040202
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY5	TARRY5	TARRY5	TARRY5
		MATRIX:	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/22/97	1/22/97	1/22/97	1/22/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES					
71-43-2	Benzene		0.18 J	3.6	3.5	0.06 J
100-41-4	Ethylbenzene		0.8 J	24	14	0.055 J
108-88-3	Toluene		0.26 J	0.49 J	0.28 J	ND
1330-20-7	Xylene (total)		0.48 J	5.7	7.2	0.1
	Total BTEX		1.72	33.79	24.98	0.215
	SEMIVOLATILES					
85-68-7	Butylbenzylphthalate		ND	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND
117-84-0	Di-n-octylphthalate		ND	ND	ND	ND
132-64-9	Dibenzofuran		76	ND	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine		ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	ND
	PAHs					
83-32-9	Acenaphthene		100	13 J	9.2 J	36
208-96-8	Acenaphthylene		9.5 J	ND	ND	5 J
120-12-7	Anthracene		210	ND	6 J	26
56-55-3	Benzo(a)anthracene		200	5.3 J	18	20
50-32-8	Benzo(a)pyrene		260 D	5.6 J	16 J	13 J
205-99-2	Benzo(b)fluoranthene		250 D	5.1 J	14 J	9.8 J
191-24-2	Benzo(g,h,i)perylene		32 JD	ND	9.2 J	5.6 J
207-08-9	Benzo(k)fluoranthene		310 D	5.2 J	15 J	9.6 J
218-01-9	Chrysene		200	5.8 J	17 J	21
53-70-3	Dibenz(a,h)anthracene		ND	ND	ND	ND
206-44-0	Fluoranthene		900 D	14 J	29	35
86-73-7	Fluorene		110	34 J	16 J	22
193-39-5	Indeno(1,2,3-cd)pyrene		35 JD	ND	8.7 J	5 J
91-57-6	2-Methylnaphthalene		50	280	120	11 J
91-20-3	Naphthalene		110	ND	33	5 J
85-01-8	Phenanthrene		1000 D	78	38	86
129-00-0	Pyrene		470 D	16 J	32	ND
	Total PAHs		4246.5	462	381.1	310
	INORGANICS					
7440-38-2	Arsenic		3.7	4.8	3.6	7.2
7439-92-1	Lead		172 J	91.8 J	1610 J	333 J
7439-97-6	Mercury		0.13	0.17	0.54	0.35
7440-66-6	Zinc		67.9	77.8	304	299
57-12-5	Cyanide		ND	ND	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
R - Rejected value.
(1) - Duplicate sample of SB03J
(2) - Duplicate sample of SB17H

TABLE 4.2
SUMMARY OF FINGERPRINT RESULTS
TARRYTOWN SITE

Sample Number	Units	Total MAHs	Total PAHs	Fingerprint Identification from Laboratory
Soils				
TP01H2	mg/kg	2,810	41,300	MGP tar
TP03H2	mg/l	1.9	18.1	MGP tar plus weathered middle weight fuel oil
TP04SO	mg/kg	1,280	29,500	MGP tar
SB10FP	mg/kg	7,260	157,000	MGP tar
SB19G	mg/kg	2.6	198	Weathered MGP tar and unknown oil
SB220G	mg/kg	4.49	526	Weathered MGP tar
MW13	mg/kg	233	4,750	MGP tar
MW14	mg/kg	80	1,280	MGP tar
MW03	mg/kg	87	1,220	Highly weathered middle weight fuel oil
TP05	mg/l	*	*	Moderately weathered middle weight fuel oil
TP07	mg/l	0.2	ND	Unknown, very low concentrations
TP09	mg/l	*	*	Highly weathered middle weight fuel oil
SB24E	mg/kg	*	307*	Moderately weathered middle weight fuel oil plus some high molecular weight PAHs
B24J	mg/kg	ND	17.6*	Moderately weathered middle weight fuel oil plus additional refined petroleum products
SB27C	mg/kg	11.8	30.5*	Moderately weathered middle weight fuel oil
SB27H	mg/kg	53.4	256*	Moderately weathered middle weight fuel oil and PAHs
SB213E	mg/kg	48.4	117*	Moderately weathered middle weight fuel oil
SB217D	mg/kg	66	283	Gasoline or naphtha plus some weathered MGP tar
SB218C	mg/kg	*	31.4*	Moderately weathered middle weight fuel oil
SB220C	mg/kg	*	42.7	Moderately weathered middle weight fuel oil
River Sediments				
SW1 (sheen)	mg/l	11.3	22.6	MGP tar
SED1	mg/l	140	4.75	PAHs
RB9	mg/kg	1.89	72.6	Residual compounds related to MGP tar plus severely weathered petroleum hydrocarbons
RB10	mg/kg	0.54	8.31	Residual compounds related to MGP tar
RB11	mg/kg	2.45	73.1	Residual compounds related to MGP tar plus severely weathered petroleum hydrocarbons
RB12	mg/kg	7.52	306	MGP tar

* Incomplete due to interference

TABLE 4.3
TCLP RESULTS FOR TEST PIT SAMPLES
TARRYTOWN SITE

CAS NO.	COMPOUND	TCLP Regulatory Level	SAMPLE ID:	TP03SO	TP04SO
			LAB ID:	2901301	2901302
			SOURCE:	NYTEST	NYTEST
			SDG:	29013	29013
			MATRIX:	SOIL	SOIL
			SAMPLED:	9/09/96	9/09/96
			UNITS:	mg/L	mg/L
	TCLP VOLATILES				
75-01-4	Vinyl Chloride	0.2		.05 U	.05 U
75-35-4	1,1-Dichloroethene	0.7		.05 U	.05 U
67-66-3	Chloroform	6		.05 U	.05 U
107-06-2	1,2-Dichloroethane	0.5		.05 U	.05 U
78-93-3	2-Butanone	200		.05 U	.05 U
56-23-5	Carbon Tetrachloride	0.5		.05 U	.05 U
79-01-6	Trichloroethene	0.5		.05 U	.05 U
71-43-2	Benzene	0.5		0.58	0.59
127-18-4	Tetrachloroethene	0.7		.05 U	.05 U
108-90-7	Chlorobenzene	100		.05 U	.05 U

U - Not detected.

Exceeds TCLP Regulatory Level

TABLE 4.4
SUMMARY OF GROUNDWATER SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	MW07	MW10	MW11	MW12
		LAB ID:	2914307	2914305	2914306	2914301
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY3	TARRY3	TARRY3	TARRY3
		MATRIX:	WATER	WATER	WATER	WATER
		SAMPLED:	9/19/96	9/19/96	9/19/96	9/19/96
CAS NO.	COMPOUND	UNITS:	ug/L	ug/L	ug/L	ug/L
	BTEX VOLATILES					
71-43-2	Benzene		140	1100 D	930 D	ND
100-41-4	Ethylbenzene		200	49 JD	200 D	ND
108-88-3	Toluene		8 J	140 D	51	ND
1330-20-7	Xylene (total)		120	120 D	200 D	10
	Total BTEX		468	1409	1381	10
	SEMIVOLATILES					
132-64-9	Dibenzofuran		17	7 J	5 J	ND
105-67-9	2,4-Dimethylphenol		ND	74	ND	ND
106-44-5	4-Methylphenol		42	ND	ND	ND
108-95-2	Phenol		ND	22	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	ND	ND	ND
	PAHs					
83-32-9	Acenaphthene		210 D	18	98 J	7 J
208-96-8	Acenaphthylene		ND	42	ND	9 J
120-12-7	Anthracene		18	6 J	7 J	ND
56-55-3	Benzo(a)anthracene		2 J	ND	ND	ND
218-01-9	Chrysene		2 J	ND	ND	ND
206-44-0	Fluoranthene		10 J	ND	2 J	ND
86-73-7	Fluorene		71	24	43	ND
91-57-6	2-Methylnaphthalene		34	37 JD	76 JD	ND
91-20-3	Naphthalene		770 D	370 D	680 D	16
[illegible]01-8	Phenanthrene		75	25	31	ND
)0-0	Pyrene		12	3 J	3 J	ND
	Total PAHs		1204	525	940	32
	INORGANICS					
7440-38-2	Arsenic		26.5	45.5	ND	10.3
7439-92-1	Lead		3.7	153	5	4.5
7439-97-6	Mercury		ND	0.65	ND	ND
7440-66-6	Zinc		86.6	734	24	42.8
57-12-5	Cyanide		660	280	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
(1) - Duplicate of MW12
(2) - Duplicate of MW15

TABLE 4.4
SUMMARY OF GROUNDWATER SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	MW101(1)	MW15	MW115(2)	MW16
		LAB ID:	2914304	3051201	3051204	3051205
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY3	TARRY6	TARRY6	TARRY6
		MATRIX:	WATER	WATER	WATER	WATER
		SAMPLED:	9/19/96	2/05/97	2/05/97	2/05/97
		UNITS:	ug/L	ug/L	ug/L	ug/L
	BTEX VOLATILES					
71-43-2	Benzene		ND	1 J	ND	12
100-41-4	Ethylbenzene		ND	8 J	6 J	3 J
108-88-3	Toluene		ND	ND	ND	2 J
1330-20-7	Xylene (total)		10	9 J	6 J	9 J
	Total BTEX		10	18	12	26
	SEMIVOLATILES					
132-64-9	Dibenzofuran		ND	ND	ND	4 J
105-67-9	2,4-Dimethylphenol		ND	ND	ND	ND
106-44-5	4-Methylphenol		ND	ND	ND	ND
108-95-2	Phenol		ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	2 J	4 J	16
	PAHs					
83-32-9	Acenaphthene		7 J	18	22	47
208-96-8	Acenaphthylene		9 J	ND	ND	44
120-12-7	Anthracene		ND	3 J	4 J	6 J
56-55-3	Benzo(a)anthracene		ND	ND	ND	ND
218-01-9	Chrysene		ND	ND	ND	ND
206-44-0	Fluoranthene		ND	2 J	2 J	4 J
86-73-7	Fluorene		ND	11	12	31
91-57-6	2-Methylnaphthalene		ND	ND	ND	2 J
91-20-3	Naphthalene		13	ND	ND	19
85-01-8	Phenanthrene		ND	16	18	17
00-0	Pyrene		ND	3 J	3 J	5 J
	Total PAHs		29	53	61	175
	INORGANICS					
7440-38-2	Arsenic		10.7	ND	ND	5.4 J
7439-92-1	Lead		2.3 J	2.6 J	8.1 J	297
7439-97-6	Mercury		ND	0.14 J	ND	1
7440-66-6	Zinc		30.5	4.6 J	8.3 J	461
57-12-5	Cyanide		109 J	ND	ND	ND

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
(1) - Duplicate of MW12
(2) - Duplicate of MW15

TABLE 4.5
SUMMARY OF RIVER BORING SEDIMENT RESULTS
TARRYTOWN SITE

			Background Samples				
		SAMPLE ID:	BA0101	BA0201	RB0104	RB0148	RB01810
		DEPTH:	0'-1'	0'-1'	0'-4'	4'-8'	8'-10'
		LAB ID:	3113208	3113209	3111901	3111902	3111903
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY7	TARRY7	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/24/97	4/24/97	4/21/97	4/21/97	4/21/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	0.015 J	0.41 J	ND
100-41-4	Ethylbenzene		ND	ND	0.16	22	0.029
108-88-3	Toluene		ND	ND	0.009 J	ND	ND
1330-20-7	Xylene (total)		ND	ND	0.26	14	0.025
	Total BTEX		ND	ND	0.444	36.41	0.054
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		0.25 J	0.19 J	ND	ND	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
84-74-2	Di-n-butylphthalate		0.11 J	ND	ND	ND	ND
132-64-9	Dibenzofuran		ND	ND	1.3 J	6.2	ND
84-66-2	Diethylphthalate		0.13 J	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		0.32 J	0.47 J	0.36 J	ND	ND
	PAHs						
83-32-9	Acenaphthene		ND	ND	15	84 D	0.52
208-96-8	Acenaphthylene		ND	ND	2.1 J	5.7	ND
120-12-7	Anthracene		ND	ND	9.4	34	0.26 J
56-55-3	Benzo(a)anthracene		0.16 J	0.18 J	6	15	0.13 J
50-32-8	Benzo(a)pyrene		0.19 J	0.23 J	5	12	0.085 J
205-99-2	Benzo(b)fluoranthene		0.26 J	0.23 J	4.1	9.6	0.044 J
191-24-2	Benzo(g,h,i)perylene		ND	ND	0.32 J	0.67 J	ND
207-08-9	Benzo(k)fluoranthene		0.22 J	0.3 J	3.9	12	0.063 J
218-01-9	Chrysene		0.19 J	0.24 J	6	15	0.13 J
206-44-0	Fluoranthene		0.31 J	0.42 J	13	33	0.3 J
[illegible]73-7	Fluorene		ND	ND	8.6	43 JD	0.29 J
[illegible]9-5	Indeno(1,2,3-cd)pyrene		ND	ND	ND	ND	ND
[illegible]7-6	2-Methylnaphthalene		ND	ND	18	160 D	0.92
91-20-3	Naphthalene		ND	ND	27 D	270 D	1.2
85-01-8	Phenanthrene		0.17 J	0.17 J	34 D	120 D	0.95
129-00-0	Pyrene		0.18 J	0.25 J	9.3	23	0.32 J
	Total PAHs		1.68	2.02	161.72	836.97	5.212
	INORGANICS						
7440-38-2	Arsenic		9.2 J	10.8 J	7.3 J	8.6 J	2 J
7439-92-1	Lead		102 J	96.3 J	67.7	170	7.2
7439-97-6	Mercury		1 J	1.1 J	0.73	0.85	ND
7440-66-6	Zinc		242 J	233 J	154	371	39.3
7440-44-0	Total Organic Carbon		46100 J	27200 J	18000	18300	13600

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
(1) - Duplicate sample of RB02810
(2) - Duplicate sample of RB0924

TABLE 4.5
SUMMARY OF RIVER BORING SEDIMENT RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB0204	RB02810	RB021012(1)	RB03610	RB0402
		DEPTH:	0'-4'	8'-10'	8'-10'	5'-10'	0'-2'
		LAB ID:	3111904	3111905	3111906	3111907	3111908
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY6	TARRY6	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/22/97	4/22/97	4/22/97	4/22/97	4/22/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	ND	ND	ND
100-41-4	Ethylbenzene		0.005 J	ND	ND	0.004 J	ND
108-88-3	Toluene		ND	ND	ND	ND	ND
1330-20-7	Xylene (total)		ND	ND	ND	ND	ND
	Total BTEX		0.005	ND	ND	0.004	ND
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		0.077 J	ND	ND	ND	0.29 J
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
84-74-2	Di-n-butylphthalate		ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		0.053 J	ND	ND	0.049 J	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		0.15 J	ND	ND	0.044 J	0.28 J
	PAHs						
83-32-9	Acenaphthene		0.44 J	ND	ND	0.93	0.38 J
208-96-8	Acenaphthylene		0.58	ND	ND	0.091 J	ND
120-12-7	Anthracene		1	ND	ND	0.49	0.18 J
56-55-3	Benzo(a)anthracene		1.4	ND	ND	0.31 J	0.15 J
50-32-8	Benzo(a)pyrene		1.2 J	ND	ND	0.22 J	0.15 J
205-99-2	Benzo(b)fluoranthene		0.91 J	ND	ND	0.12 J	0.16 J
191-24-2	Benzo(g,h,i)perylene		0.079 J	ND	ND	ND	ND
207-08-9	Benzo(k)fluoranthene		1.3 J	ND	ND	0.19 J	0.17 J
218-01-9	Chrysene		1.4	ND	ND	0.31 J	0.17 J
206-44-0	Fluoranthene		2.9	ND	ND	0.68	0.42 J
[illegible]-73-7	Fluorene		0.16 J	ND	ND	0.42	0.15 J
9-5	Indeno(1,2,3-cd)pyrene		0.085 J	ND	ND	ND	ND
[illegible]-7-6	2-Methylnaphthalene		0.094 J	ND	ND	0.36 J	0.24 J
91-20-3	Naphthalene		0.11 J	ND	ND	0.19 J	0.14 J
85-01-8	Phenanthrene		2.6	ND	ND	1.6	0.69
129-00-0	Pyrene		1.8	ND	ND	0.63	0.28 J
	Total PAHs		16.058	ND	ND	6.541	3.28
	INORGANICS						
7440-38-2	Arsenic		2.5 J	5.3 J	5.5 J	4.1 J	7.4 J
7439-92-1	Lead		38.5	8.9	9	7.3	76.9
7439-97-6	Mercury		0.32	ND	ND	ND	1.2
7440-66-6	Zinc		65.4	56.2	58.6	45.3	185
7440-44-0	Total Organic Carbon		33100	84200	31400	24400	7270

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
(1) - Duplicate sample of RB02810
(2) - Duplicate sample of RB0924

TABLE 4.5
SUMMARY OF RIVER BORING SEDIMENT RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB04810	RB0504	RB0568	RB0602	RB0668
		DEPTH:	8'-10'	0'-4'	6'-8'	0'-2'	6'-8'
		LAB ID:	3111909	3113101	3113104	3113105	3113106
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY6	TARRY6	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/22/97	4/23/97	4/23/97	4/23/97	4/23/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	0.005 J	ND	ND	ND
100-41-4	Ethylbenzene		ND	0.076	ND	ND	ND
108-88-3	Toluene		ND	ND	ND	ND	ND
1330-20-7	Xylene (total)		ND	0.15	ND	ND	ND
	Total BTEX		ND	0.231	ND	ND	ND
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		ND	0.17 J	ND	0.58 J	ND
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
84-74-2	Di-n-butylphthalate		ND	ND	ND	ND	3.1
132-64-9	Dibenzofuran		ND	ND	ND	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	0.13 J	0.098 J	0.5 J	0.053 J
	PAHs						
83-32-9	Acenaphthene		ND	0.4	ND	0.36 J	ND
208-96-8	Acenaphthylene		ND	0.13 J	ND	0.22 J	ND
120-12-7	Anthracene		ND	0.21 J	ND	0.44 J	ND
56-55-3	Benzo(a)anthracene		ND	0.22 J	ND	0.42 J	ND
50-32-8	Benzo(a)pyrene		ND	0.2 J	ND	0.36 J	ND
205-99-2	Benzo(b)fluoranthene		ND	0.096 J	ND	0.2 J	ND
191-24-2	Benzo(g,h,i)perylene		ND	0.15 J	ND	0.2 J	ND
207-08-9	Benzo(k)fluoranthene		ND	0.13 J	ND	0.22 J	ND
218-01-9	Chrysene		ND	0.23 J	ND	0.47 J	ND
206-44-0	Fluoranthene		ND	0.42	ND	1 J	ND
[illegible]-73-7	Fluorene		ND	0.2 J	ND	0.34 J	ND
[illegible]-5	Indeno(1,2,3-cd)pyrene		ND	0.12 J	ND	0.19 J	ND
[illegible]-6	2-Methylnaphthalene		ND	0.34 J	ND	ND	ND
91-20-3	Naphthalene		ND	1.2	ND	0.31 J	ND
85-01-8	Phenanthrene		ND	0.65	ND	1.4 J	ND
129-00-0	Pyrene		ND	0.39	ND	0.78 J	ND
	Total PAHs		ND	5.086	ND	6.91	ND
	INORGANICS						
7440-38-2	Arsenic		0.88 J	4.9	2.3	9.1 J	3.9
7439-92-1	Lead		5.6	43.3 J	7.4 J	83.4 J	7 J
7439-97-6	Mercury		ND	0.61	ND	1.1 J	ND
7440-66-6	Zinc		31.1	102 J	49.1 J	211 J	43.6 J
7440-44-0	Total Organic Carbon		9900	7380 J	7011 J	10800 J	25300 J

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
(1) - Duplicate sample of RB02810
(2) - Duplicate sample of RB0924

TABLE 4.5
SUMMARY OF RIVER BORING SEDIMENT RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB0702	RB7810	RB0804	RB0868	RB0924
		DEPTH:	0'-2'	8'-10'	0'-4'	6'-8'	2'-4'
		LAB ID:	3113107	3113108	3113109	3113110	3113111
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY6	TARRY6	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/23/97	4/23/97	4/23/97	4/23/97	4/24/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	ND	ND	ND
100-41-4	Ethylbenzene		0.035 J	ND	0.018 J	ND	ND
108-88-3	Toluene		ND	ND	ND	ND	ND
1330-20-7	Xylene (total)		0.034 J	ND	0.047 J	ND	ND
	Total BTEX		0.069	ND	0.065	ND	ND
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		0.19 J	ND	0.29 J	ND	0.28 J
106-47-8	4-Chloroaniline		ND	ND	ND	ND	0.26 J
84-74-2	Di-n-butylphthalate		ND	2.6	0.072 J	ND	ND
132-64-9	Dibenzofuran		ND	ND	0.08 J	ND	ND
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene		ND	ND	ND	ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		0.32 J	0.096 J	0.4 J	0.091 J	0.26 J
	PAHs						
83-32-9	Acenaphthene		0.57 J	ND	1.1 J	ND	0.47 J
208-96-8	Acenaphthylene		0.23 J	ND	0.36 J	ND	0.2 J
120-12-7	Anthracene		0.42 J	ND	0.83 J	ND	0.34 J
56-55-3	Benzo(a)anthracene		0.42 J	ND	0.93 J	ND	0.39 J
50-32-8	Benzo(a)pyrene		0.36 J	ND	0.74 J	ND	0.37 J
205-99-2	Benzo(b)fluoranthene		0.19 J	ND	0.38 J	ND	0.19 J
191-24-2	Benzo(g,h,i)perylene		0.17 J	ND	0.51 J	ND	0.37 J
207-08-9	Benzo(k)fluoranthene		0.23 J	ND	0.43 J	ND	0.26 J
218-01-9	Chrysene		0.45 J	ND	0.93 J	ND	0.42 J
206-44-0	Fluoranthene		0.87 J	ND	1.6 J	ND	0.7
86-73-7	Fluorene		0.33 J	ND	0.68 J	ND	0.2 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.16 J	ND	0.4 J	ND	0.28 J
91-57-6	2-Methylnaphthalene		0.49 J	ND	0.89 J	ND	0.34 J
91-20-3	Naphthalene		0.79 J	ND	1.9 J	ND	0.58 J
85-01-8	Phenanthrene		1.2 J	ND	2.5 J	ND	0.93
129-00-0	Pyrene		0.7 J	ND	2 J	ND	0.85
	Total PAHs		7.58	ND	16.18	ND	6.89
	INORGANICS						
7440-38-2	Arsenic		9.9 J	2.5	8.1 J	0.7 J	8.1
7439-92-1	Lead		80.8 J	7.8 J	81.2 J	5 J	66.8 J
7439-97-6	Mercury		1.1 J	ND	1 J	ND	1.1
7440-66-6	Zinc		207 J	53.8 J	186 J	24.2 J	159 J
7440-44-0	Total Organic Carbon		9313 J	5070 J	9950 J	3880 J	2210 J

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
(1) - Duplicate sample of RB02810
(2) - Duplicate sample of RB0924

TABLE 4.5
SUMMARY OF RIVER BORING SEDIMENT RESULTS
TARRYTOWN SITE

		SAMPLE ID:	RB91214(2)	RB9810	RB1068	RB10810	RB1106
		DEPTH:	2'-4'	8'-10'	6'-8'	8'-10'	0'-6'
		LAB ID:	3113201	3113202	3113203	3113204	3113205
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY7	TARRY7	TARRY7	TARRY7	TARRY7
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/24/97	4/24/97	4/24/97	4/24/97	4/24/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		ND	ND	ND	ND	ND
100-41-4	Ethylbenzene		ND	ND	ND	ND	0.064 J
108-88-3	Toluene		ND	ND	ND	ND	ND
1330-20-7	Xylene (total)		ND	ND	ND	ND	0.14 J
	Total BTEX		ND	ND	ND	ND	0.204
	SEMIVOLATILES						
85-68-7	Butylbenzylphthalate		0.15 J	ND	0.048 J	ND	0.64 J
106-47-8	4-Chloroaniline		ND	ND	ND	ND	ND
84-74-2	Di-n-butylphthalate		4	ND	ND	ND	4.9 J
132-64-9	Dibenzofuran		0.082 J	ND	ND	ND	0.51 J
84-66-2	Diethylphthalate		ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene		ND	ND	ND	ND	0.14 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.38 J	0.11 J	0.11 J	0.18 J	0.58 J
	PAHs						
83-32-9	Acenaphthene		0.95	ND	ND	ND	7.2 DJ
208-96-8	Acenaphthylene		0.26 J	ND	ND	ND	1.3 J
120-12-7	Anthracene		0.57 J	ND	ND	ND	3.4 J
56-55-3	Benzo(a)anthracene		0.6 J	ND	0.075 J	ND	2.6 J
50-32-8	Benzo(a)pyrene		0.57 J	ND	0.054 J	ND	2.5 JD
205-99-2	Benzo(b)fluoranthene		0.6 J	ND	ND	ND	1.8 JD
191-24-2	Benzo(g,h,i)perylene		ND	ND	ND	ND	ND
207-08-9	Benzo(k)fluoranthene		0.73	ND	ND	ND	2 JD
218-01-9	Chrysene		0.65 J	ND	0.073 J	ND	2.6 J
206-44-0	Fluoranthene		1.4	ND	0.14 J	0.055 J	5.3 DJ
86-73-7	Fluorene		0.56 J	ND	ND	ND	3.6 J
193-39-5	Indeno(1,2,3-cd)pyrene		ND	ND	ND	ND	ND
91-57-6	2-Methylnaphthalene		0.86	ND	ND	ND	3.2 J
91-20-3	Naphthalene		0.78	ND	ND	ND	5.4 J
85-01-8	Phenanthrene		2	ND	ND	ND	13 DJ
129-00-0	Pyrene		0.78	ND	0.19 J	0.074 J	3.7 J
	Total PAHs		11.31	ND	0.532	0.129	57.6
	INORGANICS						
7440-38-2	Arsenic		8.7	2.8	5.5	4.4	8.6 J
7439-92-1	Lead		87.8	9.4	6.3	13.3	81.5 J
7439-97-6	Mercury		0.86	ND	ND	ND	0.98 J
7440-66-6	Zinc		191 J	63.7 J	36.4 J	71 J	186 J
7440-44-0	Total Organic Carbon		14900	7530	17200	15800	27000 J

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
(1) - Duplicate sample of RB02810
(2) - Duplicate sample of RB0924

TABLE 4.5
SUMMARY OF RIVER BORING SEDIMENT RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB1204	RB1246
		DEPTH:	0'-4'	4'-6'
		LAB ID:	3113206	3113207
		SOURCE:	NYTEST	NYTEST
		SDG:	TARRY7	TARRY7
		MATRIX:	SOIL	SOIL
		SAMPLED:	4/24/97	4/24/97
		UNITS:	mg/Kg	mg/Kg
	BTEX VOLATILES			
71-43-2	Benzene		0.011 J	0.03
100-41-4	Ethylbenzene		0.2	0.11
108-88-3	Toluene		0.03	ND
1330-20-7	Xylene (total)		0.27	0.054
	Total BTEX		0.511	0.194
	SEMIVOLATILES			
85-68-7	Butylbenzylphthalate		ND	ND
106-47-8	4-Chloroaniline		ND	ND
84-74-2	Di-n-butylphthalate		ND	0.067 J
132-64-9	Dibenzofuran		0.89 J	ND
84-66-2	Diethylphthalate		ND	ND
121-14-2	2,4-Dinitrotoluene		ND	ND
117-81-7	bis(2-Ethylhexyl)phthalate		ND	0.16 J
	PAHs			
83-32-9	Acenaphthene		10	0.65
208-96-8	Acenaphthylene		1.8 J	ND
120-12-7	Anthracene		6.4	0.05 J
56-55-3	Benzo(a)anthracene		4.4 J	ND
50-32-8	Benzo(a)pyrene		3.6 J	ND
205-99-2	Benzo(b)fluoranthene		2.7 J	ND
191-24-2	Benzo(g,h,i)perylene		ND	ND
207-08-9	Benzo(k)fluoranthene		2.7 J	ND
218-01-9	Chrysene		4.4 J	ND
206-44-0	Fluoranthene		8.7	ND
[illegible]73-7	Fluorene		5.4	0.21 J
[illegible]9-5	Indeno(1,2,3-cd)pyrene		ND	ND
[illegible]/-6	2-Methylnaphthalene		11	1.7
91-20-3	Naphthalene		15	4.6 D
85-01-8	Phenanthrene		23	0.26 J
129-00-0	Pyrene		8	ND
	Total PAHs		107.1	7.47
	INORGANICS			
7440-38-2	Arsenic		3.5	11.4
7439-92-1	Lead		25.9	10.9
7439-97-6	Mercury		0.28	ND
7440-66-6	Zinc		57.2 J	62.1 J
7440-44-0	Total Organic Carbon		35900	28600

ND - Not detected.
J - Estimated value.
D - Diluted sample result.
(1) - Duplicate sample of RB02810
(2) - Duplicate sample of RB0924

TABLE 4.6
POTENTIAL MOBILITY OF DNAPL
TARRYTOWN SITE

							SOIL POROSITY			
							0.20	0.30	0.40	0.50
							VOLUME of VOIDS IN SOIL(cm^3)[2]			
							94	162	252	377
SAMPLE ID	DEPTH (feet)	BTEX CONC. (mg/Kg)	PAH CONC. (mg/Kg)	ORGANIC COMPOUND CONC. (percent by weight)	ORGANIC COMPOUND MASS grams[1]	ORGANIC COMPOUND VOLUME (cm^3)[2]	ORGANIC COMPOUND SATURATION (percent of soil porosity)			
SB16G	12-14'	241.280	4791.000	0.50%	5.03	0.66	0.70%	0.41%	0.26%	0.18%
SB217D	07-09'	1.720	4246.500	0.42%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB11F	10-12'	58.720	3000.800	0.31%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB08G	12-14'	81.865	2213.660	0.23%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
MW11F	10-12'	155.260	1841.000	0.20%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB06E	08-10'	84.790	1310.500	0.14%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB03E	08-10'	37.900	1335.800	0.14%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB02E	08-10'	127.000	1218.600	0.13%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB19J	18-20'	49.300	1266.000	0.13%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB05F	08-10'	145.200	881.000	0.10%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0148	4'-8'	36.410	836.970	0.09%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB07G	12-14'	0.215	871.480	0.09%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB10E	08-10'	26.200	720.900	0.07%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB218C	04-06'	33.790	462.000	0.05%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB15J	19-21'	11.830	443.000	0.05%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB24E	08-10'	ND	435.300	0.04%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB29H	14-16'	2.630	415.900	0.04%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB220C	04-06'	24.980	381.100	0.04%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB220G	12-14'	0.215	310.000	0.03%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0104	0'-4'	0.444	161.720	0.02%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB19G	12-14'	3.000	158.580	0.02%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB213E	04-10'	32.930	111.100	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB13D	06-08'	0.021	125.710	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB1204	0'-4'	0.511	107.100	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB14I	14-18'	6.000	94.640	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB25K	20-22'	ND	98.800	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB10I	16-18'	0.934	60.980	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB1106	0'-6'	0.204	57.600	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
MW12B	02-04'	ND	56.900	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB21H	14-16'	0.005	53.720	0.01%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB30K	21.5-22'	0.057	42.510	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB28I	16-18'	0.270	41.040	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB09F	10-12'	0.971	32.880	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB17D	06-08'	ND	18.920	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB24J	18-20'	4.200	13.990	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0804	0'-4'	0.065	16.180	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0204	0'-4'	0.005	16.058	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB30I	16-18'	1.700	13.930	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB15K	21-23'	0.020	15.188	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB22G	12-14'	0.004	13.195	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB25I	16-18'	ND	11.700	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB91214(2)	2'-4'	ND	11.310	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB12B	02-04'	ND	8.578	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB1246	4'-6'	0.194	−7.470	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0702	0'-2'	0.069	7.580	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0602	0'-2'	ND	6.910	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0924	2'-4'	ND	6.890	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB20I	14-18'	ND	6.789	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB03610	6'-10'	0.004	6.541	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0504	0'-4'	0.231	5.086	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB01810	8'-10'	0.054	5.212	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB14J	18-20'	ND	4.246	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%

TABLE 4.6
POTENTIAL MOBILITY OF DNAPL
TARRYTOWN SITE

							SOIL POROSITY			
							0.20	0.30	0.40	0.50
							VOLUME of VOIDS IN SOIL(cm^3)[3]			
							94	182	252	377
SAMPLE ID	DEPTH (feet)	BTEX CONC. (mg/Kg)	PAH CONC. (mg/Kg)	ORGANIC COMPOUND CONC. (percent by weight)	ORGANIC COMPOUND MASS grams[1]	ORGANIC COMPOUND VOLUME (cm^3)[2]	ORGANIC COMPOUND SATURATION (percent of soil porosity)			
SB16I	16-18'	0.008	4.029	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB22I	16-18'	0.185	3.575	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB0402	0'-2'	ND	3.280	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB23B	02-04'	ND	3.170	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
MW11I	14-18'	ND	2.982	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB09J	18-20'	0.012	2.370	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB24K	20-22'	ND	2.133	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
BA0201	0'-1'	ND	2.020	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB11H	14-16'	0.118	1.761	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
BA0101	0'-1'	ND	1.680	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB20K	20.5-22	ND	1.596	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB05J	16-20'	0.030	1.493	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB06H	12-16'	ND	1.460	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB18B	02-04'	ND	0.846	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB1068	6'-8'	ND	0.532	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
MW12J	18-28'	0.003	0.482	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB07M	24-26'	0.010	0.436	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB03J	18-20'	ND	0.442	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB13I	16-18'	ND	0.374	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
RB10810	8'-10'	ND	0.129	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB103J (1)	18-20'	0.014	0.080	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB117H (2)	12-16'	ND	0.091	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%
SB12G	12-14'	0.002	ND	0.00%	0.00	0.00	0.00%	0.00%	0.00%	0.00%

(1) Assuming 1 Kg sample.

(2) Based on NAPL density of 1.1 g/cm^3, estimated from BTEX and PAH concentrations in sample SB-16G

(3) Base on average specific gravity of soils of 2.65 and assumption (1).

SECTION 5

FATE AND TRANSPORT

The purpose of this section is to: (1) identify pathways through which chemicals detected in the various environmental media may be transported, and; (2) estimate the potential for migration of these compounds. The environmental pathways evaluated as potential routes of migration include air, soils, groundwater, and sediments. The primary compounds or compound groups of evaluated for these routes are BTEX and PAHs based on results presented in Section 4.

5.1 POTENTIAL ROUTES OF MIGRATION

The potential migration pathways were evaluated relative to site conditions and features observed during the field investigation.

5.1.1 Air Route

Migration of site-related VOCs can occur by volatilization at or near the soil surface. This process could be enhanced by low barometric pressure, high winds and high temperatures. Air monitoring during all aspects of the field work with a photoionization detector did not indicate the presence of VOCs in the breathing zone above action levels specified in the Project Health & Safety Plan. There may be a potential for VOCs in the subsurface to enter building basements, if present onsite. There is a little potential for transport of particulate matter (i.e., wind-born dust) because the entire site is paved with the exception of a portion of the County Asphalt property. However, DNAPL was found at depths greater than 10 feet on the County Asphalt property. Therefore, the air route does not appear to be a significant route of chemical migration.

5.1.2 Groundwater Route

Groundwater movement is generally to the west. The nearest discharge area for groundwater is the Hudson River located approximately 100 yards west of the site. Low concentrations of BTEX and PAHs were detected in the two downgradient wells closest to the river. Based on the concentrations detected in the two downgradient wells, the estimated flow of groundwater to the river, and an estimated flow of surface water within the portion of the river adjacent to the site, groundwater discharging to the Hudson River is not significantly impacting surface water quality. In addition, groundwater in the vicinity of the site is not used as a source of potable water. Therefore, the groundwater route does not appear to be a significant route of chemical migration.

5.1.3 Surface Soil Route

The entire site is paved with asphalt, therefore, surface soils are not mobile. A portion of the County Asphalt property is not paved, however, DNAPL in this area was

found at depths greater than 10 feet. In addition, soils above the water table have not been significantly impacted. As a result, the surface soil route does not appear to be a significant route of chemical migration.

5.1.4 Subsurface Soil Route

Subsurface soils at and below the water table have been impacted primarily by LNAPL, DNAPL, BTEX and PAHs. Chemical constituents in soils at depths greater than two feet below the ground surface have limited ability to migrate by resedimentation or soil movement. The 4-inch and 6-inch pipes encountered in the test pits on the County Asphalt property are not a continuing pathway or source of contaminants to the river at the present time. DNAPL, which is present in saturated subsurface soils in the vicinity of former MGP structures, has not migrated through the soils to the Hudson River. Its distribution and the DNAPL mobility assessment presented in Section 4 indicates that the DNAPL is not mobile. Certain compounds, however, may adsorb from the soil and migrate in the groundwater. Since the groundwater route is not considered a significant route of chemical migration, the subsurface soil route does not appear to be a significant route of chemical migration.

5.1.5 Sediment Route

DNAPL, BTEX and PAHs have been detected in a localized area of sediments within the Hudson River along the retaining wall. The impacted area is approximately 150 feet long by 30 feet wide and 4 to 7 feet deep, and coincides with the area where sheens have been observed on the water surface. DNAPL in the sediments is not mobile based on the DNAPL mobility assessment. Sediments in the river, however, can be resuspended by currents and could migrate from the source. As a result, sediments may be a potential route of chemical migration.

5.2 PERSISTENCE

5.2.1 BTEX

Benzene, toluene, ethylbenzene, and xylenes (BTEX) are relatively mobile and non-persistent in many shallow soil environments, but tend to be more persistent in deeper soils and groundwater. BTEX compounds tend to volatilize relatively rapidly from shallow soil and surface water. Half-lives in soil range on the order of several days to several weeks. Persistence in groundwater tends to be much longer, with half-lives ranging from several days to two years (Howard, 1990).

Organic carbon partition coefficients are relatively low, indicating limited ability to sorb to soils, and a preference to partition to groundwater. Once in the groundwater system, biodegradation of BTEX (and other hydrocarbons and related organic compounds) can be significant and rapid in the presence of oxygen (Borden and Bedient, 1986).

compounds) can be significant and rapid in the presence of oxygen (Borden and Bedient, 1986).

BTEX was present in subsurface soils in concentrations ranging from 0.002 mg/kg to 241.28 mg/kg. These results indicate that in spite of the relatively low partitioning coefficients, significant concentrations still remain in some site soils, particularly in the vicinity of the two former gas holders, the former tar well, and in the northwest corner of the site. There is leaching (partitioning) to shallow groundwater as well. At MW-10 and MW-11, BTEX concentrations were 1,409 µg/l and 1,381 µg/l, respectively.

5.2.2 PAHs

PAHs were detected in soil and groundwater at the site. Because the physical and chemical properties of these compounds vary substantially depending on the specific compound and the specific soils and hydrology, the fate and transport characteristics also vary. Some fate characteristics, though, are roughly correlated with molecular weight. Low molecular weight aromatic organic compounds (such as PAHs) degrade more rapidly and may migrate more easily than higher molecular weight compounds in the same compound class. The compounds detected at the site can be grouped by molecular weight as follows (ATSDR, 1990):

- Low molecular weight: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, 2-methylnaphthalene, and phenanthrene;
- Medium molecular weight: fluoranthene and pyrene; and
- High molecular weight: benzo(a)anthracene, benzo(b)fluoranthene, benzo-(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenz-(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

Potential mobility of PAHs in soil is primarily related to the organic carbon partition coefficient (Koc). The low molecular weight PAHs have Koc values in the range of 10^3 to 10^4 ml/g, which indicates a moderate potential to be adsorbed to organic material. Medium and higher molecular weight compounds with larger Koc values (10^4 to 10^6 ml/g) have a much greater tendency to adsorb and resist movement through soil. Volatilization of the lower molecular weight compounds from shallow soils may be similar to VOCs. However, some PAHs in soil may be transported to groundwater, and then move laterally in the aquifer, depending on soil/water conditions.

The tendency of medium and higher molecular weight PAHs to adsorb to soils is indicated by the relationship between soil and groundwater analytical results. PAHs from all molecular weight classes (low, medium, and high) were detected in soil samples at the site. However, in groundwater, the PAHs detected most frequently and in the highest concentrations were of the low molecular weight class, such as acenaphthene, fluorene, naphthalene and 2-methylnaphthalene.

The water solubility of naphthalene (and 2-methylnaphthalene) are higher and the Koc values are consequently lower than many of the PAHs. They are significantly less soluble

(less mobile) than the monocyclic aromatics, such as benzene (Gherini et al, 1988). In groundwater and soils, aerobic biodegradation of naphthalene can occur, but the rate varies significantly depending on availability of dissolved oxygen and the concentration of microorganisms.

5.3 MIGRATION

Of the four potential migration routes identified in Section 5.1, only the sediment route appears to be a potential route of chemical migration.

SECTION 6

CONCLUSIONS

Based on the objectives and results of this investigation, the following conclusions can be made:

- DNAPL was observed in varying amounts in soils at depths between 6 to 14 feet on the northern portion of the site and at depths between 10 and 25 feet on a portion of the County Asphalt property.
- Zones saturated with DNAPL were observed within two former gas holders, in the vicinity of a former tar well, and in the northwest corner of the site extending under the County Asphalt building. The DNAPL does not appear to have migrated horizontally a significant distance from its source. Only traces of DNAPL were observed in limited intervals in soils surrounding the potential sources. Fingerprint results indicate that DNAPL in the soils is characteristic of MGP-related tars.
- LNAPL was observed in the southern portion of the site in the vicinity of Anchor's former USTs and pump island at depths between 3 and 10 feet. LNAPL was also observed in an area south of the County Asphalt Plant in the vicinity of a former diesel fuel UST owned by Valente Industries. Fingerprint results indicate that the LNAPL is characteristic of weathered middle weight fuel oil.
- The distribution of BTEX and PAHs in soils is generally consistent with the distribution of visual LNAPL and DNAPL. Highest BTEX and PAH concentrations were detected in the vicinity of the former gas holders, tar well, and in the northwest corner of the site extending under the County Asphalt building area. Slightly lower BTEX and PAH concentrations were detected in the areas where fuel oil was observed.
- The distribution of BTEX and PAHs in groundwater is similar to what is seen in the saturated subsurface soils. Low concentrations of BTEX and PAHs were detected in the downgradient wells near the Hudson River. Groundwater discharging to the Hudson River is not significantly impacting surface water quality.
- DNAPL was observed in sediments in a localized area of the Hudson River adjacent to County Asphalt property. The impacted area is approximately 150 feet long by 30 feet wide and 4 to 7 feet deep, and coincides with the area where sheens have been observed on the water surface. This relationship suggests that localized DNAPL in the river sediments appears to be the source of the sheens observed on the water surface.

- Fingerprint analysis indicates that DNAPL in the river sediments is similar to DNAPL observed on the site and is characteristic of MGP-related tars. The distribution of DNAPL onsite and on the County Asphalt property indicates that DNAPL has not migrated to the river sediments through the soils. The 4-inch and 6-inch pipes encountered in the test pits on the County Asphalt property are not a continuing pathway or source of contaminants to the river at the present time.
- BTEX and PAHs were detected primarily in the area where sediments containing DNAPL were observed.
- The impact of subsurface soils and groundwater on public health is limited by several factors: (1) the entire site is paved and soils above the water table are not significantly impacted by DNAPL, BTEX or PAHs, (2) although a portion of the County Asphalt property is not paved, DNAPL was found at depths greater than 10 feet, (3) access to saturated subsurface soils can be controlled, (4) groundwater near the site is not being used as a source of potable water, (5) groundwater does not appear to be impacting surface water quality in the Hudson River, and (6) DNAPL in the soils is not mobile.
- River sediment containing MGP-related tar may be affecting aquatic life within a very localized portion of the river bottom.

SECTION 7

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USEPA. 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA. Office of Emergency and Remedial Response. PB89-184626. Washington, D.C.

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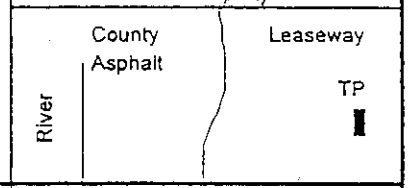
PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

OJECT NAME:	Tarrytown Site
' NUMBER:	730057.02
EA..ER	Sunny, 80 degrees F
TE/TIME START:	9/9/1996 11:30:00 AM
TE/TIME FINISH:	9/9/1996 12:30:00 PM
NTRACTOR:	Aquifer Drilling and Testing
SPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-01

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0	Asphalt 0 -6"	AAAAAAAA	
1	FILL - dark brown to black, silty and sand, bricks wood, moist, musty slightly oily odor	XXXXXXXX	
2		XXXXXXXX	
3	Heavy naphthalene-like odor at 3 feet Black stained soils	XXXXXXXX	
4		XXXXXXXX	
5	4" east-west oriented, intact steel pipe at 4.5 feet Some gray-brown clay and silt, moist	XXXXXXXX	4" intact steel pipe
6	Wet at 6 feet, heavy NAPL encountered at the water table, brown oily emulsion, naphthalene-like	XXXXXXXX	Sample TP01H2O
7	odor	XXXXXXXX	
8		XXXXXXXX	
9	Trench terminated at 8 feet		
10			
11			
12			

SUMMARY

Samples collected: TP01H2O for GC/FID fingerprint analysis

Excavation Dimensions: 10' long x 2' wide x 8' deep

AIR MONITORING DATA

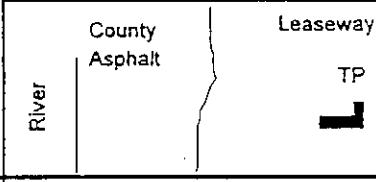
Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER
0'-5'	0 0	OK		
5'-6'	0	OK		
6'-8'	0	OK		

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	Tarrytown Site
PROJECT NUMBER:	730057.02
WEATHER	Sunny, 80 degrees F
DATE/TIME START:	9/9/1996 13:00
DATE/TIME FINISH:	9/9/1996 14:25
CONTRACTOR:	Aquifer Drilling and Testing
INSPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-02A

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0	Asphalt 0 -6"	AAAAAAA	
	FILL - gray silt and sand, lots of bricks, some wood,	xxxxxxxx	
1	rocks, metal pieces, wire, glass jars, paint can,	xxxxxxxx	
	moist, slight naphthalene-like odor	xxxxxxxx	
2		xxxxxxxx	
		xxxxxxxx	
3	Curved brick wall, possible holder wall	xxxxxxxx	Possible holder wall
		xxxxxxxx	
4		xxxxxxxx	
		xxxxxxxx	
5		xxxxxxxx	
		xxxxxxxx	
6	Concrete floor of holder encountered at 6.5 feet	xxxxxxxx	
	no groundwater or staining observed.	xxxxxxxx	Concrete holder floor
7	Trench terminated at 6.5 feet		
8			
9			
10			
11			
12			

SUMMARY

Samples collected: None

Excavation Dimensions: N-S segment: 8' long x 2' wide x 6.5' deep

E-W segment: 12' long x 2' wide x 6.5' deep

AIR MONITORING DATA

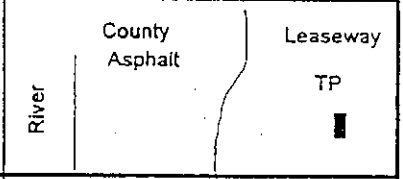
Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER
0'-4'	0 0	OK		
4'	5.3	2		

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	Tarrytown Site
R T NUMBER:	730057.02
EATHER	Sunny, 80 degrees F
ATE/TIME START:	9/9/1996 15:00
ATE/TIME FINISH:	9/9/1996 16:10
ONTRACTOR:	Aquifer Drilling and Testing
ISPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-03

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL			LITHOLOGY SCHEMATIC	COMMENTS
0	Asphalt 0 -6"			AAAAAAA	
1	FILL - dark brown to black, silt, sand and clay, lots of bricks, rocks			XXXXXXXX	
2	Naphthalene-like odor at 2 feet			XXXXXXXX	
3	Curved brick wall, possibly holder wall at 3 feet,	Brick Wall	Gray-brown silt, sand and clay	XXXXXXXX	Holder wall at 3 feet
4	WSW-ENE oriented			XXXXXXXX	
5				XXXXXXXX	
6	Very oily water encountered at 6 ', naphthalene-like odor			XXXXXXXX	Sample TP03H2O
7	Terminated at 7'		Moist at 8' No NAPL		
8			End at 8'		
9					
10					
11					
12					

SUMMARY

Samples collected: TP03H2O for GC/FID fingerprint analysis and TCLP

Excavation Dimensions: 12' long x 2' wide x 7' deep inside, 8' deep outside wall

AIR MONITORING DATA

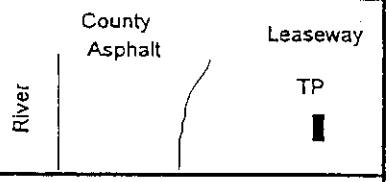
Depth	PID (ppm)		LEL %	CO2 (ppm)	OTHER
0'-7'	0	0	OK		

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	Tarrytown Site
PROJECT NUMBER:	730057.02
WEATHER	Sunny, 80 degrees F
DATE/TIME START:	9/9/1996 16:30
DATE/TIME FINISH:	9/9/1996 17:30
CONTRACTOR:	Aquifer Drilling and Testing
INSPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-04

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0	Asphalt 0 -6"	AAAAAAA	
1	FILL - dark brown to black, silty and sand, yellow fire brick, wood	XXXXXXXX	
2	Same as above	XXXXXXXX	
3	Curved brick wall encountered at southern end of excavation, possibly holder wall	XXXXXXXX	Brick holder wall
4		XXXXXXXX	
5		XXXXXXXX	
6	Heavy NAPL/sludge encountered at the water table at 6'. No NAPL outside of holder wall	XXXXXXXX	Sample TP04SO
7	Trench terminated at 6 feet		
8			
9			
10			
11			
12			

SUMMARY

Samples collected: TP04SO for GC/FID fingerprint analysis and TCLP

Excavation Dimensions: 25' long x 2' wide x 6' deep inside and 8' deep outside wall

AIR MONITORING DATA

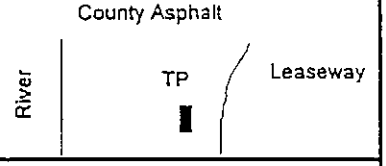
Depth	PID (ppm)		LEL %	CO2 (ppm)	OTHER
0'-6'	0	0	OK		

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

ROJECT NAME:	Tarrytown Site
F :T NUMBER:	730057.04
/EA HER	Sunny, 25 degrees F
ATE/TIME START:	1/15/1997 14:40
ATE/TIME FINISH:	1/15/1997 16:30
ONTRACTOR:	Aquifer Drilling and Testing
ISPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-05

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0			
	FILL - coarse sand and little gravel, rocks, wood,	x x x x x x x x	
1		x x x x x x x x	
		x x x x x x x x	
2	as above	x x x x x x x x	
		x x x x x x x x	
3		x x x x x x x x	
		x x x x x x x x	
4	as above	x x x x x x x x	
		x x x x x x x x	
5		x x x x x x x x	
	2" intact steel pipe encountered at 6 feet	x x x x x x x x	
6	4" intact steel pipe encountered at 7 feet, green	x x x x x x x x	LNAPL on water table
	oily LNAPL on water table directly under the 4" pipe	x x x x x x x x	Sample TP05
7	Trench terminated at 7 feet		
8			
9			
10			
11			
12			

SUMMARY

Samples collected: TP05 for GC/FID fingerprint analysis

Excavation Dimensions: 10' long x 4' wide x 7' deep

AIR MONITORING DATA

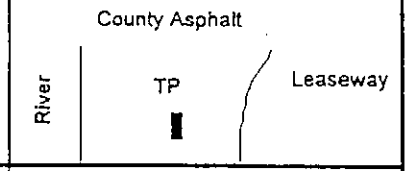
Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

ROJECT NAME:	Tarrytown Site
T NUMBER:	730057.04
EA..IER	Sunny, 25 degrees F
ATE/TIME START:	1/15/1997 13:00
ATE/TIME FINISH:	1/15/1997 14:30
ONTRACTOR:	Aquifer Drilling and Testing
SPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-06

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0		XXXXXXXX	
	FILL - coarse sand and little gravel, rocks, wood,	XXXXXXXX	
1		XXXXXXXX	
		XXXXXXXX	
2	as above	XXXXXXXX	
		XXXXXXXX	
3		XXXXXXXX	
		XXXXXXXX	
4	as above	XXXXXXXX	
		XXXXXXXX	
5		XXXXXXXX	
		XXXXXXXX	
6		XXXXXXXX	
		XXXXXXXX	No pipes found
7	Oily, green LNAPL on water table, hydrocarbon	XXXXXXXX	LNAPL on water table
	odor, slight sulfur odor, sheen	XXXXXXXX	
8	Trench terminated at 8 feet		
9			
10			
11			
12			

SUMMARY

Samples collected:

Excavation Dimensions: 8' long x 4' wide x 8' deep

AIR MONITORING DATA

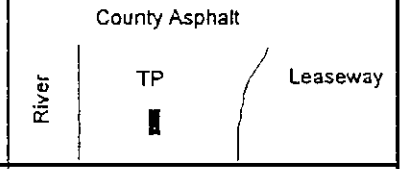
Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	Tarrytown Site
PROJECT NUMBER:	730057.04
WEATHER	Sunny, 25 degrees F
DATE/TIME START:	1/16/1997 8:00
DATE/TIME FINISH:	1/16/1997 9:00
CONTRACTOR:	Aquifer Drilling and Testing
INSPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-07

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0		xxxxxxxx	
	FILL - dark brown to black, sand and some	xxxxxxxx	
1	gravel and rocks	xxxxxxxx	
		xxxxxxxx	
2	as above	xxxxxxxx	
		xxxxxxxx	
3		xxxxxxxx	
		xxxxxxxx	
4	as above	xxxxxxxx	
		xxxxxxxx	
5		xxxxxxxx	
		xxxxxxxx	
6	Intact, east-west trending 6" steel pipe and 4" steel	xxxxxxxx	4" and 6" pipes found,
	pipe adjacent, 4" pipe leaking water from small hole	xxxxxxxx	4" pipe leaking clear water
7	Oily green LNAPL on water table below pipes,	xxxxxxxx	Sample TP07 (leaking water)
	hydrocarbon odor, slight sulfur odor, sheen	xxxxxxxx	LNAPL on water table
8	Trench terminated at 8 feet		
9			
10			
11			
12			

SUMMARY

Samples collected: TP07 (water from leaking pipe)

Excavation Dimensions: 8' long x 4' wide x 8' deep

AIR MONITORING DATA

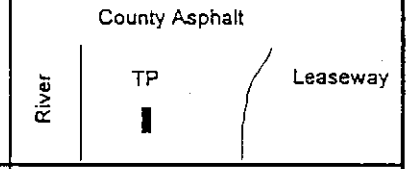
Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	Tarrytown Site
PROJECT NUMBER:	730057.04
WEATHER	Sunny, 25 degrees F
DATE/TIME START:	1/16/1997 9:00
DATE/TIME FINISH:	1/16/1997 10:00
CONTRACTOR:	Aquifer Drilling and Testing
INSPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-08

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0		XXXXXXXX	
	FILL - dark brown to black, sand and some	XXXXXXXX	
1	gravel and rocks	XXXXXXXX	
		XXXXXXXX	
2	as above	XXXXXXXX	
		XXXXXXXX	
3		XXXXXXXX	
		XXXXXXXX	
4	as above	XXXXXXXX	
		XXXXXXXX	
5		XXXXXXXX	
	Broken 4" steel pipe encountered at 6.5 ft on one	XXXXXXXX	Broken 4" steel pipe
6	side of the excavation, pipe not leaking, empty.	XXXXXXXX	
	Intact, east-west trending 6" steel pipe at 7 ft	XXXXXXXX	Intact 6" steel pipe
7	Oily green LNAPL on water table below pipe,	XXXXXXXX	
	hydrocarbon odor, slight sulfur odor, sheen	XXXXXXXX	LNAPL on water table
8	Trench terminated at 8 feet		
9			
10			
11			
12			

SUMMARY

Samples collected: none

Excavation Dimensions: 8' long x 4' wide x 8' deep

AIR MONITORING DATA

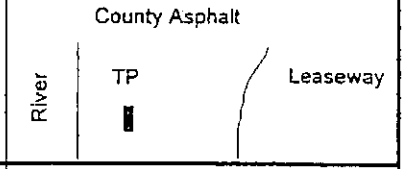
Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	Tarrytown Site
;ECT NUMBER:	730057.04
WEATHER	Sunny, 25 degrees F
DATE/TIME START:	1/16/1997 10:00
DATE/TIME FINISH:	1/16/1997 11:00
CONTRACTOR:	Aquifer Drilling and Testing
INSPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-09

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0	Silt and clay	XXXXXXXX	
	FILL - light gray 1/2" gravel (part of recovery trench)	XXXXXXXX	
1		XXXXXXXX	
		XXXXXXXX	
2	Green, PVC vertical standpipe of recovery system	XXXXXXXX	
	found at north end of excavation.	XXXXXXXX	
3		XXXXXXXX	
		XXXXXXXX	
4	as above	XXXXXXXX	
		XXXXXXXX	
5		XXXXXXXX	
		XXXXXXXX	
6		XXXXXXXX	
	No pipes found	XXXXXXXX	
7	Diesel odor and sheen observed on the water table	XXXXXXXX	Sample TP09 (sheen)
		XXXXXXXX	Sheen on water table
8	Trench terminated at 8 feet		
9			
10			
11			
12			

SUMMARY

Samples collected: TP09 (sheen on water table)

Excavation Dimensions: 10' long x 4' wide x 8' deep

AIR MONITORING DATA

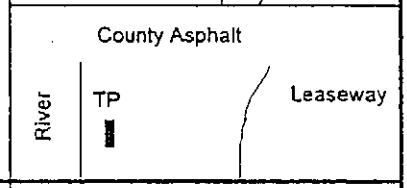
Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	Tarrytown Site
ECT NUMBER:	730057.04
WEATHER	Sunny, 25 degrees F
DATE/TIME START:	1/16/1997 11:00
DATE/TIME FINISH:	1/16/1997 12:00
CONTRACTOR:	Aquifer Drilling and Testing
INSPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-10

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0	Silt and clay	XXXXXXXX	
	FILL - light gray 1/2" gravel	XXXXXXXX	
1		XXXXXXXX	
		XXXXXXXX	
2	as above	XXXXXXXX	
		XXXXXXXX	
3	FILL - sand and gravel	XXXXXXXX	
		XXXXXXXX	
4	as above	XXXXXXXX	
		XXXXXXXX	
5		XXXXXXXX	
	Intact, east-west oriented 6" steel pipe at 6 feet	XXXXXXXX	6" steel pipe
6		XXXXXXXX	
	Slight sheen on groundwater	XXXXXXXX	Slight sheen on water
7	Trench terminated at 7 feet		
8			
9			
10			
11			
12			

SUMMARY

Samples collected:

Excavation Dimensions: 8' long x 4' wide x 7' deep

AIR MONITORING DATA

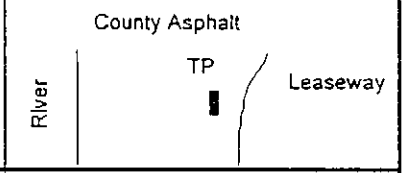
Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	Tarrytown Site
JECT NUMBER:	730057.04
WEATHER	Sunny, 25 degrees F
DATE/TIME START:	1/16/1997 1:00
DATE/TIME FINISH:	1/16/1997 1:15
CONTRACTOR:	Aquifer Drilling and Testing
INSPECTOR:	C.R. Torell - Parsons ES

TEST PIT ID: TP-11

LOCATION: County Asphalt Property



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGY SCHEMATIC	COMMENTS
0	Topsoil	x x x x x x x x x	
	Concrete slab at 4" below the surface	c c c c c c c c	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

SUMMARY

Samples collected: None

Excavation Dimensions: 8' long x 2' wide x 4" deep

AIR MONITORING DATA

Depth	PID (ppm)	LEL %	CO2 (ppm)	OTHER

Contractor: ADT	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. MW-11
Driller: Greg		
Inspector: Chris Torell	PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1
Rig Type: Failing F-3	PROJECT NUMBER 730057.02000	Location Description:
Method: 4 1/4" HSA		Northwest central portion of site

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Cloudy, 75

Date/Time Start 9/11/96 13:45

Date/Time Finish 9/11/96 17:30

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cs	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
-			75	22	asphalt	AAAAAAA			
				11	FILL, black cinders, slag, rocks, ash,	xxxxxxxxxxx			
				10	(moist), naphthalene-type odor	xxxxxxxxxxx			
		2		11		xxxxxxxxxxx			
-			30	15	as above, strong naphthalene-type odor	xxxxxxxxxxx			
				12		xxxxxxxxxxx			
				14		xxxxxxxxxxx			
		4		14		xxxxxxxxxxx			
-			0	4	no recovery, naphthalene-type odor and sheen on spoon	xxxxxxxxxxx			
				3		xxxxxxxxxxx			
				2		xxxxxxxxxxx			
		6		2		xxxxxxxxxxx			
-			100	4	as above, (moist)	xxxxxxxxxxx			
				3	(wet at 7.5 feet)	xxxxxxxxxxx			
				7	amber-colored NAPL at 7.8 feet, strong naphthalene	xxxxxxxxxxx			
		8		8	type odor	xxxxxxxxxxx			Zones of
-			100	6	as above, black foundry sand, saturated with NAPL	xxxxxxxxxxx			NAPL
				6		xxxxxxxxxxx			|
				7		xxxxxxxxxxx			|
		10		6	olive gray SILT and very fine SAND, (wet),	-·-·-·-·-·-·-			Lenses of
-	MW11F		100	5	NAPL in sand lenses	::::::::::::::::			NAPL
				4	as above, saturated with NAPL, strong naphthalene	-·-·-·-·-·-·-			|
				3	type odor	::::::::::::::::			|
		12		3		-·-·-·-·-·-·-			|
-			100	4	as above, mottled silt and fine sand, (moist)	::::::::::::::::			|
				4	less NAPL	-·-·-·-·-·-·-			|
				3		::::::::::::::::			|
		14		4		-·-·-·-·-·-·-			|
-	MW11I		50	4	gray olive CLAY and SILT, some very fine sand lenses,	==========			
				3	(wet), no NAPL	-·-·-·-·-·-·-			
				5		==========			
		16		6		-·-·-·-·-·-·-			
-	MW11I		100	2	as above	==========			
				2		-·-·-·-·-·-·-			
				1		==========			
		18		2		-·-·-·-·-·-·-			
					TD = 16'				
		20							

STANDARD PENETRATION TEST

SS = SPLIT SPOON

AUGER CUTTINGS

CORED

WOR = Weight of Rod

WOH = Weight of Hammer

RB = Roller Bit

COMMENTS

:::: sand

-·-· silt

═══ clay

AAAA asphalt

CCCC concrete

xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. MW-12

Contractor: ADT
Driller: Greg
Inspector: Chris Torell
Rig Type: Failing F-3
Method: 4 1/4" HSA

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.02000

Sheet 1 of 1
Location Description: Northeast corner of site
Location Plan See Site Plan

Weather Cloudy, 65
Date/Time Start 9/12/96 15:50
Date/Time Finish 9/12/96 18:20

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0			100	12	asphalt	AAAAAAA			
				19	FILL, brown silt and fine to coarse sand, little gravel	xxxxxxxxxx			
				10	and rocks, (moist), some "prussian blue" staining	xxxxxxxxxx			
		2		10		xxxxxxxxxx			
3.4	W12B		100	10	as above, black-stained, wood, (very moist)	xxxxxxxxxx			
				7	slightly oily odor	xxxxxxxxxx			
				5		xxxxxxxxxx			
		4		5		xxxxxxxxxx			
0			100	6	as above	xxxxxxxxxx			
				6		xxxxxxxxxx			
				8	gray green SILT and very fine SAND, little clay,				
		6		8	(very moist)				
0			100	7	as above, little clay, (wet)				
				6					
				7					
		8		5					
0.9			100	5	as above, no clay, thixatropic, (wet)				
				6					
				7					
		10		4					
0.8			100	8	as above, little clay				
				8					
				8					
		12		11					
0			100	3	as above				
				3					
				7					
		14		6					
0.9			100	3	as above, trace clay				
				2					
				7					
		16		8					
0			100	9	as above, trace clay lenses				
				8					
				6					
		18		6					
0	W12J		100	3	as above, thin (less than 1-inch) clay lenses				
				2					
				4					
		20		2					
					TD = 20'				

STANDARD PENETRATION TEST
SS = SPLIT SPOON
AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::: sand
- - - silt
clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

Contractor:	ADT	BORING/ WELL NO.	SB-01
Driller:	Greg		
Inspector:	Chris Torell	Sheet 1 of 1	
Rig Type:	Failing F-3	PROJECT NAME	ConEd - Tarrytown
Method:	4 1/4" HSA	PROJECT NUMBER	730057.02000
		Location Description:	Eastern side of site
		Location Plan	See Site Plan
		Weather	Sunny, 65
		Date/Time Start	9/12/96 14:20
		Date/Time Finish	9/16/96 11:00

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Ct	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
-			-	Auger	asphalt	AAAAAAA			
				Auger	concrete	CCCCCCCC			
				Auger	Fill, subbase gravel	xxxxxxxxxx			
		2		Auger		xxxxxxxxxx			
-			100	50/2"	as above	xxxxxxxxxx			
				Auger		xxxxxxxxxx			
				Auger		xxxxxxxxxx			
		4		Auger		xxxxxxxxxx			
-			-	Auger	as above	xxxxxxxxxx			
				Auger		xxxxxxxxxx			
				Auger		xxxxxxxxxx			
		6		Auger		xxxxxxxxxx			
4.1			100	6	gray-green SILT and very fine grained SAND, little clay	-·-·-·-·-·-·-			
				4	(wet), oily odor	::::::::::::::			
				5		-·-·-·-·-·-·-			
		8		7		::::::::::::::			
50.2	B01E		100	2	as above, brick and rock fragments, (wet), oily odor	-·-·-·-·-·-·-			
				4		::::::::::::::			
				5		-·-·-·-·-·-·-			
		10		6		::::::::::::::			
27.8			100	2	as above, some clayey peat-like zones,	-·-·-·-·-·-·-			
				3	1" porcelain fragment	::::::::::::::			
				3		-·-·-·-·-·-·-			
		12		3		::::::::::::::			
9.2			100	2	as above, peat-like zones, (moist), no odor	-·-·-·-·-·-·-			
				3		::::::::::::::			
				1		==========			
		14		1		::::::::::::::			
14.1	01H		100	2	as above, no odor	-·-·-·-·-·-·-			
				4		::::::::::::::			
				7		==========			
		16		7		::::::::::::::			
					TD = 16'				
		18							
		20							

STANDARD PENETRATION TEST

SS = SPLIT SPOON
AUGER CUTTINGS
CORED

WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
-·-·- silt
========== clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

Contractor: ADT
Driller: Greg
Inspector: Chris Torell
Rig Type: Failing F-3
Method: 4 1/4" HSA

PROJECT NAME: ConEd - Tarrytown
PROJECT NUMBER: 730057.02000

BORING/ WELL NO. SB-02
Sheet 1 of 1
Location Description: Eastern side of site
Location Plan: See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather: Hazy, 75
Date/Time Start: 9/10/96 10:00
Date/Time Finish: 9/10/96 11:00

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0			100	auger	asphalt	AAAAAAA			
				37	FILL, black silt and fine sand, cinders, fire brick,	xxxxxxxxxxx			
				27/2"	moist, slight naphthalene-like odor	xxxxxxxxxxx			
		2		auger		xxxxxxxxxxx			
6.5			100	11	as above, foundry sand, wood chips	xxxxxxxxxxx			
				10		xxxxxxxxxxx			
				9		xxxxxxxxxxx			
		4		9		xxxxxxxxxxx			
-			10	6	as above, poor recovery, brick fragments,	xxxxxxxxxxx			Trace
				8	oily brown fragments	xxxxxxxxxxx			
				7	wet at 5 feet	xxxxxxxxxxx			
		6		7		xxxxxxxxxxx			
-			10	6	as above, poor recovery	xxxxxxxxxxx			
				6		xxxxxxxxxxx			
				12		xxxxxxxxxxx			
		8		7		xxxxxxxxxxx			
32.1	B02E		20	8	black silt and fine sand, wood and brick fragments	xxxxxxxxxxx		Sheen	
				7	(wet), sheen, naphthalene-type odor	xxxxxxxxxxx			
				1		xxxxxxxxxxx			
		10		1		xxxxxxxxxxx			
6.1			20	6	poor recovery, brick and concrete pieces	xxxxxxxxxxx			
				45/2"		xxxxxxxxxxx			
					Refusal at 11'				
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
- - - - silt
═══ clay
AAAA asphalt
CCCC concrete
xxxxx fill

j:\4873 I\tarrytwn\welllith.wk3

Contractor: ADT
Driller: Greg
Engr: Chris Torell
Rig Type: Failing F-3
Method: 4 1/4" HSA

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-03 / MW-10

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.02000

Sheet 1 of 2
Location Description:
Center of former MGP site

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Hazy, 75
Date/Time Start 9/10/96 13:00
Date/Time Finish 9/10/96 17:15

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
71.2			50	26	asphalt	A A A A A A A			
				12	FILL, black silt and very fine sand, cinders, slag, rocks,	x x x x x x x x x x x			
				12	(moist), naphthalene-type odor	x x x x x x x x x x x			
		2		8		x x x x x x x x x x x			
70.5			100	12	as above, (very moist), naphthalene-type odor	x x x x x x x x x x x			
				12		x x x x x x x x x x x			
				8		x x x x x x x x x x x			
		4		18		x x x x x x x x x x x			
19.6			50	2	as above, asphaltic tar-like gravel,	x x x x x x x x x x x			
				2	(very moist), strong naphthalene-type odor	x x x x x x x x x x x			
				10		x x x x x x x x x x x			
		6		7		x x x x x x x x x x x			
59.7			50	12	as above	x x x x x x x x x x x			
				4	lense with amber colored NAPL	x x x x x x x x x x x			NAPL Lenses
				1	gray to tan SILT, little clay and very fine sand,	- - - - - - - - - - -			
		8		1	(moist), no NAPL	- - - - - - - - - - -			
	B03E		30	1	as above, amber colored NAPL in sand lenses, (wet)	- - - - - - - - - - -			NAPL Lenses
				2		- - - - - - - - - - -			|
				1		- - - - - - - - - - -			|
		10		1		- - - - - - - - - - -			|
40.2			100	3	gray-green SILT and very fine SAND, trace clay,	- - - - - - - - - - -		Sheen	
				2	(wet), thixotropic, sheen in sandier zones	: : : : : : : : : : : : : : :		|	
				1		- - - - - - - - - - -		|	
		12		1		: : : : : : : : : : : : : : :		|	
84.4			100	4	as above, some sand lenses with amber colored NAPL	- - - - - - - - - - -			NAPL Lenses
				3		: : : : : : : : : : : : : : :			|
				2		- - - - - - - - - - -			|
		14		3		: : : : : : : : : : : : : : :			|
32.2			100	2	as above, (wet), no NAPL or sheen	- - - - - - - - - - -			
				1		: : : : : : : : : : : : : : :			
				1		- - - - - - - - - - -			
		16		1		: : : : : : : : : : : : : : :			
7.0			100	6	as above, thixatropic	- - - - - - - - - - -			
				7		: : : : : : : : : : : : : : :			
				3		- - - - - - - - - - -			
		18		2		: : : : : : : : : : : : : : :			
0	B03J		100	3	as above, increasing clay lenses	= = = = = = = = = =			
	SB103J (dup)			4		- - - - - - - - - - -			
				4		= = = = = = = = = =			
		20		3		- - - - - - - - - - -			
					see pg 2				

STANDARD PENETRATION TEST
SS = SPLIT SPOON
ER CUTTINGS
RED

WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - silt
= = = = clay
A A A A asphalt
C C C C concrete
x x x x x fill

Contractor: ADT					PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-04			
Driller: Greg									
Inspector: Chris Torell					PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1			
Rig Type: Failing F-3					PROJECT NUMBER 730057.02000	Location Description:			
Method: 4 1/4" HSA						North-central portion of site			
GROUNDWATER OBSERVATIONS					Weather Cloudy, 75	Location Plan See Site Plan			
Water Level					Date/Time Start 9/11/96 9:50				
Date									
Time					Date/Time Finish 9/11/96 12:00				
Meas. From									
PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Ct/	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0			50	6	asphalt	AAAAAAA			
				4	FILL, black sand and silt, cinders, ash, (moist)	xxxxxxxxxx			
				2		xxxxxxxxxx			
		2		3		xxxxxxxxxx			
5.6			50	5	as above	xxxxxxxxxx			
				5	gray-green mottled fine grained SAND, little silt				
				5	(very moist)				
		4		4					
7.2			100	7	as above, wet in places				
				5					
				6					
		6		5					
6.6			50	6	as above, thixatropic, (wet)				
				5					
				6					
		8		9					
9.3	B04E		50	12	as above, some clay lenses, thixatropic, (wet)				
				6					
				7					
		10		5					
7.9			80	12	as above, some clay lenses, thixatropic, (wet)				
				6					
				6					
		12		13					
5.8			100	6	as above, some clay lenses, thixatropic, (wet)				
				7					
				7					
		14		11					
3.1			100	12	as above, no clay				
				7					
				11					
		16		15					
2.8			100	2	as above				
				3					
				3					
		18		4					
0	SB04J		100	4	as above, occasional 1" clay lenses				
				3					
				3					
		20		2					
					TD = 20'				

STANDARD PENETRATION TEST
SS = SPLIT SPOON
AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
---- silt
==== clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: ADT
Driller: Greg
Inspector: Chris Torell
Rig Type: Failing F-3
Method: 4 1/4" HSA

PARSONS ENGINEERING SCIENCE DRILLING RECORD

BORING/ WELL NO. SB-05

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.02000

Sheet 1 of 1
Location Description: North central portion of site
Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Cloudy, 65
Date/Time Start 9/12/96 9:00
Date/Time Finish 9/12/96 10:10

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0			50	7	asphalt	AAAAAAA			
				12	FILL, black silt and sand, cinders, ash, slag, (dry)	xxxxxxxxxx			
				12		xxxxxxxxxx			
		2		14		xxxxxxxxxx			
7.4			50	12	as above, (very moist), slight napthalene-type odor	xxxxxxxxxx			
				9		xxxxxxxxxx			
				7		xxxxxxxxxx			
		4		6		xxxxxxxxxx			
11.1			20	9	as above	xxxxxxxxxx			
				6		xxxxxxxxxx			
				7		xxxxxxxxxx			
		6		4	(wet), strong naphthalene-type odor, slight sheen	xxxxxxxxxx			
-			20	12	gray-black SILT and very fine SAND, little clay,	-.-.-.-.-.-			Trace
				11	(wet), thixatropic, trace of amber colored NAPL	::::::::::::			NAPL
				5	strong naphthalene-type odor	-.-.-.-.-.-			|
		8		4		::::::::::::			|
-	B05E		100	7	as above, amber colored NAPL in sand lenses,	-.-.-.-.-.-			Lenses of
				6	strong naphthalene-type odor	::::::::::::			NAPL
				5		-.-.-.-.-.-			|
		10		6		::::::::::::			|
-			20	9	as above	-.-.-.-.-.-			|
				5		::::::::::::			|
				5		-.-.-.-.-.-			|
		12		6		::::::::::::			|
16.7			100	5	as above, occaisional 1/2-inch clay lenses	-.-.-.-.-.-		Sheen	
				5	sheen in places, strong naphthalene-type odor	==========		|	
				7		-.-.-.-.-.-		|	
		14		6		==========		|	
11.9			20	12	as above, no clay, (wet), thixatropic	-.-.-.-.-.-		|	
				11	trace sheen	::::::::::::		|	
				5		-.-.-.-.-.-		|	
		16		6		::::::::::::		|	
16.9	B05J		100	4	as above, occasional 1/4-inch clay lenses,	==========			
				5	no odor, no sheen	-.-.-.-.-.-			
				6		==========			
		18		7		-.-.-.-.-.-			
9.7	B05J		30	5	as above	::::::::::::			
				5		-.-.-.-.-.-			
				6		==========			
		20		4		-.-.-.-.-.-			
					TD = 20'				

STANDARD PENETRATION TEST
SS = SPLIT SPOON
AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
-.-.- silt
========== clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

Contractor: ADT
Driller: Greg
Inspector: Chris Torell
Rig Type: Failing F-3
Method: 4 1/4" HSA

PROJECT NAME: ConEd - Tarrytown
PROJECT NUMBER: 730057.02000

BORING/WELL NO.: SB-06
Sheet 1 of 1
Location Description: South of former tar well
Location Plan: See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather: Cloudy, 65
Date/Time Start: 9/12/96 11:10
Date/Time Finish: 9/12/96 13:15

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
12			100	6	asphalt	AAAAAAA			
				11	FILL, gravel, little coarse sand, brick and cinderblock	xxxxxxxxxx			
				18	fragments, (moist)	xxxxxxxxxx			
		2		30/3"		xxxxxxxxxx			
31.3			50	11	as above	xxxxxxxxxx			
				26		xxxxxxxxxx			
				13		xxxxxxxxxx			
		4		36	black cinders	xxxxxxxxxx			
0			50	7	FILL, gray-green silt and very fine sand, some clay,	xxxxxxxxxx			
				1	glass fragments, (moist to wet), no odor	xxxxxxxxxx			
				2		xxxxxxxxxx			
		6		2		xxxxxxxxxx			
-			50	6	as above	xxxxxxxxxx			Zones of
				4	FILL, foundry sand and slag, (wet), saturated with	xxxxxxxxxx			NAPL
				7	amber colored NAPL, strong naphthalene-type odor	xxxxxxxxxx			|
		8		2		xxxxxxxxxx			|
-	06 E		100	17	as above, saturated with amber colored NAPL	xxxxxxxxxx			|
				18		xxxxxxxxxx			|
				22		xxxxxxxxxx			|
		10		16		xxxxxxxxxx			|
-			100	9	as above	xxxxxxxxxx			|
				9		xxxxxxxxxx			|
				11	gray-black SILT and very fine SAND, occasional	-·-·-·-·-·-·-		Trace	
		12		8	1/2-inch clay lenses, (very moist), trace sheen	::::::::::::::		Sheen	
7.3	06H		50	6	gray-green interbedded SILT and CLAY, little very	-·-·-·-·-·-·-		|	
				6	fine sand, (wet), trace sheen	==========		|	
				3		-·-·-·-·-·-·-		|	
		14		3		==========		|	
0	06H		50	4	as above, (moist), no sheen	-·-·-·-·-·-·-			
				4		==========			
				2		-·-·-·-·-·-·-			
		16		3		==========			
					TD = 16'				
		18							
		20							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
-·-·- silt
═══ clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: ADT	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-07	
Driller: Greg			
Inspector: Chris Torell	PROJECT NAME ConEd - Tarrytown	Sheet 1 of 2	
Rig Type: Failing F-3	PROJECT NUMBER 730057.02000	Location Description:	
Method: 4 1/4" HSA		Northwest corner of site	
GROUNDWATER OBSERVATIONS			
Water Level	Weather Drizzle, 60	Location Plan See Site Plan	
Date	Date/Time Start 9/13/96 7:30		
Time			
Meas. From	Date/Time Finish 9/13/96 9:00		

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
-			-	auger	asphalt	AAAAAAAA			
				auger		AAAAAAAA			
				auger	gravel sub-base	xxxxxxxxxxxxxxxx			
		2		auger		xxxxxxxxxxxxxxxx			
0			50	2	FILL, black sand and silt, ash, brick, slag,	xxxxxxxxxxxxxxxx			
				1	(very moist), no odor	xxxxxxxxxxxxxxxx			
				2		xxxxxxxxxxxxxxxx			
		4		2		xxxxxxxxxxxxxxxx			
-			0	2	no recovery	xxxxxxxxxxxxxxxx			
				h		xxxxxxxxxxxxxxxx			
				h		xxxxxxxxxxxxxxxx			
		6		h		xxxxxxxxxxxxxxxx			
0.2			50	3	FILL, black sand and silt, ash, brick, slag,	xxxxxxxxxxxxxxxx			
				3	(wet), no odor	xxxxxxxxxxxxxxxx			
				1		xxxxxxxxxxxxxxxx			
		8		1		xxxxxxxxxxxxxxxx			
1			100	1	as above, NAPL saturated sawdust,	xxxxxxxxxxxxxxxx		Slight	Zones of
				h	(wet), slight sheen, naphthalene-type odor	xxxxxxxxxxxxxxxx		Shee	NAPL
				1		xxxxxxxxxxxxxxxx		1	1
		10		h		xxxxxxxxxxxxxxxx		1	1
0.6			100	1	as above, grey silt and clay, peaty, wood fragments,	xxxxxxxxxxxxxxxx			
				1	(moist)	xxxxxxxxxxxxxxxx			
				1		xxxxxxxxxxxxxxxx			
		12		3	NAPL-soaked wood fragment at 12 feet	xxxxxxxxxxxxxxxx			Trace NAPL
-	07G		50	1	as above	xxxxxxxxxxxxxxxx			
				2		xxxxxxxxxxxxxxxx			
				1		xxxxxxxxxxxxxxxx			
		14		2	Little amber-colored NAPL at 14'	xxxxxxxxxxxxxxxx			Trace NAPL
-			0	6	no recovery, drove brick fragment	xxxxxxxxxxxxxxxx			
				2		xxxxxxxxxxxxxxxx			
				1		xxxxxxxxxxxxxxxx			
		16		2		xxxxxxxxxxxxxxxx			
0.8			50	6	FILL, grey-green fine sand and silt, wood fragments	xxxxxxxxxxxxxxxx		Trace	
				7	trace sheen, no odor	xxxxxxxxxxxxxxxx		Sheen	
				3		xxxxxxxxxxxxxxxx			
		18		1		xxxxxxxxxxxxxxxx			
0			50	6	gray-green SILT and very fine SAND, little clay,	- - - - - - - - - - - -			
				7	(wet), thixatropic, no odor, no sheen	: : : : : : : : : : : : : : :			
				11		- - - - - - - - - - - -			
		20		12		: : : : : : : : : : : : : : :			
					see pg. 2				

STANDARD PENETRATION TEST

SS = SPLIT SPOON
AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - silt
═══ clay
A A A A asphalt
C C C C concrete
x x x x x fill

Contractor: ADT	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-07
Driller: Greg		
Inspector: Chris Torell	PROJECT NAME ConEd - Tarrytown	Sheet 2 of 2
Rig Type: Failing F-3	PROJECT NUMBER 730057.02000	Location Description:
Method: 4 1/4" HSA		Northwest corner of site
GROUNDWATER OBSERVATIONS		
Water Level	Weather Drizzle, 60	Location Plan See Site Plan
Date	Date/Time Start 9/13/96 7:30	
Time		
Meas. From	Date/Time Finish 9/13/96 9:00	

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
-			0	12	no recovery				
				11					
				10					
		22		6					
0			100	6	gray-green SILT and very fine SAND,				
				7	1/2 to 1-inch clay lenses, (wet), thixatropic				
				10	no odor, no sheen				
		24		11					
0	07M		100	3	as above				
				6					
				6					
		26		9					
					TD = 26'				

STANDARD PENETRATION TEST

SS = SPLIT SPOON

AUGER CUTTINGS

C = CORED

WOR = Weight of Rod

WOH = Weight of Hammer

RB = Roller Bit

COMMENTS

: : : : : : sand

- - - - silt

clay

A A A A asphalt

C C C C concrete

x x x x x fill

j:\43731\tarrytwn\welllith.wk3

Contractor: ADT	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO.	SB-08 / MW-13
Driller: Greg			
Inspector: Chris Torell	PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1	
Rig Type: Failing F-3	PROJECT NUMBER 730057.02000	Location Description:	
Method: 4 1/4" HSA		North western side of site	

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather: Drizzle, 60

Date/Time Start: 9/13/96 9:15

Date/Time Finish: 9/13/96 9:46

Location Plan: See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0			100	9	asphalt	AAAAAAA			
				8	FILL, ash, cinders, slag, (moist), no odor	xxxxxxxxxxx			
				5		xxxxxxxxxxx			
		2		4		xxxxxxxxxxx			
3.1			50	3	as above,	xxxxxxxxxxx			
				4		xxxxxxxxxxx			
				6		xxxxxxxxxxx			
		4		4		xxxxxxxxxxx			
2.0			50	4	as above, (very moist)	xxxxxxxxxxx			
				5		xxxxxxxxxxx			
				3		xxxxxxxxxxx			
		6		3		xxxxxxxxxxx			
0			50	1	as above, gray color, (wet)	xxxxxxxxxxx			
				1		xxxxxxxxxxx			
				1		xxxxxxxxxxx			
		8		3		xxxxxxxxxxx			
-			50	2	as above, dark gray color, wood fragments	xxxxxxxxxxx			
				8		xxxxxxxxxxx			
				5	wood fragment soaked with NAPL	xxxxxxxxxxx			
		10		4	strong naphthalene-type odor	xxxxxxxxxxx			Zones of
-			30	4	as above, little amber colored NAPL saturated sawdust	xxxxxxxxxxx			NAPL
				6	strong naphthalene-type odor	xxxxxxxxxxx			
				8		xxxxxxxxxxx			
		12		8		xxxxxxxxxxx			
-	08G		50	15	as above, fine sand, brick chips,	xxxxxxxxxxx			
				16	saturated with amber colored NAPL,	xxxxxxxxxxx			
				17	strong naphthalene-type odor	xxxxxxxxxxx			
		14		7	Auger refusal at 13.5'				
		16							
		18							
		20							

STANDARD PENETRATION TEST

S = SPLIT SPOON

AUGER CUTTINGS

C = CORED

WOR = Weight of Rod

WOH = Weight of Hammer

RB = Roller Bit

COMMENTS

:::::: sand

- - - - silt

===== clay

AAAA asphalt

CCCC concrete

xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

Contractor:	ADT	BORING/ WELL NO.	SB-09
Driller:	Greg		
Inspector:	Chris Torell	PROJECT NAME	ConEd - Tarrytown
Rig Type:	Failing F-3	PROJECT NUMBER	730057.02000
Method:	4 1/4" HSA	Sheet	1 of 1
		Location Description:	Western portion of site
		Location Plan	See Site Plan
		Weather	Sunny, 65
		Date/Time Start	9/16/96 12:30
		Date/Time Finish	9/16/96 13:40

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
115			100	19	asphalt	AAAAAAA			
				31	FILL, black fine sand, ash, cinders, slag, (moist)	xxxxxxxxxxx			
				23		xxxxxxxxxxx			
		2		24		xxxxxxxxxxx			
-			0	28/4"	no recovery	xxxxxxxxxxx			
				auger		xxxxxxxxxxx			
				auger		xxxxxxxxxxx			
		4		auger		xxxxxxxxxxx			
86.5			10	25	as above	xxxxxxxxxxx			
				50/5"		xxxxxxxxxxx			
				auger		xxxxxxxxxxx			
		6		auger		xxxxxxxxxxx			
-			0	50/5"	no recovery, strong diesel odor on auger cuttings	xxxxxxxxxxx			
				auger		xxxxxxxxxxx			
				auger		xxxxxxxxxxx			
		8		auger		xxxxxxxxxxx			
-			0	23	no recovery, rocks in augers, strong diesel	xxxxxxxxxxx			
				19	odor and black product coating spoon	xxxxxxxxxxx			
				6		xxxxxxxxxxx			
		10		5		xxxxxxxxxxx			
124.2	B09F		50	6	FILL, black ash, slag, rocks, (wet), sheen, diesel odor	xxxxxxxxxxx		Sheen	
				4	gray-black fine to very fine SAND, little silt,	::::::::::::::::			
				3	(wet), no odor or sheen	::::::::::::::::			
		12		10		::::::::::::::::			
42.8			50	10	as above, some roots and shells,	::::::::::::::::			
				7	(wet), slight diesel odor	::::::::::::::::			
				4		::::::::::::::::			
		14		7		::::::::::::::::			
6.1			20	4	light gray-green SILT and very fine SAND, little clay,	-.-.-.-.-.-.-.			
				7	(moist), thixatropic, no odor or sheen	::::::::::::::::			
				10		-.-.-.-.-.-.-.			
		16		8		::::::::::::::::			
8.1			20	4	as above, occasional 1/4-inch clay lenses, (wet)	-.-.-.-.-.-.-.			
				3		==========			
				7		-.-.-.-.-.-.-.			
		18		4		==========			
15.8	B09J		50	12	as above with clay lenses	-.-.-.-.-.-.-.			
				7		==========			
				6		-.-.-.-.-.-.-.			
		20		7		==========			
					TD = 20'				

STANDARD PENETRATION TEST
S = SPLIT SPOON
AUGER CUTTINGS
C = CORED

WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
- - - - silt
========== clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE DRILLING RECORD

Contractor:	ADT
Driller:	Greg
Inspector:	Chris Torell
Rig Type:	Failing F-3
Method:	4 1/4" HSA

BORING/WELL NO. SB-10

PROJECT NAME ConEd - Tarrytown

PROJECT NUMBER 730057.02000

Sheet 1 of 1

Location Description: Western side of site

Location Plan See Site Plan

Weather Sunny, 65

Date/Time Start 9/16/96 14:30

Date/Time Finish 9/16/96 15:20

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
-			100	10	asphalt	AAAAAAA			
				14	FILL, black sand, cinders, slag, ash, rocks, (moist)	xxxxxxxxxx			
				7		xxxxxxxxxx			
		2		6		xxxxxxxxxx			
-			100	5	as above	xxxxxxxxxx			
				10		xxxxxxxxxx			
				15		xxxxxxxxxx			
		4		10	as above, (wet), strong naphthalene-type odor	xxxxxxxxxx			
-			0	11	no recovery, drove cinder block fragment	xxxxxxxxxx			
-				11		xxxxxxxxxx			
				9		xxxxxxxxxx			
		6		5		xxxxxxxxxx			
-			10	6	as above, auger cuttings have a naphthalene-type odor	xxxxxxxxxx			
				3		xxxxxxxxxx			
				2		xxxxxxxxxx			
		8		1		xxxxxxxxxx			
-	B10E		50	2	as above, some peat, (wet), amber colored NAPL	xxxxxxxxxx			Zones of NAPL
				2	saturated sawdust, strong naphthalene-type odor	xxxxxxxxxx			
				1		xxxxxxxxxx			
		10		1		xxxxxxxxxx			
-			100	1	as above	xxxxxxxxxx			
				1		xxxxxxxxxx			
				3	gray fine to medium SAND, (wet)	::::::::::::::			
		12		7		::::::::::::::			
-			50	2	as above, some clay lenses	==========			
				7		::::::::::::::			
				4		==========			
		14		3		::::::::::::::			
-			5	6	poor recovery, as above	==========			
				7		::::::::::::::			
				10		==========			
		16		11		::::::::::::::			
-	B10I		50	8	tan SILT and very fine SAND with 1-inch clay lenses	-.-.-.-.-.-.-			
				9		==========			
				10		-.-.-.-.-.-.-			
		18		9		==========			
					TD = 18'				
		20							

STANDARD PENETRATION TEST

S = SPLIT SPOON

AUGER CUTTINGS

C = CORED

WOR = Weight of Rod

WOH = Weight of Hammer

RB = Roller Bit

COMMENTS

:::::: sand

-.-.- silt

=== clay

AAAA asphalt

CCCC concrete

xxxxx fill

Contractor: ADT	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO.	SB-11 / MW-14
Driller: Greg			
Inspector: Chris Torelt	PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1	
Rig Type: Failing F-3	PROJECT NUMBER 730057.02000	Location Description:	
Method: 4 1/4" HSA		Western center of site	
GROUNDWATER OBSERVATIONS			
Water Level	Weather Sunny, 65	Location Plan See Site Plan	
Date	Date/Time Start 9/16/96 16:45		
Time			
Meas. From	Date/Time Finish 9/16/96 17:25		

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
33			100	5	asphalt	AAAAAAA			
				23	FILL, black ash, cinders, slag, brick, (dry)	xxxxxxxxxx			
				33/1"		xxxxxxxxxx			
		2		auger		xxxxxxxxxx			
-			0	7	no recovery	xxxxxxxxxx			
				5		xxxxxxxxxx			
				9		xxxxxxxxxx			
		4		11		xxxxxxxxxx			
8.9			10	6	FILL as above	xxxxxxxxxx			
				2		xxxxxxxxxx			
				2		xxxxxxxxxx			
		6		2		xxxxxxxxxx			
149			20	4	as above, black, wood fragments, (wet)	xxxxxxxxxx		Sheen	
				2	strong naphthalene-type odor, sheen	xxxxxxxxxx		|	
				2		xxxxxxxxxx		|	
		8		4		xxxxxxxxxx		|	
4.8			30	5	as above, strong naphthalene-type odor, sheen	xxxxxxxxxx		|	
				3		xxxxxxxxxx		|	
				3		xxxxxxxxxx		|	
		10		4		xxxxxxxxxx		|	
248	B11F		100	18	as above, trace black free-product	xxxxxxxxxx		|	Trace
				3		xxxxxxxxxx		|	NAPL
				4		xxxxxxxxxx		|	|
		12		6		xxxxxxxxxx		|	|
39.3			10	6	gray-black fine to medium SAND, little silt, (wet)	::::::::::::::::			
				7	trace oily odor	- - - - - - - - - -			
				10		::::::::::::::::			
		14		10		::::::::::::::::			
0	11H		100	7	interbedded CLAY and SILT, little very fine sand lenses,	==========			
				11	(wet), no odor or sheen	- - - - - - - - - -			
				12		==========			
		16		3		- - - - - - - - - -			
					TD = 16'				
		18							
		20							

STANDARD PENETRATION TEST
- SPLIT SPOON
- JGER CUTTINGS
- CORED

WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
- - - - silt
═══ clay
AAAA asphalt
CCCC concrete
xxxxx fill

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PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. SB-12

Contractor: ADT
Driller: Greg
Inspector: Chris Torell
Rig Type: Failing F-3
Method: 4 1/4" HSA

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.02000

Sheet 1 of 1
Location Description: Southern central portion of site
Location Plan See Site Plan

Weather Rainy, 65
Date/Time Start 9/17/96 8:45
Date/Time Finish 9/17/96 9:15

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
4.9			50	17	asphalt	AAAAAAA			
				10	FILL, gray coarse sand, brick, cinderblock, (dry)	xxxxxxxxxx			
				11		xxxxxxxxxx			
		2		9		xxxxxxxxxx			
7.3	B12B		50	6	gray SILT and very fine SAND, little clay,				
				5	(very moist to wet)				
				3					
		4		4					
3.6			50	10	as above, few brick fragments				
				25					
				10					
		6		6					
4.6			50	10	as above, interbedded grey-green silt and fine sand				
				5	(wet)				
				4					
		8		6					
4.2			25	9	as above, thin 1/16-inch clay lenses				
				3					
				3					
		10		3					
2.6			100	5	as above, occaisional 1/2-inch clay lenses				
				5					
				6					
		12		7					
2.9	12G		100	6	as above				
				7					
				6					
		14		6					
					TD = 14'				
		16							
		18							
		20							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
- - - - silt
===== clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: ADT					PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-13			
Driller: Greg									
tor: Chris Torell					PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1			
Type: Failing F-3					PROJECT NUMBER 730057.02000	Location Description:			
Method: 4 1/4" HSA						North central portion of site			
GROUNDWATER OBSERVATIONS									
Water Level					Weather Rainy, 65	Location Plan See Site Plan			
Date					Date/Time Start 9/17/96 10:40				
Time									
Meas. From					Date/Time Finish 9/17/96 11:30				
PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts.	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0			20	11	asphalt	AAAAAAA			
				17	FILL, cinders, ash, slag, (moist)	xxxxxxxxxx			
				11		xxxxxxxxxx			
		2		10		xxxxxxxxxx			
-			0	4	no recovery	xxxxxxxxxx			
				8		xxxxxxxxxx			
				11		xxxxxxxxxx			
		4		8		xxxxxxxxxx			
-			0	4	norecovery	xxxxxxxxxx			
				5		xxxxxxxxxx			
				4		xxxxxxxxxx			
		6		5		xxxxxxxxxx			
-			100	3	gray-green SILT and very fine SAND, trace clay, (wet),			Slight	
				4	slight sheen and naphthalene-type odor,			Sheen	
				3	trace of amber colored NAPL in sandy lenses			|	Trace
		8		6				|	NAPL
			100	3	as above, increasing clay content			|	
				2	trace sheen in sandy lenses			|	
				1	no sheen				
		10		2					
0			50	2	as above, no sheen or odor (wet)				
				3					
				5					
		12		6					
0			50	3	as above, no sheen or odor (wet)				
				3					
				4					
		14		8					
0			25	5	as above, no sheen or odor (wet)				
				4					
				5					
		16		6					
0	B13I		100	6	as above, 1/2-inch clay lenses				
				7					
				8					
		18		9					
					TD = 18'				
		20							

STANDARD PENETRATION TEST

SS = SPLIT SPOON

GER CUTTINGS

URED

WOR = Weight of Rod

WOH = Weight of Hammer

RB = Roller Bit

COMMENTS

:::::: sand

- - - - silt

clay

AAAA asphalt

CCCC concrete

xxxxx fill

j:\4873 1\tarrytwn\welllith.wk3

Contractor: Northstar Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-14

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description: County Ashpalt Property

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Sunny, 30 degrees F.

Date/Time Start 1/20 /97 : 1245

Date/Time Finish 1/20 /97 : 1350

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0				A	FILL, silt, frozen	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
0			100	G	FILL, black with cinders, slag, bricks, and rocks	xxxxxxxxxxxxxxx			
				G	(wet), no odor	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxxx			
0			100	G	as above, black, little silt, traces of shells,	xxxxxxxxxxxxxxx			
				G	slight naphthalene like odor	xxxxxxxxxxxxxxx			
				G	(wet at 5 ft)	xxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxx			
3.4				G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxx			
4.9			100	G	as above with some ash	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxxx			
2				G		xxxxxxxxxxxxxxx			
				G	as above, black, amber color sheen at 11 ft,	xxxxxxxxxxxxxxx			
				G	slight naphthalene like odor	xxxxxxxxxxxxxxx		Sheen	
		12		G		xxxxxxxxxxxxxxx			
2			100	G	as above, gray with shells	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		14		G		xxxxxxxxxxxxxxx			
13.1	SB14I			G	as above, black, pieces of wood,	xxxxxxxxxxxxxxx		Heavy	
				G	heavy sheen and naphthalene like odor	xxxxxxxxxxxxxxx		Sheen	
				G		xxxxxxxxxxxxxxx			
		16		G		xxxxxxxxxxxxxxx			
35.3			100	G	as above, wet	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G	Gray SILT with some clay, trace clay laminations	- - - - - - - - - - - - - - -			
		18		G	(moist)	- - - - - - - - - - - - - - -			
8	SB14J			G		- - - - - - - - - - - - - - -			
				G		- - - - - - - - - - - - - - -			
				G		- - - - - - - - - - - - - - -			
		20		G		- - - - - - - - - - - - - - -			
					TD = 20 ft.				

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : sand
- - - - - silt
= = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE DRILLING RECORD

BORING/ WELL NO. SB-15

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 2
Location Description: County Asphalt Property

Weather Clear, 30 degrees F.
Date/Time Start 1/20 /97 : 1515
Date/Time Finish 1/20 /97 : 1720

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxxx			
0			100	G	FILL, ash, cinders, brick, black-gray silt and	xxxxxxxxxxxxxxxx			
				G	coarse sand (moist)	xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxxxx			
				G	as above	xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxxx			
0			100	G	as above, slight naphthalene like odor	xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxxx			
				G	as above, (wet)	xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxxxx			
34.2			100	G	as above, black, slight sheen and naphthalene	xxxxxxxxxxxxxxxx		Slight	
				G	like odor	xxxxxxxxxxxxxxxx		Sheen	
				G		xxxxxxxxxxxxxxxx		|	
		12		G		xxxxxxxxxxxxxxxx		|	
10.1				G	as above with pieces of wood at 13 feet	xxxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxxx		|	
				G	Numerous blebs of amber colored NAPL	xxxxxxxxxxxxxxxx		|	Blebs
		14		G	strong naphthalene like odor	xxxxxxxxxxxxxxxx		|	|
			100	A	augered through wood	xxxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxxx			
8				G	as above, cinders, coarse sand and silt, rocks,	xxxxxxxxxxxxxxxx		Sheen	Trace
		16		G	trace blebs of amber colored NAPL, some sheen	xxxxxxxxxxxxxxxx		|	Blebs
				G	and odor	xxxxxxxxxxxxxxxx		|	|
				G		xxxxxxxxxxxxxxxx		|	|
11.7				G		xxxxxxxxxxxxxxxx		|	|
		18		G		xxxxxxxxxxxxxxxx		|	|
			100	G	Gray SAND and SILT with a little clay	- - - - - - - - - - - -			
	SB15J			G		: : : : : : : : : : : : :			
226				G	as above, some blebs of amber colored NAPL,	- - - - - - - - - - - -		Heavy	Some
		20		G	heavy sheen and naphthalene like odor	: : : : : : : : : : : : :		Sheen	Blebs
					see page 2				

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-15

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 2 of 2
Location Description: County Asphalt Property

Weather Clear, 30 degrees F.

Location Plan See Site Plan

Date/Time Start 1/20 /97 : 1515

Date/Time Finish 1/20 /97 : 1720

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
			100	G	as above	: : : : : : : : : : : : : : :		Heavy	Some
				G		: : : : : : : : : : : : : : :		Sheen	Blebs
7.4	SB15K			G	Gray interbedded SILT and CLAY,	= = = = = = = = = = =			
		22		G	no sheen, odor, or staining	- - - - - - - - - - - - -			
				G		= = = = = = = = = = =			
				G		- - - - - - - - - - - - -			
					TD = 23 ft				
		24							
		26							
		28							
		30							
		32							
		43							
		36							
		38							
		40							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. SB-16

Contractor: Northstar Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 2
Location Description: County Asphalt Property

Weather Clear, 27 degrees F.
Date/Time Start 1/21/97 : 0800
Date/Time Finish 1/21/97 : 0840

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0				xxxxxxxxxxxxxx			
0				A	Augered 0-2 ft.	xxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxx			
1.1			100	G	FILL, ash, brick, cinders, dark brown silt and	xxxxxxxxxxxxxx			
				G	coarse sand (moist)	xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxx			
1.4				G	as above	xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxx			
1.3			100	G	as above	xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxx			
2				G	as above (wet)	xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxx			
13.8			100	G	as above, heavy sheen, naphthalene like odor	xxxxxxxxxxxxxx		Heavey	
				G		xxxxxxxxxxxxxx		Sheen	
				G		xxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxx			
				G	as above, pieces of wood, zone of heavy amber	xxxxxxxxxxxxxx			Zones of
232	SB16G			G	colored NAPL, strong naphthalene like odor	xxxxxxxxxxxxxx			NAPL
				G		xxxxxxxxxxxxxx			
		14		G		xxxxxxxxxxxxxx			
161			100	G	Gray SILT and fine SAND, some clay, (wet)	- - - - - - - - - - - -			
				G	amber colored NAPL to 15 ft.	: : : : : : : : : : : : :			
				G		- - - - - - - - - - - -			
		16		G		: : : : : : : : : : : : :			
18.3	SB16I			G	as above, no free phase product or sheen	- - - - - - - - - - - -			
				G		: : : : : : : : : : : : :			
				G		- - - - - - - - - - - -			
		18		G		: : : : : : : : : : : : :			
			100	G	as above, no free phase product or sheen	- - - - - - - - - - - -			
				G		: : : : : : : : : : : : :			
				G		- - - - - - - - - - - -			
		20		G		: : : : : : : : : : : : :			
					see page 2				

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-16

Contractor: Northstar Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 2 of 2
Location Description: County Asphalt Property

Weather Clear, 27 degrees F.
Date/Time Start 1/21 /97 : 0800
Date/Time Finish 1/21 /97 : 0840

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
			100	G	Gray SILT and fine SAND, some clay, (wet)	- - - - - - - - - - - -			
				G	no stain, sheen or free phase product	: : : : : : : : : : : : : : :			
				G		- - - - - - - - - - - -			
		22		G		: : : : : : : : : : : : : : :			
					TD = 22 ft.				
		24							
		26							
		28							
		30							
		32							
		34							
		36							
		38							
		40							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-17	
Driller: Jeff Thew			
Inspector: Chris Torell	PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1	
Rig Type: CME trailer rig	PROJECT NUMBER 730057.04000	Location Description: County Asphalt Property	
Method: Geoprobe			

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Clear, 27 degrees F.

Date/Time Start 1/21 /97 : 1015

Date/Time Finish 1/21 /97 : 1100

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0				xxxxxxxxxxxxxxx			
				A	Augered to 4 feet, FILL, frozen	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
				A	Auger refusal at 2 feet, move north 20 feet	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		4		A		xxxxxxxxxxxxxxx			
0.7			100	G	FILL, black silt and coarse sand, some ash, cinders,	xxxxxxxxxxxxxxx			
				G	brick	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxx			
1.3	SB17D			G	as above, (wet)	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxx			
0			100	G	as above, black, slight diesel odor	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxxx			
0				G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxxx			
0	SB17H		100	G	Gray-green SILT and very fine grained SAND,	- - - - - - - - - - - - -			
				G	trace 1/4" clay laminations, no odor, (wet)	: : : : : : : : : : : : : :			
				G		- - - - - - - - - - - - -			
		14		G		: : : : : : : : : : : : : :			
0				G	as above	- - - - - - - - - - - - -			
				G		: : : : : : : : : : : : : :			
				G		- - - - - - - - - - - - -			
		16		G		: : : : : : : : : : : : : :			
				G	TD = 16 ft.				
				G					
				G					
		18		G					
				G					
				G					
				G					
		20		G					

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

NOTE: Hole moved 20 ft north after 2 refusals at 2 ft.

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. SB-18

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description: County Asphalt Property

Weather Clear, 27 degrees F.
Date/Time Start 1/21 /97 : 1215
Date/Time Finish 1/21 /97 : 1230

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
0	SB18B		100	G	FILL, black sand, cinders, brick	xxxxxxxxxxxxxxx			
				G	(moist)	xxxxxxxxxxxxxxx			
				G	Gray-green SILT and fine grained SAND, trace clay	- - - - - - - - - - - - -			
		4		G	thixotropic, (wet)	: : : : : : : : : : : : : :			
0				G		- - - - - - - - - - - - -			
				G		: : : : : : : : : : : : : :			
				G		- - - - - - - - - - - - -			
		6		G		: : : : : : : : : : : : : :			
0			100	G	as above	- - - - - - - - - - - - -			
				G		: : : : : : : : : : : : : :			
				G		- - - - - - - - - - - - -			
		8		G		: : : : : : : : : : : : : :			
0				G	as above	- - - - - - - - - - - - -			
				G		: : : : : : : : : : : : : :			
				G		- - - - - - - - - - - - -			
		10		G		: : : : : : : : : : : : : :			
0			100	G	as above, trace 1/8" clay lenses	- - - - - - - - - - - - -			
				G		: : : : : : : : : : : : : :			
				G		- - - - - - - - - - - - -			
		12		G		: : : : : : : : : : : : : :			
0	SB18G			G	as above	- - - - - - - - - - - - -			
				G		: : : : : : : : : : : : : :			
				G		- - - - - - - - - - - - -			
		14		G		: : : : : : : : : : : : : :			
					TD = 14 ft.				
		16							
		18							
		20							

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling					PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-19			
Driller: Jeff									
Inspector: Chris Torell					PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1			
Rig Type: CME trailer rig					PROJECT NUMBER 730057.04000	Location Description: County Asphalt Property			
Method: Geoprobe									
GROUNDWATER OBSERVATIONS					Weather Clear, 27 degrees F.	Location Plan See Site Plan			
Water Level					Date/Time Start 1/21 /97 : 1300				
Date									
Time					Date/Time Finish 1/21 /97 : 1410				
Meas. From									
PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxxx			
			100	G	FILL, asphalt, brick, black-brown silt and coarse sand	xxxxxxxxxxxxxxxx			
				G	(moist)	xxxxxxxxxxxxxxxx			
				G	Refusal at 6 ft, moved hole 5 ft, then augered to 5 ft.	xxxxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
			100	G	as above	xxxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxxx			
				G	as above, trace blebs of amber colored NAPL and	xxxxxxxxxxxxxxxx			Trace
				G	naphthalene like odor, (wet)	xxxxxxxxxxxxxxxx			Blebs
				G		xxxxxxxxxxxxxxxx			Some
		8		G		xxxxxxxxxxxxxxxx			Blebs
			100	G	as above, some blebs of amber colored NAPL	xxxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxxx			|
		10		G		xxxxxxxxxxxxxxxx			|
				G	as above	xxxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxxx			|
		12		G		xxxxxxxxxxxxxxxx			|
	SB19G		100	G	as above, heavier zone of amber colored NAPL	xxxxxxxxxxxxxxxx			Zone of
				G		xxxxxxxxxxxxxxxx			NAPL
				G		xxxxxxxxxxxxxxxx			|
		14		G		xxxxxxxxxxxxxxxx			|
				G	Green SILT and CLAY, little very fine grained sand,	- - - - - - - - - - - -		Trace	
				G	plastic, trace of a sheen	= = = = = = = = = =		Sheen	
				G		- - - - - - - - - - - -		|	
		16		G		= = = = = = = = = =		|	
			100	G	as above, some blebs of NAPL to 18.5 ft.	- - - - - - - - - - - -			Some
				G		= = = = = = = = = =			Blebs
				G		- - - - - - - - - - - -			|
		18		G		= = = = = = = = = =			|
	SB19J			G		- - - - - - - - - - - -			|
				G	as above, no NAPL	= = = = = = = = = =			
				G		- - - - - - - - - - - -			
		20		G		= = = = = = = = = =			
					TD = 20 ft.				

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- · - · - · silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

NOTE: Refusal at 6 ft. Moved hole and augered to 5 ft before continuing.

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-20

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 2
Location Description: County Asphalt Property

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather -Clear, 27 degrees F.
Date/Time Start 1/21 /97 : 1505
Date/Time Finish 1/21 /97 : 1540

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Ct	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxxx			
				G	FILL, ash, bricks, cinders, black coarse sand	xxxxxxxxxxxxxxxx			
				G	(moist)	xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxxxx			
				G	as above	xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxxx			
				G	as above	xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
				G	(wet at 7 ft)	xxxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxxx			
				G	as above	xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxxxx			
				G	Trace blebs of amber colored NAPL,	xxxxxxxxxxxxxxxx		Slight	Trace
				G	slight naphthalene odor and sheen	xxxxxxxxxxxxxxxx		Sheen	Blebs
				G		xxxxxxxxxxxxxxxx		|	|
		12		G		xxxxxxxxxxxxxxxx		|	|
				G	As above, scattered blebs of amber colored NAPL	xxxxxxxxxxxxxxxx		|	|
				G	naphthalene odor and sheen	xxxxxxxxxxxxxxxx		|	|
				G		xxxxxxxxxxxxxxxx		|	|
		14		G		xxxxxxxxxxxxxxxx		|	|
	SB20I			G	as above, some blebs of amber colored NAPL,	xxxxxxxxxxxxxxxx		Heavy	Some
				G	heavy sheen and slight naphthalene odor	xxxxxxxxxxxxxxxx		Sheen	Blebs
				G		xxxxxxxxxxxxxxxx		|	|
		16		G		xxxxxxxxxxxxxxxx		|	|
				G	as above	xxxxxxxxxxxxxxxx		|	|
				G		xxxxxxxxxxxxxxxx		|	|
				G		xxxxxxxxxxxxxxxx		|	|
		18		G		xxxxxxxxxxxxxxxx		|	|
				G	as above, trace blebs of amber colored NAPL,	xxxxxxxxxxxxxxxx		Slight	Trace
				G	naphthalene like odor and sheen	xxxxxxxxxxxxxxxx		Sheen	Blebs
				G		xxxxxxxxxxxxxxxx		|	|
		20		G		xxxxxxxxxxxxxxxx		|	|

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling D+B Driller: Jeff Inspector: Chris Torell Rig Type: CME trailer rig Method: Geoprobe	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-20
	PROJECT NAME ConEd - Tarrytown PROJECT NUMBER 730057.04000	Sheet 2 of 2 Location Description: County Asphalt Property
GROUNDWATER OBSERVATIONS Water Level Date Time Meas. From	Weather Clear, 27 degrees F. Date/Time Start 1/21 /97 : 1505 Date/Time Finish 1/21 /97 : 1540	Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCREMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
	SB20K			G	as above	xxxxxxxxxxxxxxx		Sheen	Trace Blebs
				G	Gray SAND and SILT, trace clay,	- - - - - - - - - - - - -			
				G	no odor or sheen	: : : : : : : : : : : : :			
		22		G		- - - - - - - - - - - - -			
					TD = 22 ft.				
		24							
		26							
		28							
		30							
		32							
		34							
		36							
		38							
		40							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling
Driller: Jeff
spector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-21

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 2
Location Description: County Asphalt Property

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Clear, 27 degrees F.
Date/Time Start 1/21 /97 : 1630
Date/Time Finish 1/21 /97 : 1720

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
			100	G	FILL, cinders, brick, slag, black silt and coarse sand	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxxx			
				G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxx			
			100	G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G	(wet at 7 ft.)	xxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxx			
				G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxxx			
			0	G	no recovery 10-14 ft.	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		14		G		xxxxxxxxxxxxxxx			
	SB21H		100	G	FILL, as above, trace of amber colored blebs of	xxxxxxxxxxxxxxx			
				G	NAPL, naphthalene like odor and sheen	xxxxxxxxxxxxxxx		Sheen	Trace Blebs
				G	Dark gray PEAT and CLAY, tight, moist,	==========			
		16		G		==========			
				G	as above	==========			
				G		==========			
				G		==========			
		18		G		==========			
			100	G	as above, no odor or sheen	==========			
				G		==========			
				G		==========			
		20		G		==========			

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS
:::::: sand
- · - · - silt
==== clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling Driller: Jeff Inspector: Chris Torell Rig Type: CME trailer rig Method: Geoprobe	**PARSONS ENGINEERING SCIENCE** **DRILLING RECORD**	BORING/ WELL NO. SB-21
	PROJECT NAME ConEd - Tarrytown PROJECT NUMBER 730057.04000	Sheet 2 of 2 Location Description:
GROUNDWATER OBSERVATIONS	Weather Clear, 27 degrees F. Date/Time Start 1/21 /97 : 1630 Date/Time Finish 1/21 /97 : 1720	Location Plan See Site Plan

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
	SB21K		100	G	as above	= = = = = = = = =			
				G		= = = = = = = = =			
				G		= = = = = = = = =			
		22		G		= = = = = = = = =			
					TD = 22 ft.				
		24							
		26							
		28							
		30							
		32							
		34							
		36							
		38							
		40							

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling					PARSONS ENGINEERING SCIENCE DRILLING RECORD		BORING/ WELL NO. SB- 22			
Driller: Jeff										
Inspector: Chris Torell					PROJECT NAME ConEd - Tarrytown		Sheet 1 of 1			
Rig Type: CME trailer rig					PROJECT NUMBER 730057.04000		Location Description: County Asphalt Property			
Method: Geoprobe										
GROUNDWATER OBSERVATIONS					Weather Clear, 27 degrees F.		Location Plan See Site Plan			
Water Level					Date/Time Start 1/21 /97 : 1750					
Date										
Time					Date/Time Finish 1/21 /97 : 1820					
Meas. From										
PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL		LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0								
				A	Augered to 2 ft.		xxxxxxxxxxxxxxx			
				A			xxxxxxxxxxxxxxx			
				A			xxxxxxxxxxxxxxx			
		2		A			xxxxxxxxxxxxxxx			
			100	G	FILL, rocks, brick, cinders, black coarse sand (dry)		xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
		4		G			xxxxxxxxxxxxxxx			
				G	as above		xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
		6		G			xxxxxxxxxxxxxxx			
			100	G	as above, black, slight musty odor		xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
				G	(wet at 7 ft.)		xxxxxxxxxxxxxxx			
		8		G			xxxxxxxxxxxxxxx			
				G	as above		xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
		10		G			xxxxxxxxxxxxxxx			
			100	G	as above		xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
		12		G			xxxxxxxxxxxxxxx			
	SB22G			G	as above		xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxx			
		14		G			xxxxxxxxxxxxxxx			
			100	G	Dark gray PEAT and CLAY, some sand lenses,		==========		Trace	Trace
				G	trace of scattered blebs of amber colored NAPL		==========		Sheen	Blebs
				G	no odor or NAPL		==========			
		16		G			==========			
	SB22I			G	as above		==========			
				G			==========			
				G			==========			
		18		G			==========			
					TD = 18 ft.					
		20								

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB- 23	
Driller: Jeff			
Inspector: Chris Torell	PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1	
Rig Type: CME trailer rig	PROJECT NUMBER 730057.04000	Location Description: County Asphalt Property	
Method: Geoprobe			

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Cloudy, 35 degrees F.

Date/Time Start: 1/22 /97 : 0755

Date/Time Finish: 1/22 /97 : 0830

Location Plan: See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
	SB23B		100	G	FILL, rust colored, ash cinders, coarse sand	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxxx			
				G	as above	xxxxxxxxxxxxxxx			
				G	very moist	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxx			
			100	G	as above, wood pieces, gray, septic odor (wet)	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxx			
				G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxxx			
			100	G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxxx			
	SB23G			G		xxxxxxxxxxxxxxx			
				G	Gray PEAT and CLAY, trace fine sand, tight, some	= = = = = = = = = =			
				G	shells, (moist)	= = = = = = = = = =			
		14		G		= = = = = = = = = =			
					TD = 14 ft.				
		16							
		18							
		20							

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling					PARSONS ENGINEERING SCIENCE DRILLING RECORD		BORING/ WELL NO. SB-24			
Driller: Jeff										
Inspector: Chris Torell					PROJECT NAME ConEd - Tarrytown		Sheet 1 of 2			
Rig Type: CME trailer rig					PROJECT NUMBER 730057.04000		Location Description: County Asphalt Property			
Method: Geoprobe										
GROUNDWATER OBSERVATIONS										
Water Level					Weather Cloudy, 35 degrees F.		Location Plan See Site Plan			
Date					Date/Time Start 1/22 /97 : 1600					
Time										
Meas. From					Date/Time Finish 1/22 /97 : 1650					
PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL		LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0								
				A	Augered to 2 ft.		xxxxxxxxxxxxxxxx			
				A			xxxxxxxxxxxxxxxx			
				A			xxxxxxxxxxxxxxxx			
		2		A			xxxxxxxxxxxxxxxx			
			100	G	FILL, brick, asphalt, rocks, cinders, (dry)		xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
		4		G			xxxxxxxxxxxxxxxx			
				G	as above		xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
		6		G			xxxxxxxxxxxxxxxx			
			100	G	as above		xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
				G	Heavy diesel product and odors, (wet)		xxxxxxxxxxxxxxxx			Heavy
		8		G			xxxxxxxxxxxxxxxx			Diesel
	SB24E			G	as above		xxxxxxxxxxxxxxxx			|
				G			xxxxxxxxxxxxxxxx			|
				G			xxxxxxxxxxxxxxxx			|
		10		G			xxxxxxxxxxxxxxxx			|
			100	G	as above, heavy sheen, naphthalene odor, no		xxxxxxxxxxxxxxxx		Heavy	
				G	diesel product		xxxxxxxxxxxxxxxx		Sheen	
				G			xxxxxxxxxxxxxxxx		|	
		12		G			xxxxxxxxxxxxxxxx		|	
				G	as above		xxxxxxxxxxxxxxxx		|	
				G			xxxxxxxxxxxxxxxx		|	
				G			xxxxxxxxxxxxxxxx		|	
		14		G			xxxxxxxxxxxxxxxx		|	
			0	G	no recovery		xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
		16		G			xxxxxxxxxxxxxxxx		????????	
				G	no recovery		xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
				G			xxxxxxxxxxxxxxxx			
		18		G			xxxxxxxxxxxxxxxx			
	SB24J		100	G	FILL as above, few blebs of amber colored NAPL		xxxxxxxxxxxxxxxx		Sheen	Blebs
				G	naphthalene like odor and sheen		xxxxxxxxxxxxxxxx		|	|
				G			xxxxxxxxxxxxxxxx		|	|
		20		G			xxxxxxxxxxxxxxxx		|	|
					see page 2					

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- · - · - · silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-24

Contractor: Northstar Drilling
Driller: Jeff
spector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 2 of 2
Location Description: County Asphalt Property

Location Plan See Site Plan

Weather Cloudy, 35 degrees F.

Date/Time Start 1/22 /97 : 1600

Date/Time Finish 1/22 /97 : 1650

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
0	SB24K		100	G	Gray CLAY and PEAT, trace fine sand and silt,	= = = = = = = = = =			
				G	some shells, tight, no odor or sheen	= = = = = = = = = =			
				G		= = = = = = = = = =			
		22		G		= = = = = = = = = =			
					TD = 22 ft.				
		24							
		26							
		28							
		30							
		32							
		34							
		36							
		38							
		40							

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
XXXXX fill

Contractor: Northstar Drilling
Driller: Jeff
tor: Chris Torell
. . Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-25/MW15

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 2
Location Description: County Asphalt Property

Weather Cloudy, 35 degrees F.

Location Plan See Site Plan

Date/Time Start 1/22 /97 : 1710

Date/Time Finish 1/22 /97 : 1800

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
5.8			100	G	FILL, rocks, brown-gray coarse sand and gravel,	xxxxxxxxxxxxxxx			
				G	some cinders, (moist)	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxxx			
1.7				G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxx			
15.5			100	G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxx			
2.5				G	as above, (wet)	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		10		G	refusal at 10 feet, auger through	xxxxxxxxxxxxxxx			
8.4			100	G	as above, slight naphthalene like odor, no sheen	xxxxxxxxxxxxxxx			
				G	water is black color	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxxx			
2.1				G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		14		G		xxxxxxxxxxxxxxx			
7.6			100	G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		16		G		xxxxxxxxxxxxxxx			
32.3	SB251			G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		18		G		xxxxxxxxxxxxxxx			
11.4			100	G	as above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		20		G		xxxxxxxxxxxxxxx			
					See page 2				

STANDARD PENETRATION TEST
SPLIT SPOON WOR = Weight of Rod
A = AUGER CUTTINGS WOH = Weight of Hammer
G = GEOPROBE RB = Roller Bit

COMMENTS Monitoring well set at 19 feet

: : : : : : sand AAAA asphalt
- - - - - silt CCCC concrete
= = = = clay xxxxx fill

Contractor: Northstar Drilling Driller: Jeff tor: Chris Torell ype: CME trailer rig Method: Geoprobe	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB- 25/ MW 15
	PROJECT NAME ConEd - Tarrytown PROJECT NUMBER 730057.04000	Sheet 2 of 2 Location Description: County Asphalt Property
	Weather Cloudy, 35 degrees F. Date/Time Start 1/22 /97 : 1710 Date/Time Finish 1/22 /97 : 1800	Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
2.4	SB25K		100		as above to 21 ft.	xxxxxxxxxxxxxxx			
						xxxxxxxxxxxxxxx			
					Gray CLAY and PEAT, little fine sand and silt, shells,	==========			
		22			tight, (moist)	==========			
					TD = 22 ft				
		24							
		26							
		28							
		30							
		32							
		34							
		36							
		38							
		40							

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. SB-28/MW16

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 2
Location Description: County Asphalt Property

Weather Cloudy, 45 degrees F.
Date/Time Start 1/23 /97 : 1240
Date/Time Finish 1/23 /97 : 1330

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 4 ft.	xxxxxxxxxxxxxxx			
				A	(obstruction at 2.5 ft.)	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		4		A		xxxxxxxxxxxxxxx			
			100	G	Gray FILL, sand and gravel, traces of bricks and	xxxxxxxxxxxxxxx			
				G	cinders (moist)	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		6		G		xxxxxxxxxxxxxxx			
				G	As above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxx			
			100	G	As above, black cinders, slag, slight naphthalene	xxxxxxxxxxxxxxx		Slight	
				G	like odor and sheen	xxxxxxxxxxxxxxx		Sheen	
				G		xxxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxxx			
				G	As above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxxx			
			100	G	As above, sheen and naphthalene like odor	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		14		G		xxxxxxxxxxxxxxx			
				G	As above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		16		G		xxxxxxxxxxxxxxx			
	SB28I		<100	G	As above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		18		G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G	Poor recovery, Drilling change, CLAY, slough	==========			
		20		G	into spoon	==========			

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- · - · - · silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE DRILLING RECORD

BORING/ WELL NO. SB-28/MW16

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 2 of 2
Location Description: County Asphalt Property

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Cloudy, 45 degrees F.
Date/Time Start 1/23 /97 : 1240
Date/Time Finish 1/23 /97 : 1330

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
			<100	G	As above, poor recovery, CLAY,	= = = = = = = = = =			
				G		= = = = = = = = = =			
				G		= = = = = = = = = =			
		22		G		= = = = = = = = = =			
				G		= = = = = = = = = =			
				G		= = = = = = = = = =			
				G	CLAY and PEAT, shells	= = = = = = = = = =			
		24		G		= = = = = = = = = =			
					TD = 25 ft				
		26							
		28							
		30							
		32							
		34							
		36							
		38							
		40							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling					PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-29			
Driller: Jeff									
Inspector: Chris Torell					PROJECT NAME ConEd - Tarrytown	Sheet 1 of 2			
Rig Type: CME trailer rig					PROJECT NUMBER 730057.04000	Location Description: County Asphalt Property			
Method: Geoprobe									
GROUNDWATER OBSERVATIONS									
Water Level					Weather Cloudy, 45 degrees F.	Location Plan See Site Plan			
Date					Date/Time Start 1/23 /97 : 1520				
Time									
Meas. From					Date/Time Finish 1/23 /97 : 1540				
PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 8 ft, FILL, see log for TP05 in the	xxxxxxxxxxxxxxx			
				A	same area	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		4		A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		6		A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		8		A		xxxxxxxxxxxxxxx			
			100	G	FILL, black cinders, rocks and gravel, sheen and	xxxxxxxxxxxxxxx		Sheen	
				G	naphthalene like odor	xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
		10		G		xxxxxxxxxxxxxxx		|	
				G	Refusal at 10 ft. augered to 11 ft.	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G	FILL as above	xxxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxxx		????????	
			100	G	Refusal at 12.5 ft. augered to 14 ft.	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		14		G		xxxxxxxxxxxxxxx			
	SB29H			G	FILL as above, few to some blebs of amber	xxxxxxxxxxxxxxx			Few
				G	colored NAPL	xxxxxxxxxxxxxxx			Blebs
				G		xxxxxxxxxxxxxxx			|
		16		G		xxxxxxxxxxxxxxx			|
			100	G	As above	xxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxx			|
		18		G		xxxxxxxxxxxxxxx			|
				G	Gray very fine SAND and SILT, trace clay,	: : : : : : : : : : : : : : :			
				G	wet, no odor or sheen	- - - - - - - - - - - - - - -			
				G		: : : : : : : : : : : : : : :			
		20		G		- - - - - - - - - - - - - - -			

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
C = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-29

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 2 of 2
Location Description: County Asphalt Property

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Cloudy, 45 degrees F.

Date/Time Start 1/23 /97 : 1520

Date/Time Finish 1/23 /97 : 1540

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
			100	G	As above, very fine SAND and SILT, trace clay	: : : : : : : : : : : : : : :			
				G		- - - - - - - - - - - - -			
				G		: : : : : : : : : : : : : : :			
		22		G		- - - - - - - - - - - - -			
					TD = 22 ft.				
		24							
		26							
		28							
		30							
		32							
		34							
		36							
		38							
		40							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS
: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
XXXXX fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. SB-30

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 2
Location Description: County Asphalt Property

Location Plan See Site Plan

Weather Clear, 20 degrees F.
Date/Time Start 1/24 /97 : 0730
Date/Time Finish 1/24 /97 : 0800

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 10 ft, FILL, see log for TP10 located	xxxxxxxxxxxxxxx			
				A	15 ft. north	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
				A	As above	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		4		A		xxxxxxxxxxxxxxx			
				A	As above	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		6		A		xxxxxxxxxxxxxxx			
				A	As above	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		8		A		xxxxxxxxxxxxxxx			
				A	As above	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		10		A		xxxxxxxxxxxxxxx			
			100	G	FILL, black gravel, rocks and coarse sand, little brick	xxxxxxxxxxxxxxx			
				G	cinders, (wet), strong naphthalene like odor,	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxxx			
				G	As above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		14		G		xxxxxxxxxxxxxxx			
			100	G	As above, sheen and odor	xxxxxxxxxxxxxxx		Sheen	
				G		xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
		16		G		xxxxxxxxxxxxxxx		|	
	SB30I			G	As above	xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
		18		G		xxxxxxxxxxxxxxx		|	
			100	G	As above	xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
		20		G		xxxxxxxxxxxxxxx		|	

STANDARD PENETRATION TEST

S = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. SB- 30

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 2 of 2
Location Description: County Asphalt Property

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Clear, 20 degrees F.

Date/Time Start 1/24 /97 : 0730

Date/Time Finish 1/24 /97 : 0800

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		20							
			100	G	As above	xxxxxxxxxxxxxxx		Sheen	
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
	SB30K	22		G	Black CLAY and SILT, some fine sand, shells, (moist)	= = = = = = = = = =			
					TD = 22 ft.				
		24							
		26							
		28							
		30							
		32							
		34							
		36							
		38							
		40							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/
WELL NO. SB-213

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description: Adjacent to G-213 on Leaseway Property

Weather Cloudy, 35 degrees F.
Date/Time Start 1/22 /97 : 1220
Date/Time Finish 1/22 /97 : 1240

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxx			
			100	G	FILL, rocks, brick, ash, cinders, moist	xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxx			
	SB213E			G		xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
				G	As above, wet, some diesel product and odor	xxxxxxxxxxxxxx			Trace
		6		G		xxxxxxxxxxxxxx			Diesel
			100	G	As above, lots of bricks, trace diesel product and odor	xxxxxxxxxxxxxx			|
				G	(wet)	xxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxx			|
		8		G		xxxxxxxxxxxxxx			|
				G	As above	xxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxx			|
		10		G		xxxxxxxxxxxxxx			|
			100	G	As above, trace diesel odor	xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxx			
				G	Dark gray PEAT and CLAY, some silt and very	==========			
		14		G	fine sand, trace shells, no odor or sheen	==========			
					TD = 14 ft.				
		16							
		18							
		20							

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

Contractor: Northstar Drilling
Driller: Jeff
Inspector: Chris Torell
Rig Type: CME trailer rig
Method: Geoprobe

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. SB-217

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description: Adjacent to G-217 on Leaseway Property

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Cloudy, 35 degrees F.
Date/Time Start 1/22 /97 : 0940
Date/Time Finish 1/22 /97 : 1000

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered through 5 feet of rubble FILL	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		4		A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
			100	G	FILL, ash, cinders, sand, strong diesel odor and sheen,	xxxxxxxxxxxxxxx		Strong	Diesel
		6		G	some diesel product	xxxxxxxxxxxxxxx		Sheen	"
				G		xxxxxxxxxxxxxxx		"	"
				G		xxxxxxxxxxxxxxx		"	"
	SB217D			G		xxxxxxxxxxxxxxx		"	"
		8		G		xxxxxxxxxxxxxxx		"	"
				G	As above	xxxxxxxxxxxxxxx		"	"
				G		xxxxxxxxxxxxxxx		"	"
			100	G	As above, less sheen and odor, traces of diesel product	xxxxxxxxxxxxxxx		"	"
		10		G		xxxxxxxxxxxxxxx		Slight	Trace
				G	As above	xxxxxxxxxxxxxxx		Sheen	Diesel
				G		xxxxxxxxxxxxxxx		"	"
				G		xxxxxxxxxxxxxxx		"	"
		12		G		xxxxxxxxxxxxxxx		"	"
				G		xxxxxxxxxxxxxxx		"	
				G		xxxxxxxxxxxxxxx		"	
			100	G	As above, diesel odor and sheen	xxxxxxxxxxxxxxx		"	
		14		G		xxxxxxxxxxxxxxx		"	
				G	Dark gray fine to medium silty SAND, little clay,	::::::::::::::::		"	
				G	slight diesel odor and sheen (wet)	::::::::::::::::		"	
				G		::::::::::::::::		"	
		16		G		::::::::::::::::		"	
				G		::::::::::::::::		"	
				G		::::::::::::::::		"	
					TD = 17 ft.				
		18							
		20							

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

:::::: sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
XXXXX fill

Contractor: Northstar Drilling	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. SB-218
Driller: Jeff		
Inspector: Chris Torelt	PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1
Rig Type: CME trailer rig	PROJECT NUMBER 730057.04000	Location Description: County Asphalt Property
Method: Geoprobe		

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather Cloudy, 35 degrees F.

Date/Time Start 1/22 /97 : 1130

Date/Time Finish 1/22 /97 : 1150

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered to 2 ft.	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
			100	G	FILL, bricks, cinders, rocks, black coarse sand	xxxxxxxxxxxxxxx			
				G	and gravel	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		4		G		xxxxxxxxxxxxxxx			
	SB218C			G	As above, diesel odor and sheen, (wet)	xxxxxxxxxxxxxxx		Sheen	
				G		xxxxxxxxxxxxxxx			
				G	Diesel product	xxxxxxxxxxxxxxx		Heavy	Heavy
		6		G		xxxxxxxxxxxxxxx		Sheen	Diesel
			100	G	As above, heavy diesel product and odor	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		8		G		xxxxxxxxxxxxxxx			
				G	As above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		10		G		xxxxxxxxxxxxxxx			
			100	G	As above	xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
		12		G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G		xxxxxxxxxxxxxxx			
				G	Dark gray PEAT and CLAY, some shells, tight,	==========			
		14		G	no odor or sheen	==========			
					TD = 14 ft.				
		16							
		18							
		20							

STANDARD PENETRATION TEST

SS = SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE

WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay

AAAA asphalt
CCCC concrete
xxxxx fill

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. SB- 220

Contractor: Northstar Drilling
Driller: Jeff
Engr: Chris Torelli
Rig type: CME trailer rig
Method: Geoprobe

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description: County Asphalt Property

Weather Cloudy, 35 degrees F.
Date/Time Start 1/22 /97 : 1440
Date/Time Finish 1/22 /97 : 1500

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
				A	Augered through 4 feet of rubble FILL	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		2		A		xxxxxxxxxxxxxxx			
				A	As above	xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
				A		xxxxxxxxxxxxxxx			
		4		A		xxxxxxxxxxxxxxx			
	SB220C		100	G	FILL, rocks, cinders, brick, coarse black sand,	xxxxxxxxxxxxxxx			Heavy
				G	heavy diesel product and odor	xxxxxxxxxxxxxxx			Diesel
				G		xxxxxxxxxxxxxxx			|
		6		G		xxxxxxxxxxxxxxx			|
				G	As above	xxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxx			|
		8		G		xxxxxxxxxxxxxxx			|
			100	G	As above	xxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxx			|
				G		xxxxxxxxxxxxxxx			|
		10		G		xxxxxxxxxxxxxxx			|
				G	As above, minimal diesel odor, heavy naphthalene	xxxxxxxxxxxxxxx		Sheen	
				G	like odor and sheen (wet)	xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
		12		G		xxxxxxxxxxxxxxx		|	
	SB220G		100	G	As above, heavy naphthalene like odor and sheen	xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
		14		G		xxxxxxxxxxxxxxx		|	
				G	As above	xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
				G		xxxxxxxxxxxxxxx		|	
		16		G	PEAT and CLAY, trace very fine sand and silt, shells	= = = = = = = = =			
					TD = 16 ft.				
		18							
		20							

STANDARD PENETRATION TEST
SPLIT SPOON
A = AUGER CUTTINGS
G = GEOPROBE
WOR = Weight of Rod
WOH = Weight of Hammer
RB = Roller Bit

COMMENTS

: : : : : : sand
- - - - - silt
= = = = clay
AAAA asphalt
CCCC concrete
xxxxx fill

APPENDIX B

GROUNDWATER SAMPLING RECORDS

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: **MW-10** WEATHER: Sunny, 55 degrees F.
DATE: 9/19/96 TIME: 9:30 am

SAMPLERS: Chris Torell of Parsons ES
LeVern Burm of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-10
Screen/Sample Depth: 4 - 19' below ground surface
Sampling Method: Peristaltic pump with dedicated tygon tubing

GROUNDWATER PURGING

Initial Static Water Level: 4.6 feet

One Well Volume:					3 Volumes
2-Inch Casing:	15.3	Feet of Water x 0.16 Gallons/Foot =	2.4	Gallons	7.3
3-Inch Casing:		Feet of Water x 0.36 Gallons/Foot =		Gallons	
4-Inch Casing:		Feet of Water x 0.65 Gallons/Foot =		Gallons	

Volume of groundwater purged: 10 Gallons
Purging Device: Peristaltic pump
Purge Water Disposition (e.g., contained): Contained in 55-gallon drums

SAMPLE DESCRIPTION

Color: Light brown, cloudy
Odor: Slight naphthalene odor
Other:
Sample Analyzed for: BTEX, SVOC, Pb, As, Hg, Zn, Cn
QC Samples at this Location:
QC Samples Analyzed for:

FIELD MEASUREMENTS

Temperature (C/F): 65
pH: 7.4
Conductivity (µohms/cm): 1360
Turbidity (NTU):
Dissolved Oxygen:
Eh (Redox Potential):

SAMPLE CUSTODY

Chain of Custody Number:
Shipped Via: NYTEST Courier
Laboratory: NYTEST Environmental
Airbill Number: Delivered by courier

COMMENTS

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: **MW-11** WEATHER: Sunny, 55 degrees F.
DATE: 9/19/96 TIME: 10:15 am

SAMPLERS: Chris Torell of Parsons ES
LeVern Burm of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-11
Screen/Sample Depth: 5 - 15' below ground surface
Sampling Method: Peristaltic pump with dedicated tygon tubing

GROUNDWATER PURGING

Initial Static Water Level: 7.38 feet

One Well Volume:					3 Volumes
2-Inch Casing:	8.62	Feet of Water x 0.16 Gallons/Foot =	1.4	Gallons	4.1
3-Inch Casing:		Feet of Water x 0.36 Gallons/Foot =		Gallons	
4-Inch Casing:		Feet of Water x 0.65 Gallons/Foot =		Gallons	

Volume of groundwater purged: 5 Gallons
Purging Device: Peristaltic pump
Purge Water Disposition (e.g., contained): Contained in 55-gallon drums

SAMPLE DESCRIPTION

Color: Clear
Odor: Slight naphthalene odor
Other:
Sample Analyzed for: BTEX, SVOC, Pb, As, Hg, Zn, Cn
QC Samples at this Location:
QC Samples Analyzed for:

FIELD MEASUREMENTS

Temperature (C/F): 68.7
pH: 7.0
Conductivity (µohms/cm): 1440
Turbidity (NTU):
Dissolved Oxygen:
Eh (Redox Potential):

SAMPLE CUSTODY

Chain of Custody Number:
Shipped Via: NYTEST Courier
Laboratory: NYTEST Environmental
Airbill Number: Delivered by courier

COMMENTS

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: MW-12
DATE: 9/19/96
WEATHER: Sunny, 55 degrees F.
TIME: 8:00 am

SAMPLERS: Chris Torell of Parsons ES
LeVern Burm of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-12
Screen/Sample Depth: 4 - 19' below ground surface
Sampling Method: Peristaltic pump with dedicated tygon tubing

GROUNDWATER PURGING

Initial Static Water Level: 3.8 feet
One Well Volume:

					3 Volumes
2-Inch Casing:	15	Feet of Water x 0.16 Gallons/Foot =	2.4	Gallons	7.2
3-Inch Casing:		Feet of Water x 0.36 Gallons/Foot =		Gallons	
4-Inch Casing:		Feet of Water x 0.65 Gallons/Foot =		Gallons	

Volume of groundwater purged: 7.2 Gallons
Purging Device: Peristaltic pump
Purge Water Disposition (e.g., contained): Contained in 55-gallon drums

SAMPLE DESCRIPTION

Color: Clear
Odor: None
Other:
Sample Analyzed for: BTEX, SVOC, Pb, As, Hg, Zn, Cn
QC Samples at this Location: MS, MSD, DUP (MW101, 8:30 am)
QC Samples Analyzed for: BTEX, SVOC, Pb, As, Hg, Zn, Cn

FIELD MEASUREMENTS

Temperature (C/F): 68.5
pH: 7.3
Conductivity (µohms/cm): 904
Turbidity (NTU):
Dissolved Oxygen:
Eh (Redox Potential):

SAMPLE CUSTODY

Chain of Custody Number:
Shipped Via: NYTEST Courier
Laboratory: NYTEST Environmental
Airbill Number: Delivered by courier

COMMENTS

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: MW-7 WEATHER: Sunny, 55 degrees F.
DATE: 9/19/96 TIME: 11:30 am

SAMPLERS: Chris Torell of Parsons ES
LeVern Burm of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-7
Screen/Sample Depth: 4 - 19' below ground surface
Sampling Method: Peristaltic pump with dedicated tygon tubing

GROUNDWATER PURGING

Initial Static Water Level: 4.97 feet
One Well Volume: 3 Volumes

2-Inch Casing:	10	Feet of Water x 0.16 Gallons/Foot =	1.6	Gallons	4.8
3-Inch Casing:		Feet of Water x 0.36 Gallons/Foot =		Gallons	
4-Inch Casing:		Feet of Water x 0.65 Gallons/Foot =		Gallons	

Volume of groundwater purged: 5 Gallons
Purging Device: Peristaltic pump
Purge Water Disposition (e.g., contained): Contained in 55-gallon drums

SAMPLE DESCRIPTION

Color: Light gray-brown
Odor: Slight naphthalene odor
Other:
Sample Analyzed for: BTEX, SVOC, Pb, As, Hg, Zn, Cn
QC Samples at this Location:
QC Samples Analyzed for:

FIELD MEASUREMENTS

Temperature (C/F): 73.4
pH: 6.3
Conductivity (µohms/cm): 2910
Turbidity (NTU):
Dissolved Oxygen:
Eh (Redox Potential):

SAMPLE CUSTODY

Chain of Custody Number:
Shipped Via: NYTEST Courier
Laboratory: NYTEST Environmental
Airbill Number: Delivered by courier

COMMENTS

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: MW-13 WEATHER: Sunny, 55 degrees F.
DATE: 9/19/96 and 9/20/96 TIME: 13:45 and 9:10

SAMPLERS: Chris Torell of Parsons ES
LeVern Burm of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-13
Screen/Sample Depth: 4.5 - 12.5' below ground surface
Sampling Method: Disposable bailer

GROUNDWATER PURGING

Initial Static Water Level: 4.6 feet
One Well Volume: 3 Volumes

2-Inch Casing:	0	Feet of Water x 0.16 Gallons/Foot =	0	Gallons	0
3-Inch Casing:		Feet of Water x 0.36 Gallons/Foot =		Gallons	
4-Inch Casing:		Feet of Water x 0.65 Gallons/Foot =		Gallons	

Volume of groundwater purged: 0 Gallons
Purging Device:
Purge Water Disposition (e.g., contained):

SAMPLE DESCRIPTION

Color: Dark gray
Odor: Naphthalene odor
Other: trace DNAPL and LNAPL
Sample Analyzed for: GC/FID Fingerprint
QC Samples at this Location:
QC Samples Analyzed for:

FIELD MEASUREMENTS

Temperature (C/F): Dissolved Oxygen:
pH: Eh (Redox Potential):
Conductivity (µohms/cm):
Turbidity (NTU):

SAMPLE CUSTODY

Chain of Custody Number: Laboratory: META Environmental
Shipped Via: Fedex Airbill Number: 2287734120

COMMENTS Volumes from 9/19/96 and 9/20/96 combined

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: MW-14 WEATHER: Sunny, 55 degrees F.
DATE: 9/19/96 and 9/20/96 TIME: 14:00 and 9:15

SAMPLERS: Chris Torell of Parsons ES
LeVern Burn of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-14
Screen/Sample Depth: 4 - 19' below ground surface
Sampling Method: Disposable bailer

GROUNDWATER PURGING

Initial Static Water Level: _____
One Well Volume: 3 Volumes

2-Inch Casing:	____	Feet of Water x 0.16 Gallons/Foot =	____	Gallons	____
3-Inch Casing:	____	Feet of Water x 0.36 Gallons/Foot =	____	Gallons	____
4-Inch Casing:	____	Feet of Water x 0.65 Gallons/Foot =	____	Gallons	____

Volume of groundwater purged: _____ Gallons
Purging Device: _____
Purge Water Disposition (e.g., contained): _____

SAMPLE DESCRIPTION

Color: Black
Odor: Oily odor
Other: Trace DNAPL
Sample Analyzed for: GC/FID fingerprint
QC Samples at this Location: _____
QC Samples Analyzed for: _____

FIELD MEASUREMENTS

Temperature (C/F): _____ Dissolved Oxygen: _____
pH: _____ Eh (Redox Potential): _____
Conductivity (µohms/cm): _____
Turbidity (NTU): _____

SAMPLE CUSTODY

Chain of Custody Number: _____ Laboratory: META Environmental
Shipped Via: FEDEX Airbill Number: 2287734120

COMMENTS: Volumes from 9/19/96 and 9/20/96 were combined

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: **MW-03** WEATHER: Sunny, 70 degrees F.
DATE: 9/20/96 TIME: 9:30

SAMPLERS: Chris Torell of Parsons ES
LeVern Burm of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-03
Screen/Sample Depth: 4.5 - 19.5' below ground surface
Sampling Method: Disposable bailer

GROUNDWATER PURGING

Initial Static Water Level: _____
One Well Volume: 3 Volumes

2-Inch Casing:	____	Feet of Water x 0.16 Gallons/Foot =	____	Gallons	____
3-Inch Casing:	____	Feet of Water x 0.36 Gallons/Foot =	____	Gallons	____
4-Inch Casing:	____	Feet of Water x 0.65 Gallons/Foot =	____	Gallons	____

Volume of groundwater purged: _____ Gallons
Purging Device: _____
Purge Water Disposition (e.g., contained): _____

SAMPLE DESCRIPTION

Color: Black
Odor: Heavy diesel odor
Other: 1/8" LNAPL and trace DNAPL
Sample Analyzed for: GC/FID fingerprint
QC Samples at this Location: _____
QC Samples Analyzed for: _____

FIELD MEASUREMENTS

Temperature (C/F): _____ Dissolved Oxygen: _____
pH: _____ Eh (Redox Potential): _____
Conductivity (µohms/cm): _____
Turbidity (NTU): _____

SAMPLE CUSTODY

Chain of Custody Number: _____ Laboratory: META Environmental
Shipped Via: FEDEX Airbill Number: 2287734120

COMMENTS _____

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: **MW-15** WEATHER: Cloudy, 40 degrees F
DATE: 2/5/97 TIME: 12:45

SAMPLERS: Chris Torell of Parsons ES
Joanne Howard of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-15
Screen/Sample Depth: 4 - 19' below ground surface
Sampling Method: Peristaltic pump with dedicated tygon tubing

GROUNDWATER PURGING

Initial Static Water Level: 7.76 feet

One Well Volume:					3 Volumes
2-Inch Casing:	10.44	Feet of Water x 0.16 Gallons/Foot =	1.6	Gallons	4.8
3-Inch Casing:		Feet of Water x 0.36 Gallons/Foot =		Gallons	
4-Inch Casing:		Feet of Water x 0.65 Gallons/Foot =		Gallons	

Volume of groundwater purged: 17 Gallons
Purging Device: Peristaltic pump
Purge Water Disposition (e.g., contained): Contained in 55-gallon drums

SAMPLE DESCRIPTION

Color: Clear
Odor: Slight naphthalene odor
Other:
Sample Analyzed for: BTEX, SVOC, Pb, As, Hg, Zn, Cn
QC Samples at this Location:
QC Samples Analyzed for:

FIELD MEASUREMENTS

Temperature (C/F): 49.5
pH: 6.4
Conductivity (µohms/cm): 7850
Turbidity (NTU):
Dissolved Oxygen:
Eh (Redox Potential):

SAMPLE CUSTODY

Chain of Custody Number:
Shipped Via: NYTEST Courier
Laboratory: NYTEST Environmental
Airbill Number: Delivered by courier

COMMENTS

PARSONS ENGINEERING SCIENCE, INC.
GROUNDWATER SAMPLING RECORD

SITE NAME: Tarrytown Site
PROJECT NUMBER: 730057.04000

SAMPLE NUMBER: **MW-16** WEATHER: Cloudy, 40 degrees F
DATE: 2/5/97 TIME: 14:50

SAMPLERS: Chris Torell of Parsons ES
Joanne Howard of Parsons ES

DESCRIPTION OF SAMPLING POINT

Sample Location: Monitoring well MW-16
Screen/Sample Depth: 4 - 19' below ground surface
Sampling Method: Peristaltic pump with dedicated tygon tubing

GROUNDWATER PURGING

Initial Static Water Level: 8.08'

One Well Volume:					3 Volumes
2-Inch Casing:	9.74	Feet of Water x 0.16 Gallons/Foot =	1.5	Gallons	4.7
3-Inch Casing:		Feet of Water x 0.36 Gallons/Foot =		Gallons	
4-Inch Casing:		Feet of Water x 0.65 Gallons/Foot =		Gallons	

Volume of groundwater purged: 5 Gallons
Purging Device: Peristaltic pump
Purge Water Disposition (e.g., contained): Contained in 55-gallon drums

SAMPLE DESCRIPTION

Color: Clear
Odor: Slight naphthalene odor and sheen
Other:
Sample Analyzed for: BTEX, SVOC, Pb, As, Hg, Zn, Cn
QC Samples at this Location:
QC Samples Analyzed for:

FIELD MEASUREMENTS

Temperature (C/F): 52.4
pH: 5.6
Conductivity (µohms/cm): 9770
Turbidity (NTU):
Dissolved Oxygen:
Eh (Redox Potential):

SAMPLE CUSTODY

Chain of Custody Number:
Shipped Via: NYTEST Courier
Laboratory: NYTEST Environmental
Airbill Number: Delivered by courier

COMMENTS

APPENDIX C

RIVER BORING DRILLING RECORDS

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/WELL NO. RB-01

Contractor: North Star Drilling
Driller: Jeff Thew
...tor: Chris Torell
...g Type: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME: ConEd - Tarrytown
PROJECT NUMBER: 730057.04000

Sheet 1 of 1
Location Description:

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather: Sunny, 50
Date/Time Start: 4/21/97 17:15
Date/Time Finish: 4/21/97 18:20

Location Plan: See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
	RB0104		35	WOR	SILT and CLAY, grey brown, some very fine sand, amber product stringers throughout, naptha odor, very loose	silt / clay			Stringers of NAPL
		2							
			35	WOR	SILT and SAND, fine-coarse, grey black, little clay, black organics, sheen and heavy naptha odor	silt / sand		Sheen	
		4							
	RB0148		30	NBC	SAND and GRAVEL, fine-coarse, grey, little silt and clay, saturated with amber product, heavy naptha odor	sand / gravel			Zones of NAPL
		6							
			100	NBC	as above	sand / gravel			
					CLAY and SILT, red tan, trace sand, very fine, tight, moist, no sheen or odor	silt / clay			
		8							
3.2	RB01810		100	NBC	as above	silt / clay			
		10							
					TD=10.0				
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST

...IT SPOON
A = AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
NBC = No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS: :::::: sand o o o gravel
-·-·-·- silt = = = clay

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. RB-02

Contractor: North Star Drilling
Driller: Jeff Thew
ctor: Chris Torell
g Type: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description:

Weather Sunny, 40
Date/Time Start 4/22/97 8:45
Date/Time Finish 4/22/97 10:15

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0.8	RB0204		20	NBC	SILT and CLAY, some sand and gravel, black-gray very loose, trace sheen, naphthalene-like odor			Trace Sheen	
	|						|	
	|						|	
	|	2						
2.0	|		100	NBC	as above, no sheen				
	|								
	|								
	|	4							
21.3			100	NBC	as above, some peat, coherent, napthalene-like odor				
		6							
1.7			100	NBC	as above, some very fine sand and shells, gray, plastic, no sheen or odor				
		8							
1.1	RB02810		100	NBC	as above				
		10							
					TD = 10 feet				
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
SLIT SPOON
A = AUGER CUTTINGS
C = CORED

WOR = Weight of Rod
WOH = Weight of Hammer
NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS : : : : : sand o o o gravel
- - - - - - - silt = = = clay

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PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. RB-03

Contractor: North Star Drilling
Driller: Jeff Thew
:tor: Chris Torell
-- Type: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description:

Weather Sunny, 40
Date/Time Start 4/22/97 12:40
Date/Time Finish 4/22/97 14:50

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
no sam.			40	NBC	GRAVEL, 3/8", possible barge spillage	o o o o o o o o			
						o o o o o o o o			
						o o o o o o o o			
		2				o o o o o o o o			
			40	NBC	as above, heavy sheen, amber product stringers	o o o o o o o o		Heavy	Stringers
					throghout, napthalene-like odor	o o o o o o o o		Sheen	of NAPL
						o o o o o o o o		|	|
		4				o o o o o o o o		|	|
			10	NBC	as above, little silt and clay .	o o o o o o o o		|	|
						o o o o o o o o		|	|
						o o o o o o o o		|	|
		6				o o o o o o o o		|	|
1.1	RB03610		60	NBC	SILT and SAND, very fine, grey, some clay and	- - - - - - - - - - - - - -		Slight	
					sheils, sheen in places, possibly	: : : : : : : : : : : : : : :		Sheen	
					from above	- - - - - - - - - - - - - -		|	
		8				: : : : : : : : : : : : : : :		|	
1.1	RB03610		30	NBC	as above, no odor or sheen	- - - - - - - - - - - - - -			
						: : : : : : : : : : : : : : :			
						- - - - - - - - - - - - - -			
		10				: : : : : : : : : : : : : : :			
					TD= 10.0				
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
SPT SPOON
A = AUGER CUTTINGS
C = CORED

WOR = Weight of Rod
WOH = Weight of Hammer
NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS

: : : : : sand o o o gravel
- - - - - - silt = = = clay

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PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. RB-04

Contractor: North Star Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description:

Weather Sunny, 40
Date/Time Start 4/22/97 18:00
Date/Time Finish 4/22/97 18:45

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
1.3	RB0402		25	WOR	SILT and CLAY, gray-black, some very fine-coarse sand, trace shells, no odor or sheen, very loose				
		2							
0.4			100	WOR	as above				
		4							
no sam.			10	NBC	as above, gray-tan, some fine sand and gravel, till-like, tight				
		6							
2.8			50	NBC	as above				
		8							
2.4	RB04810		100	NBC	as above, gray-tan red, very tight				
		10							
					TD= 10.0				
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS : : : : : sand o o o gravel
- - - - - - silt = = = clay

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. RB-05

Contractor: North Star Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description:

Weather Cloudy, 40
Date/Time Start 4/23/97 10:15
Date/Time Finish 4/23/97 10:30

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
1.7	RB0504		10	NBC	SILT and CLAY, gray-black, some fine sand and shells, no sheen or odor, very loose				
		2							
1.7			100	NBC	as above, trace sheen in places, napthalene-like odor			Trace Sheen	
		4							
3.2			100	NBC	as above, trace sheen in places (much less than 2-4'), little fine gravel, no odor				
		6							
0.0	RB0568		100	NBC	as above, no odor or sheen				
					as above, red-tan-gray, little very fine sand and gravel, till-like, tight				
		8							
					TD= 8.0				
		10							
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

WOR = Weight of Rod
WOH = Weight of Hammer
NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS : : : : : sand o o o gravel
- - - - - silt = = = clay

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. RB-06

Contractor: North Star Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description:

Location Plan See Site Plan

Weather Cloudy, 40
Date/Time Start 4/23/97 13:05
Date/Time Finish 4/23/97 13:40

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
1.4	RB0602		50	WOR	SILT and CLAY, black-gray, trace very fine sand, no odor or sheen, very loose				
		2							
2.9			25	WOR	as above, little fine-coarse sand and shells, competent, trace sheen			Trace Sheen	
		4							
2.2			25	NBC	as above gray, some fine-coarse gravel, no sheen				
		6							
2.3	RB0668		100	NBC	as above, no odor or sheen				
		8			as above, trace fine-coarse sand and gravel, red tan gray, tight,				
					TD= 8.0				
		10							
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
S = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS : : : : : sand o o o gravel
- - - - - - silt = = = clay

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. RB-07

Contractor: North Star Drilling
Driller: Jeff Thew
:ctor: Chris Torell
..g Type: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description:

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather Cloudy, 40
Date/Time Start 4/23/97 16:20
Date/Time Finish 4/23/97 17:00

Location Plan See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0.2	RB0702		15	WOR	SILT and CLAY, black-gray, trace very fine sand, sheen in places, very loose			Sheen	
		2							
1.3			15	WOR	as above, trace sheen			Trace Sheen	
		4							
4.0			15	WOR	as above, trace-little sheen, black, some fine sand and gravel				
		6							
no sam.			10	NBC	as above, gray-red-tan, trace very fine sand, no odor or sheen				
		8							
2.9	RB07810		50	NBC	as above, tight,				
		10							
					TD= 10.0				
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
:LIT SPOON
A = AUGER CUTTINGS
C = CORED

WOR = Weight of Rod
WOH = Weight of Hammer
NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS

: : : : : sand o o o gravel
-·-·-·-· silt = = = clay

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PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. RB-08

Contractor: North Star Drilling
Driller: Jeff Thew
or: Chris Torell
ype: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description:

Location Plan See Site Plan

Weather Cloudy, 40
Date/Time Start 4/23/97 19:15
Date/Time Finish 4/23/97 19:40

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Ct	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
0.4	RB0804		10	WOR	SILT and CLAY, black-gray, trace sheen, very loose			Trace Sheen	
		2							
2.7			100	WOR	as above, some sand and gravel, fine, trace shells				
		4							
-			0	NBC	no recovery				
		6							
0.7	RB0868		100	NBC	as above, and sand and gravel, till-like, hard				
		8							
					TD= 8.0				
		10							
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
IT SPOON
A = AUGER CUTTINGS
C = CORED
WOR = Weight of Rod
WOH = Weight of Hammer
NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS : : : : : sand o o o gravel
silt = = = clay

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PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/ WELL NO. RB-09

Contractor: North Star Drilling
Driller: Jeff Thew
Inspector: Chris Torell
Rig Type: Barge-mounted Tripod
Method: Drive and Wash

PROJECT NAME ConEd - Tarrytown
PROJECT NUMBER 730057.04000

Sheet 1 of 1
Location Description:

Weather Rain, 40
Date/Time Start 4/24/97 9:20
Date/Time Finish 4/24/97 10:00

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
no sam.			10	WOR	SILT and CLAY, black, gray in places, sheen, trace shells, very loose			Trace Sheen	
		2							
1.1	RB0924		100	WOR	as above, little very fine sand and shells, no sheen				
		4							
3.2			50	NBC	as above, black, some very fine sand and gravel, heavy sheen and napthalene-like odor			Heavy Sheen	
		6							
-			0	NBC	no recovery				
		8							
0.6	RB09810		100	NBC	as above, red-tan-gray, tight, no odor or sheen				
		10			SAND, red, coarse,				
					TD= 10.0				
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST
SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

WOR = Weight of Rod
WOH = Weight of Hammer
NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS : : : : : sand o o o gravel
- - - - - - - silt = = = clay

Contractor:	North Star Drilling
Driller:	Jeff Thew
Inspector:	Chris Torell
Rig Type:	Barge-mounted Tripod
Method:	Drive and Wash

PARSONS ENGINEERING SCIENCE
DRILLING RECORD

BORING/WELL NO. RB-10

PROJECT NAME ConEd - Tarrytown

PROJECT NUMBER 730057.04000

Sheet 1 of 1

Location Description:

Location Plan See Site Plan

Weather Rain, 40

Date/Time Start 4/24/97 14:10

Date/Time Finish 4/24/97 15:30

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
no sam.			10	WOR	SILT and CLAY, gray-black, some 1/4" gravel possibly from barges), trace sheen, very loose	silt / clay		Trace Sheen	
		2							
no sam.			5	NBC	GRAVEL, 1/4", possibly from barges, trace sheen	o o o o o o o o		|	
		4							
no sam.			5	NBC	as above	o o o o o o o o		|	
		6							
1.1	RB1068		100	NBC	SAND and GRAVEL, black, trace sheen, little silt and clay, no odor or sheen	sand / gravel		|	
					SILT and SAND, very fine, shells, trace clay	silt / sand			
		8							
4.1	RB10810		100	NBC	CLAY, gray, some silt and shells, tight	= = = = = = = = =			
		10							
					TD= 10.0				
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST

SPLIT SPOON — WOR = Weight of Rod

A = AUGER CUTTINGS — WOH = Weight of Hammer

C = CORED — NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS : : : : : sand o o o gravel
-.-.-.-.- silt = = = clay

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Contractor: North Star Drilling	PARSONS ENGINEERING SCIENCE DRILLING RECORD	BORING/ WELL NO. RB-11	
Driller: Jeff Thew			
tor: Chris Torell	PROJECT NAME ConEd - Tarrytown	Sheet 1 of 1	
... Type: Barge-mounted Tripod	PROJECT NUMBER 730057.04000	Location Description:	
Method: Drive and Wash			

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Rain, 40

Date/Time Start: 4/24/97 16:05

Date/Time Finish: 4/24/97 16:40

Location Plan: See Site Plan

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
2.4	RB1106		25	WOR	SILT and CLAY, gray-black, trace very fine sand, shells, sheen			Sheen	
		2							
2.3			10	WOR	as above				
		4							
2.9			25	NBC	as above, little very fine sand and gravel, trace sheen				
		6							
no sam.			10	NBC	CLAY, red brown tan, little silt and very fine sand, tight				
		8							
				NBC	TD= 8.0				
		10							
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST

...LIT SPOON

A = AUGER CUTTINGS

C = CORED

WOR = Weight of Rod

WOH = Weight of Hammer

NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS

: : : : : sand o o o gravel

silt = = = clay

Contractor:	North Star Drilling
Driller:	Jeff Thew
[Inspec]tor:	Chris Torell
[Ri]g Type:	Barge-mounted Tripod
Method:	Drive and Wash

PARSONS ENGINEERING SCIENCE DRILLING RECORD

BORING/ WELL NO. RB-12

PROJECT NAME ConEd - Tarrytown

PROJECT NUMBER 730057.04000

Sheet 1 of 1

Location Description:

Weather Rain, 40

Date/Time Start 4/24/97 19:05

Date/Time Finish 4/24/97 19:20

Location Plan See Site Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

PID Reading	Sample I.D.	Sample Depth	Percent Recovery	Blow Cts	FIELD IDENTIFICATION OF MATERIAL	LITHOLOGIC SCHEMATIC	STAIN	SHEEN	FREE PRODUCT
		0							
	RB1204		10	WOR	SILT and CLAY, gray-black, trace fine gravel, heavy	- - - - - -		Heavy	Trace
	|				sheen, napthalene-like odor,	= = = = = =		Sheen	Gobs NAPL
	|				trace amber NAPL globs	- - - - - -		|	|
	|	2				= = = = = =		|	|
	|		50	WOR	as above, some 1/4" gravel, some NAPL globs	- - - - - -		|	Some
	|				(>5 globs)	= = = = = =		|	Gobs NAPL
	|					- - - - - -		|	|
	|	4				= = = = = =		|	|
1.2	RB1246		75	NBC	as above, gray-tan-red, trace fine sand and gravel	- - - - - -			
					no NAPL, odor or sheen	= = = = = =			
						- - - - - -			
		6				= = = = = =			
				NBC	TD= 6.0				
		8							
				NBC					
		10							
		12							
		14							
		16							
		18							
		20							

STANDARD PENETRATION TEST

[SP]LIT SPOON

A = AUGER CUTTINGS

C = CORED

WOR = Weight of Rod

WOH = Weight of Hammer

NBC= No Blow Counts, Hammer Stroke < 30", not per ASTM

COMMENTS

: : : : : sand o o o gravel

- - - - - silt = = = clay

4571 t/tarrytwn/boreiogs/sedborio.xls

APPENDIX D

DATA QUALITY COMPLIANCE SCREENING REPORTS

DATA COMPLIANCE SCREENING REPORT

Date: October 30, 1996

Subject: Con Edison Tarrytown Site
Soil and Groundwater Samples

A compliance screening has been completed on the data deliverables for the three sample delivery groups (SDGs) containing soil and groundwater samples collected from the Tarrytown site on September 9, 1996 through September 19, 1996. This screening ensures that all laboratory data deliverables are complete. In addition to this screening, an evaluation of sample analytical holding times, laboratory / field QC blanks, and field duplicate precision was also conducted as well as a determination of which analytical result is representative of the sample when more than one analysis was reported by the laboratory. The following is a summary of this review:

- All extraction and analytical holding times were compliant for all analyses.
- None of the laboratory / field QC blanks contained BTEX, semivolatile, or inorganic contamination with the exception of the semivolatile laboratory method blank SBLK74 which contained isophorone (43 μg/kg), and the field equipment blank RB01 which contained zinc (17.3 μg/L). However, project samples were not affected due to the contamination in these blanks.
- All field duplicate results were acceptable for all analyses and matrices with the exception of cyanide for the groundwater sample MW-12 (not detected) and its duplicate MW-101 (109 μg/L). These results were considered estimated with the positive result qualified "J" and the nondetected result qualified "UJ".
- Volatile groundwater sample MW-10 was diluted and reanalyzed since the original analysis of this sample yielded BTEX above the highest calibration standard. Similarly, volatile groundwater sample MW-11 was reanalyzed at a dilution due to target compounds (BEX) exceeding instrument calibration ranges. The diluted sample results in these cases were reported and qualified "D" for the affected samples.
- Volatile soil samples SB-06E and SB-08G were diluted and reanalyzed since BEX exceeded calibration ranges. Volatile soil sample MW-11F was diluted and reanalyzed since BTEX exceeded calibration ranges. Volatile soil sample SB-05F was diluted and reanalyzed since toluene exceeded calibration ranges. Volatile soil samples SB-09F and SB-10I were diluted and reanalyzed since ethylbenzene exceeded calibration ranges. The diluted sample results for these cases were reported and qualified "D" with the exception of toluene for sample MW-11F. The original sample result was considered estimated and qualified "J" since toluene was not detected in the diluted analysis of this sample.

- Volatile soil sample SB-06H was reanalyzed due to low internal standard responses. The reanalysis of this sample confirmed the presence of matrix interferences since the reanalyzed sample also experienced a low internal standard response. Results from the reanalysis were reported with the nondetected benzene result considered estimated and qualified "UJ". Similarly, volatile soil sample SB-04J experienced low internal standard responses. However, this sample was not reanalyzed since its designated MS/MSD analyses also experienced low internal standard responses confirming the presence of matrix interferences in SB-04J. As a result, the BTEX results for this sample were considered estimated with positive results qualified "J" and nondetected results qualified "UJ". Volatile soil sample SB-06E experienced low internal standard responses. However, this sample was diluted and reanalyzed (noted above) with BEX reported from the diluted analysis. Therefore, the toluene result reported for SB-06E from the original analysis was considered estimated and qualified "J". Volatile soil sample SB-07G was reanalyzed due to low internal standard response effecting benzene. The reanalysis also experienced low internal standard responses confirming the presence of matrix interferences in this sample. The original sample results for SB-07G were reported with benzene considered estimated and qualified "J" or "UJ". Volatile soil sample SB-12G was reanalyzed due to a noncompliant high surrogate recovery. However, since the reanalysis of this sample confirmed the presence of matrix interferences with noncompliant surrogate recoveries and internal standard responses, the original sample results for SB-12G were reported with positive results considered estimated and qualified "J".
- Semivolatile groundwater sample MW-7 was diluted and reanalyzed since naphthalene and acenaphthene exceeded calibration ranges. Semivolatile groundwater sample MW-10 was diluted and reanalyzed since naphthalene and 2-methylnaphthalene exceeded calibration ranges. Semivolatile groundwater sample MW-11 was diluted and reanalyzed since naphthalene, 2-methynaphthalene, and acenaphthene exceeded calibration ranges. The diluted sample results for these cases were reported and qualified "D" with the exception of acenaphthene for sample MW-11. The original sample result was considered estimated and qualified "J" since acenaphthene was not detected in the diluted analysis of this sample.
- Semivolatile soil samples SB-02E, MW-11F, and SB-05F were diluted and reanalyzed since naphthalene exceeded calibration ranges. Semivolatile soil sample SB-11F was diluted and reanalyzed since naphthalene, phenanthrene, and pyrene exceeded calibration ranges. Semivolatile soil sample SB-07G was diluted and reanalyzed since naphthalene, 2-methylnaphthalene, acenaphthene, fluorene, phenanthrene, fluoranthene, pyrene, and chrysene exceeded calibration ranges. Semivolatile soil sample SB-08G was diluted and reanalyzed since naphthalene, 2-methylnaphthalene, acenaphthene, fluorene, phenanthrene, fluoranthene, pyrene, benzo(a)anthracene and chrysene exceeded calibration ranges. The diluted sample results for these cases were reported and qualified "D".

- The soil matrix spike recovery for cyanide (17%) was noncompliant effecting samples MW-11F, MW-11I, SB-05F, SB-05J, SB-06E, SB-06H, MW-12B, MW-12J, SB-07G, SB-07M, and SB-08G. The soil matrix spike recoveries for lead (73.7%) and zinc (181.2%) were noncompliant effecting samples MW-12B, MW-12J, SB-07G, SB-07M, and SB-08G. The soil matrix spike analysis associated with samples SB-11F, SB-11H, SB-12B, SB-12G, SB-13D, SB-13I, SB-01E, SB-01H, SB-09J, SB-09F, SB-10I, and SB-10E had noncompliant recoveries for lead (131.4%), zinc (231.9%), and cyanide (0%). Sample results were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for those analytes where the spike recovery was less than 75%. Sample results were considered estimated with positive results qualified "J" for those analytes where the spike recovery was greater than 75%. However, the nondetected cyanide results for those samples where cyanide experienced a 0% recovery in the associated matrix spike analysis, were considered unusable and qualified "R".

DATA COMPLIANCE SCREENING REPORT

Date: February 27, 1997

Subject: Con Edison Tarrytown Site
Soil Samples

A compliance screening has been completed on the data deliverables for the two sample delivery groups (SDGs) containing soil samples collected from the Tarrytown site on January 20,1997 through January 24, 1997. This screening ensures that all laboratory data deliverables are complete. In addition to this screening, an evaluation of sample analytical holding times, laboratory / field QC blanks, and field duplicate precision was also conducted as well as a determination of which analytical result is representative of the sample when more than one analysis was reported by the laboratory. The following is a summary of this review:

- All extraction and analytical holding times were compliant for all analyses.
- None of the laboratory / field QC blanks contained BTEX, semivolatile, or inorganic contamination with the exception of the semivolatile laboratory method blank SBLK22 which contained bis(2-ethylhexyl)phthalate at a concentration of 42 μg/kg. The only sample affected by the contamination found in this method blank was the reextracted sample SB14J RE in which the bis(2-ethylhexyl)phthalate result was considered to be a laboratory artifact and qualified as not detected "U" on the table.
- All field duplicate results were acceptable for all analyses.
- Volatile soil sample SB16G was diluted and reanalyzed since ethylbenzene and total xylenes exceeded calibration ranges. The diluted sample results for this case was reported and qualified "D".
- Volatile soil sample SB23B was reanalyzed due to low internal standard responses and noncompliant surrogate recoveries. The reanalysis of this sample confirmed the presence of matrix interferences since the reanalyzed sample also experienced low internal standard responses. Therefore, the original sample results for SB23B were reported.
- Semivolatile soil samples SB29H and SB24E were diluted and reanalyzed since phenanthrene exceeded calibration ranges. Semivolatile soil sample SB217D was diluted and reanalyzed since fluoranthene, phenanthrene, and pyrene exceeded calibration ranges. Semivolatile soil sample SB19G was diluted and reanalyzed since pyrene exceeded calibration ranges. The diluted sample results for these cases were reported and qualified "D".

- The semivolatile soil samples SB17D, SB17H, SB17H DUP, SB18B, SB18G, SB19G, and SB19J were reanalyzed due to low internal standard responses. The reanalysis of these samples confirmed the presence of sample matrix interferences since the reanalyzed samples also experienced low internal standard responses. Therefore, results from the original analysis of these samples were reported. Semivolatile soil sample SB14J was reextracted and reanalyzed due to poor surrogate recoveries. Since the surrogate recoveries were compliant during the reanalysis of this sample, the sample results from the reanalysis of sample SB14J were reported. In addition, semivolatile soil samples SB217D, SB24E, and SB23B were reanalyzed due to low internal standard responses. In the case of sample SB23B, this sample was diluted and reanalyzed. Since the internal standard responses were improved during the reanalysis of these samples, those compounds associated with these internal standards were reported from the reanalysis.
- The soil matrix spike recovery for cyanide (58%) was noncompliant effecting all samples in SDG Tarry5 except SB20K and RB02. The soil matrix spike recovery for cyanide (0%) was also noncompliant effecting samples SB30I, SB29H, and SB30K. The soil matrix spike recovery for zinc (56.6%) was noncompliant effecting all samples in SDG Tarry4. Sample results were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for those analytes where the spike recovery was less than 75%. However, the nondetected cyanide results for those samples where cyanide experienced a 0% recovery in the associated matrix spike analysis, were considered unusable and qualified "R".
- The soil laboratory duplicate precision for zinc (54.1%RPD) effecting the samples in SDG Tarry4 and for lead (30%RPD) effecting the samples in SDG Tarry5 were noncompliant. Therefore, sample results were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for these analytes in the effected samples.

DATA COMPLIANCE SCREENING REPORT

From: March 4,1997

Subject: Con Edison Tarrytown Site
Groundwater Samples

A compliance screening has been completed on the data deliverables for the one sample delivery group (SDG) containing groundwater samples collected from the Tarrytown site on February 5, 1997. This screening ensures that all laboratory data deliverables are complete. In addition to this screening, an evaluation of sample analytical holding times, laboratory / field QC blanks, and field duplicate precision was also conducted as well as a determination of which analytical result is representative of the sample when more than one analysis was reported by the laboratory. The following is a summary of this review:

- All extraction and analytical holding times were compliant for all analyses.
- None of the laboratory / field QC blanks contained BTEX, semivolatile, or inorganic contamination.
- All field duplicate results were acceptable for all analyses with the exception of the metal analysis for lead, mercury, and zinc. Relative percent differences between the sample and field duplicate (MW15 and MW115, respectively) for these analytes were poor. Therefore, results for these analytes in this duplicate pair were considered estimated with positive results qualified "J" and nondetected results qualified "UJ". Matrix interferences from sampling or analysis may be resulting in these inhomogeneities.

DATA COMPLIANCE SCREENING REPORT

Date: May 27, 1997

Subject: Con Edison Tarrytown Site
Soil Samples

A compliance screening has been completed on the data deliverables for the two sample delivery groups (SDGs) containing soil samples (TARRY 6 and TARRY 7) collected from the Tarrytown site on April 21, 1997 through April 24, 1997. This screening ensures that all laboratory data deliverables are complete. In addition to this screening, an evaluation of sample analytical holding times and laboratory QC blanks was also conducted as well as a determination of which analytical result is representative of the sample when more than one analysis was reported by the laboratory. The following is a summary of this review:

- All extraction and analytical holding times were compliant for all analyses with the exception of the reextracted semivolatile sample RBO702RE which exceeded the seven day extraction holding time by two days. Therefore, all results for this sample were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" on the table of analytical results.
- None of the laboratory field QC blanks contained BTEX, semivolatile, or inorganic contamination.
- BTEX sample RBO402 was reanalyzed due to one surrogate recovery exceeding the QC limit. The reanalysis of this sample (RBO402RE) produced similar surrogate recovery results confirming the presence of matrix interferences for this sample. Therefore, the original BTEX sample results should be used in evaluating RBO402.
- Semivolatile sample RBO104 was diluted and reanalyzed since naphthalene and phenanthrene exceeded instrument calibration ranges. Semivolatile sample RBO148 was diluted and reanalyzed since naphthalene, phenanthrene, 2-methylnaphthalene, acenaphthene, and fluorene exceeded instrument calibration ranges. Semivolatile sample RB1246 was diluted and reanalyzed since naphthalene exceeded instrument calibration ranges. Semivolatile sample RB1106 was diluted and reanalyzed since acenaphthene, phenanthrene, and fluoranthene exceeded instrument calibration ranges. The diluted sample results for these cases were reported and qualified "D" for these samples. It was also noted that semivolatile samples RB1246 and RB1106 were diluted and reanalyzed due to noncompliant internal standard responses (i.e., low recoveries). Since the internal standard responses were improved and compliant for the diluted samples, those compounds associated with the

noncompliant internal standards were reported from the diluted samples for RB1246 and RB1106.

- Semivolatile sample RBO702 was reextracted and reanalyzed due to surrogate recoveries exceeding the QC limits (three acid surrogates and one base-neutral surrogate). The reextracted sample (RBO702RE) produced compliant surrogate recoveries, but a noncompliant internal standard response. Since matrix effects may be present and the reextracted sample exceeded extraction holding times, the original sample results should be used to evaluate RBO702. Qualification of the sample data was not warranted due to noncompliant surrogate recoveries since acid fraction sample results were not detected and only one base-neutral surrogate was noncompliant.
- Semivolatile sample RBO204 was reanalyzed due to a low internal standard response. Since the reanalysis of this sample produced similar internal standard results confirming the presence of matrix interferences, the original sample results should be used to evaluate RBO204. Sample results for those compounds associated with the noncompliant internal standard were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" on the table of analytical results.
- The matrix spike recovery for arsenic (74.2%) effecting the samples with the lab ID beginning with "31119" and the matrix spike recovery for cyanide (68%) effecting the samples in SDG TARRY 7 were below the 75-125% QC acceptance limit. Therefore, arsenic and cyanide results in the effected samples were considered estimated with positive results qualified "J" and nondetected results qualified "UJ". The matrix spike recovery for TOC (127%) effecting the samples with the lab ID beginning with "31131" exceeded the QC acceptance limit. Therefore, positive TOC sample results were considered estimated and qualified "J" for these samples.
- The serial dilution results were noncompliant for the percent differences (%D) for lead (10.8%) and zinc (11.9%) effecting the samples with the lab ID beginning with "31131" and for zinc (11.6%) effecting the samples in SDG TARRY 7. Since these results exceeded the 10%D QC limit, lead and zinc were considered estimated for the effected samples with positive results qualified "J" and nondetected results qualified "UJ".
- It was noted that samples RBO602, RBO702, RBO804, RBO1106, BA0101, and BA0201 contained less than 50% solids (38.2%, 41.2%, 47.3%, 45%, 35.6%, and 34.6%, respectively). Therefore, since these soil samples contained mostly water, then all sample results for all analyses (BTEX, semivolatile, metals, cyanide, and TOC) were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

APPENDIX E

LABORATORY ANALYTICAL RESULTS

SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB01H	SB02E	SB03E	SB03J	SB103J
		DEPTH:	12-14'	08-10'	08-10'	18-20'	18-20'
		LAB ID:	2909610	2903101	2903102	2903103	2903104
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY2	TARRY1	TARRY1	TARRY1	TARRY1
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/16/96	9/10/96	9/10/96	9/10/96	9/10/96
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		0.013 U	16	6.2	0.013 U	0.002 J
108-88-3	Toluene		0.013 U	27	4.7	0.013 U	0.002 J
100-41-4	Ethylbenzene		0.013 U	33	11	0.013 U	0.014 U
1330-20-7	Xylene (total)		0.013 U	51	16	0.013 U	0.01 J
	SEMIVOLATILES						
108-95-2	Phenol		0.42 U	56 U	43 U	0.43 U	0.46 U
111-44-4	bis(2-Chloroethyl)Ether		0.42 U	56 U	43 U	0.43 U	0.46 U
95-57-8	2-Chlorophenol		0.42 U	56 U	43 U	0.43 U	0.46 U
541-73-1	1,3-Dichlorobenzene		0.42 U	56 U	43 U	0.43 U	0.46 U
106-46-7	1,4-Dichlorobenzene		0.42 U	56 U	43 U	0.43 U	0.46 U
95-50-1	1,2-Dichlorobenzene		0.42 U	56 U	43 U	0.43 U	0.46 U
95-48-7	2-Methylphenol		0.42 U	56 U	43 U	0.43 U	0.46 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.42 U	56 U	43 U	0.43 U	0.46 U
106-44-5	4-Methylphenol		0.42 U	56 U	43 U	0.43 U	0.46 U
621-64-7	N-Nitroso-di-n-propylamine		0.42 U	56 U	43 U	0.43 U	0.46 U
67-72-1	Hexachloroethane		0.42 U	56 U	43 U	0.43 U	0.46 U
98-95-3	Nitrobenzene		0.42 U	56 U	43 U	0.43 U	0.46 U
78-59-1	Isophorone		0.42 U	56 U	43 U	0.43 U	0.46 U
88-75-5	2-Nitrophenol		0.42 U	56 U	43 U	0.43 U	0.46 U
105-67-9	2,4-Dimethylphenol		0.42 U	56 U	43 U	0.43 U	0.46 U
120-83-2	2,4-Dichlorophenol		0.42 U	56 U	43 U	0.43 U	0.46 U
120-82-1	1,2,4-Trichlorobenzene		0.42 U	56 U	43 U	0.43 U	0.46 U
91-20-3	Naphthalene		0.42 U	890 D	330	0.23 J	0.08 J
106-47-8	4-Chloroaniline		0.42 U	56 U	43 U	0.43 U	0.46 U
87-68-3	Hexachlorobutadiene		0.42 U	56 U	43 U	0.43 U	0.46 U
111-91-1	bis(2-Chloroethoxy)methane		0.42 U	56 U	43 U	0.43 U	0.46 U
59-50-7	4-Chloro-3-Methylphenol		0.42 U	56 U	43 U	0.43 U	0.46 U
91-57-6	2-Methylnaphthalene		0.42 U	280	280	0.08 J	0.46 U
77-47-4	Hexachlorocyclopentadiene		0.42 U	56 U	43 U	0.43 U	0.46 U
88-06-2	2,4,6-Trichlorophenol		0.42 U	56 U	43 U	0.43 U	0.46 U
95-95-4	2,4,5-Trichlorophenol		2.1 U	280 U	210 U	2.2 U	2.3 U
91-58-7	2-Chloronaphthalene		0.42 U	56 U	43 U	0.43 U	0.46 U
88-74-4	2-Nitroaniline		2.1 U	280 U	210 U	2.2 U	2.3 U
131-11-3	Dimethylphthalate		0.42 U	56 U	43 U	0.43 U	0.46 U
208-96-8	Acenaphthylene		0.42 U	56 U	16 J	0.43 U	0.46 U
606-20-2	2,6-Dinitrotoluene		0.42 U	56 U	43 U	0.43 U	0.46 U
99-09-2	3-Nitroaniline		2.1 U	280 U	210 U	2.2 U	2.3 U
83-32-9	Acenaphthene		0.42 U	6 J	88	0.43 U	0.46 U
51-28-5	2,4-Dinitrophenol		2.1 U	280 U	210 U	2.2 U	2.3 U
100-02-7	4-Nitrophenol		2.1 U	280 U	210 U	2.2 U	2.3 U
132-64-9	Dibenzofuran		0.42 U	56 U	15 J	0.43 U	0.46 U
121-14-2	2,4-Dinitrotoluene		0.42 U	56 U	43 U	0.43 U	0.46 U
84-66-2	Diethylphthalate		0.42 U	56 U	43 U	0.43 U	0.46 U
7005-72-3	4-Chlorophenyl-phenylether		0.42 U	56 U	43 U	0.43 U	0.46 U
86-73-7	Fluorene		0.42 U	7.1 J	90	0.43 U	0.46 U
100-01-6	4-Nitroaniline		2.1 U	280 U	210 U	2.2 U	2.3 U
534-52-1	4,6-Dinitro-2-methylphenol		2.1 U	280 U	210 U	2.2 U	2.3 U
86-30-6	N-Nitrosodiphenylamine		0.42 U	56 U	43 U	0.43 U	0.46 U
101-55-3	4-Bromophenyl-phenylether		0.42 U	56 U	43 U	0.43 U	0.46 U
118-74-1	Hexachlorobenzene		0.42 U	56 U	43 U	0.43 U	0.46 U
87-86-5	Pentachlorophenol		2.1 U	280 U	210 U	2.2 U	2.3 U
85-01-8	Phenanthrene		0.42 U	17 J	190	0.077 J	0.46 U
120-12-7	Anthracene		0.42 U	56 U	52	0.43 U	0.46 U
84-74-2	Di-n-butylphthalate		0.42 U	56 U	43 U	0.43 U	0.46 U
206-44-0	Fluoranthene		0.42 U	6.5 J	58	0.43 U	0.46 U
129-00-0	Pyrene		0.42 U	12 J	110	0.055 J	0.46 U
85-68-7	Butylbenzylphthalate		0.42 U	56 U	43 U	0.43 U	0.46 U
91-94-1	3,3'-Dichlorobenzidine		0.84 U	110 U	85 U	0.86 U	0.91 U
56-55-3	Benzo(a)anthracene		0.42 U	56 U	32 J	0.43 U	0.46 U
218-01-9	Chrysene		0.42 U	56 U	34 J	0.43 U	0.46 U
117-81-7	bis(2-Ethylhexyl)phthalate		0.42 U	56 U	43 U	0.43 U	0.46 U
117-84-0	Di-n-octylphthalate		0.42 U	56 U	43 U	0.43 U	0.46 U
205-99-2	Benzo(b)fluoranthene		0.42 U	56 U	8.6 J	0.43 U	0.46 U
207-08-9	Benzo(k)fluoranthene		0.42 U	56 U	14 J	0.43 U	0.46 U
50-32-8	Benzo(a)pyrene		0.42 U	56 U	17 J	0.43 U	0.46 U
193-39-5	Indeno(1,2,3-cd)pyrene		0.42 U	56 U	7.4 J	0.43 U	0.46 U
53-70-3	Dibenz(a,h)anthracene		0.42 U	56 U	43 U	0.43 U	0.46 U
191-24-2	Benzo(g,h,i)perylene		0.42 U	56 U	8.8 J	0.43 U	0.46 U
100-51-6	Benzyl Alcohol		0.42 U	56 U	43 U	0.43 U	0.46 U
65-85-0	Benzoic Acid		2.1 U	280 U	210 U	2.2 U	2.3 U
	INORGANICS						
7440-38-2	Arsenic		4.8	3.8	6.9	3.7	2.1
7439-92-1	Lead		3.9 J	870	34.9	9.5	11.7
7439-97-6	Mercury		0.13 U	0.53	0.13 U	0.1 U	0.11 U
7440-66-6	Zinc		40.2 J	833	69.4	58.3	69.6
57-12-5	Cyanide		R	0.7	3.2	0.51 U	0.53 U

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	SB04E	SB04J	SB05F	SB05J	SB06E
		DEPTH:	08-10'	18-20'	08-10'	16-20'	08-10'
		LAB ID:	2903105	2903106	2905103	2905104	2905105
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY1	TARRY1	TARRY1	TARRY1	TARRY1
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/10/96	9/10/96	9/12/96	9/12/96	9/12/96
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		0.013 U	0.013 U	12	0.007 J	1.6 JD
108-88-3	Toluene		0.013 U	0.013 U	62 D	0.004 J	0.19 J
100-41-4	Ethylbenzene		0.013 U	0.013 U	9.2	0.007 J	38 D
1330-20-7	Xylene (total)		0.013 U	0.013 U	62	0.012 J	45 D
	SEMIVOLATILES						
108-95-2	Phenol		0.46 U	0.43 U	18 U	0.45 U	38 U
111-44-4	bis(2-Chloroethyl)Ether		0.46 U	0.43 U	18 U	0.45 U	38 U
95-57-8	2-Chlorophenol		0.46 U	0.43 U	18 U	0.45 U	38 U
541-73-1	1,3-Dichlorobenzene		0.46 U	0.43 U	18 U	0.45 U	38 U
106-46-7	1,4-Dichlorobenzene		0.46 U	0.43 U	18 U	0.45 U	38 U
95-50-1	1,2-Dichlorobenzene		0.46 U	0.43 U	18 U	0.45 U	38 U
95-48-7	2-Methylphenol		0.46 U	0.43 U	18 U	0.45 U	38 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.46 U	0.43 U	18 U	0.45 U	38 U
106-44-5	4-Methylphenol		0.46 U	0.43 U	18 U	0.45 U	38 U
621-64-7	N-Nitroso-di-n-propylamine		0.46 U	0.43 U	18 U	0.45 U	38 U
67-72-1	Hexachloroethane		0.46 U	0.43 U	18 U	0.45 U	38 U
98-95-3	Nitrobenzene		0.46 U	0.43 U	18 U	0.45 U	38 U
78-59-1	Isophorone		0.46 U	0.43 U	18 U	0.45 U	38 U
88-75-5	2-Nitrophenol		0.46 U	0.43 U	18 U	0.45 U	38 U
105-67-9	2,4-Dimethylphenol		0.46 U	0.43 U	18 U	0.45 U	38 U
120-83-2	2,4-Dichlorophenol		0.46 U	0.43 U	18 U	0.45 U	38 U
120-82-1	1,2,4-Trichlorobenzene		0.46 U	0.43 U	18 U	0.45 U	38 U
91-20-3	Naphthalene		0.46 U	0.43 U	270 D	0.44 J	300
106-47-8	4-Chloroaniline		0.46 U	0.43 U	18 U	0.45 U	38 U
87-68-3	Hexachlorobutadiene		0.46 U	0.43 U	18 U	0.45 U	38 U
111-91-1	bis(2-Chloroethoxy)methane		0.46 U	0.43 U	18 U	0.45 U	38 U
59-50-7	4-Chloro-3-Methylphenol		0.46 U	0.43 U	18 U	0.45 U	38 U
91-57-6	2-Methylnaphthalene		0.46 U	0.43 U	130	0.22 J	200
77-47-4	Hexachlorocyclopentadiene		0.46 U	0.43 U	18 U	0.45 U	38 U
88-06-2	2,4,6-Trichlorophenol		0.46 U	0.43 U	18 U	0.45 U	38 U
95-95-4	2,4,5-Trichlorophenol		2.3 U	2.1 U	92 U	2.2 U	190 U
91-58-7	2-Chloronaphthalene		0.46 U	0.43 U	18 U	0.45 U	38 U
88-74-4	2-Nitroaniline		2.3 U	2.1 U	92 U	2.2 U	190 U
131-11-3	Dimethylphthalate		0.46 U	0.43 U	18 U	0.45 U	38 U
208-96-8	Acenaphthylene		0.46 U	0.43 U	74	0.053 J	14 J
606-20-2	2,6-Dinitrotoluene		0.46 U	0.43 U	18 U	0.45 U	38 U
99-09-2	3-Nitroaniline		2.3 U	2.1 U	92 U	2.2 U	190 U
83-32-9	Acenaphthene		0.46 U	0.43 U	10 J	0.062 J	130
51-28-5	2,4-Dinitrophenol		2.3 U	2.1 U	92 U	2.2 U	190 U
100-02-7	4-Nitrophenol		2.3 U	2.1 U	92 U	2.2 U	190 U
132-64-9	Dibenzofuran		0.46 U	0.43 U	4.1 J	0.45 U	16 J
121-14-2	2,4-Dinitrotoluene		0.46 U	0.43 U	18 U	0.45 U	38 U
84-66-2	Diethylphthalate		0.46 U	0.43 U	18 U	0.45 U	38 U
7005-72-3	4-Chlorophenyl-phenylether		0.46 U	0.43 U	18 U	0.45 U	38 U
86-73-7	Fluorene		0.46 U	0.43 U	57	0.092 J	97
100-01-6	4-Nitroaniline		2.3 U	2.1 U	92 U	2.2 U	190 U
534-52-1	4,6-Dinitro-2-methylphenol		2.3 U	2.1 U	92 U	2.2 U	190 U
86-30-6	N-Nitrosodiphenylamine		0.46 U	0.43 U	18 U	0.45 U	38 U
101-55-3	4-Bromophenyl-phenylether		0.46 U	0.43 U	18 U	0.45 U	38 U
118-74-1	Hexachlorobenzene		0.46 U	0.43 U	18 U	0.45 U	38 U
87-86-5	Pentachlorophenol		2.3 U	2.1 U	92 U	2.2 U	190 U
85-01-8	Phenanthrene		0.46 U	0.43 U	110	0.25 J	180
120-12-7	Anthracene		0.46 U	0.43 U	34	0.062 J	61
84-74-2	Di-n-butylphthalate		0.46 U	0.43 U	18 U	0.45 U	38 U
206-44-0	Fluoranthene		0.46 U	0.43 U	38	0.089 J	70
129-00-0	Pyrene		0.46 U	0.43 U	75	0.17 J	120
85-68-7	Butylbenzylphthalate		0.46 U	0.43 U	18 U	0.45 U	38 U
91-94-1	3,3'-Dichlorobenzidine		0.91 U	0.85 U	37 U	0.9 U	76 U
56-55-3	Benzo(a)anthracene		0.46 U	0.43 U	21	0.045 J	36 J
218-01-9	Chrysene		0.46 U	0.43 U	19	0.45 U	35 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.46 U	0.43 U	18 U	0.45 U	38 U
117-84-0	Di-n-octylphthalate		0.46 U	0.43 U	18 U	0.45 U	38 U
205-99-2	Benzo(b)fluoranthene		0.46 U	0.43 U	5.4 J	0.45 U	10 J
207-08-9	Benzo(k)fluoranthene		0.46 U	0.43 U	9.2 J	0.45 U	16 J
50-32-8	Benzo(a)pyrene		0.46 U	0.43 U	15 J	0.45 U	24 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.46 U	0.43 U	5.6 J	0.45 U	8.1 J
53-70-3	Dibenz(a,h)anthracene		0.46 U	0.43 U	18 U	0.45 U	38 U
191-24-2	Benzo(g,h,i)perylene		0.46 U	0.43 U	7.8 J	0.45 U	9.4 J
100-51-6	Benzyl Alcohol		0.46 U	0.43 U	18 U	0.45 U	38 U
65-85-0	Benzoic Acid		2.3 U	2.1 U	92 U	2.2 U	190 U
	INORGANICS						
7440-38-2	Arsenic		0.89 J	0.6 U	0.66 U	1.2 J	0.54 U
7439-92-1	Lead		6.2	7.7	6.9	6.5	14.8
7439-97-6	Mercury		0.11 U	0.12 U	0.14 U	0.13 U	0.11 U
7440-66-6	Zinc		52.5	47.7	38.6	52.8	28.2
57-12-5	Cyanide		0.72 U	0.6 U	0.74 U	0.69 U	0.51 U

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	SB06H	SB07G	SB07M	SB08G	SB09F
		DEPTH:	12-16'	12-14'	24-26'	12-14'	10-12'
		LAB ID:	2905106	2906805	2906806	2906807	2909612
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY1	TARRY2	TARRY2	TARRY2	TARRY2
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/12/96	9/13/96	9/13/96	9/13/96	9/16/96
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		0.013 U	0.009 J	0.014 U	1.8 JD	0.054
108-88-3	Toluene		0.013 U	0.006 J	0.002 J	0.065	0.007 J
100-41-4	Ethylbenzene		0.013 U	0.06	0.014 U	49 D	0.62 JD
1330-20-7	Xylene (total)		0.013 U	0.14	0.008 J	31 D	0.29
	SEMIVOLATILES						
108-95-2	Phenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
111-44-4	bis(2-Chloroethyl)Ether		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
95-57-8	2-Chlorophenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
541-73-1	1,3-Dichlorobenzene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
106-46-7	1,4-Dichlorobenzene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
95-50-1	1,2-Dichlorobenzene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
95-48-7	2-Methylphenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
106-44-5	4-Methylphenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
621-64-7	N-Nitroso-di-n-propylamine		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
67-72-1	Hexachloroethane		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
98-95-3	Nitrobenzene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
78-59-1	Isophorone		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
88-75-5	2-Nitrophenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
105-67-9	2,4-Dimethylphenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
120-83-2	2,4-Dichlorophenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
120-82-1	1,2,4-Trichlorobenzene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
91-20-3	Naphthalene		0.51	79 D	0.46 U	620 D	5
106-47-8	4-Chloroaniline		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
87-68-3	Hexachlorobutadiene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
111-91-1	bis(2-Chloroethoxy)methane		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
59-50-7	4-Chloro-3-Methylphenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
91-57-6	2-Methylnaphthalene		0.2 J	120 D	0.46 U	480 D	3.1
77-47-4	Hexachlorocyclopentadiene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
88-06-2	2,4,6-Trichlorophenol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
95-95-4	2,4,5-Trichlorophenol		2.2 U	26 U	2.3 U	23 U	8.5 U
91-58-7	2-Chloronaphthalene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
88-74-4	2-Nitroaniline		2.2 U	26 U	2.3 U	23 U	8.5 U
131-11-3	Dimethylphthalate		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
208-96-8	Acenaphthylene		0.44 U	9.5	0.46 U	12	0.27 J
606-20-2	2,6-Dinitrotoluene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
99-09-2	3-Nitroaniline		2.2 U	26 U	2.3 U	23 U	8.5 U
83-32-9	Acenaphthene		0.12 J	68 D	0.46 U	240 D	2.4
51-28-5	2,4-Dinitrophenol		2.2 U	26 U	2.3 U	23 U	8.5 U
100-02-7	4-Nitrophenol		2.2 U	26 U	2.3 U	23 U	8.5 U
132-64-9	Dibenzofuran		0.44 U	6	0.46 U	12	0.82 J
121-14-2	2,4-Dinitrotoluene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
84-66-2	Diethylphthalate		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
7005-72-3	4-Chlorophenyl-phenylether		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
86-73-7	Fluorene		0.093 J	70 D	0.46 U	120 D	2
100-01-6	4-Nitroaniline		2.2 U	26 U	2.3 U	23 U	8.5 U
534-52-1	4,6-Dinitro-2-methylphenol		2.2 U	26 U	2.3 U	23 U	8.5 U
86-30-6	N-Nitrosodiphenylamine		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
101-55-3	4-Bromophenyl-phenylether		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
118-74-1	Hexachlorobenzene		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
87-86-5	Pentachlorophenol		2.2 U	26 U	2.3 U	23 U	8.5 U
85-01-8	Phenanthrene		0.25 J	140 D	0.13 J	260 D	5.1
120-12-7	Anthracene		0.061 J	40	0.46 U	89 JD	1.9
84-74-2	Di-n-butylphthalate		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
206-44-0	Fluoranthene		0.086 J	66 D	0.08 J	88 JD	3.1
129-00-0	Pyrene		0.14 J	130 D	0.12 J	150 D	3.7
85-68-7	Butylbenzylphthalate		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
91-94-1	3,3'-Dichlorobenzidine		0.89 U	10 U	0.92 U	9.2 U	3.4 U
56-55-3	Benzo(a)anthracene		0.44 U	35	0.054 J	45 JD	1.4 J
218-01-9	Chrysene		0.44 U	50 D	0.052 J	42 JD	1.2 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
117-84-0	Di-n-octylphthalate		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
205-99-2	Benzo(b)fluoranthene		0.44 U	14	0.46 U	11	0.7 J
207-08-9	Benzo(k)fluoranthene		0.44 U	13	0.46 U	17	0.68 J
50-32-8	Benzo(a)pyrene		0.44 U	26	0.46 U	29	1 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.44 U	5.2	0.46 U	5.1	0.61 J
53-70-3	Dibenz(a,h)anthracene		0.44 U	0.78 J	0.46 U	0.86 J	1.7 U
191-24-2	Benzo(g,h,i)perylene		0.44 U	5 J	0.46 U	4.7	0.72 J
100-51-6	Benzyl Alcohol		0.44 U	5.1 U	0.46 U	4.6 U	1.7 U
65-85-0	Benzoic Acid		2.2 U	26 U	2.3 U	23 U	8.5 U
	INORGANICS						
7440-38-2	Arsenic		3.5	16.3	1.4	4.7	1.4
7439-92-1	Lead		10.9	297 J	7.5 J	1760 J	10.5 J
7439-97-6	Mercury		0.13 U	2.4	0.14 U	0.76	0.12
7440-66-6	Zinc		69.8	370 J	63 J	348 J	60 J
57-12-5	Cyanide		0.67 U	0.77 U	0.75 U	0.74 U	R

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	SB09J	SB10E	SB10I	SB11F	SB11H
		DEPTH:	18-20'	08-10'	16-18'	10-12'	14-16'
		LAB ID:	2909611	2909614	2909613	2909603	2909604
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY2	TARRY2	TARRY2	TARRY2	TARRY2
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	9/16/96	9/16/96	9/16/96	9/16/96	9/16/96
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		0.003 J	2.6	0.061	9.9	0.069
108-88-3	Toluene		0.012 U	1.6 U	0.003 J	0.82 J	0.012 U
100-41-4	Ethylbenzene		0.005 J	21	0.62 JD	20	0.046
1330-20-7	Xylene (total)		0.004 J	2.6	0.25	28	0.003 J
	SEMIVOLATILES						
108-95-2	Phenol		0.42 U	45 U	1.6 U	41 U	0.42 U
111-44-4	bis(2-Chloroethyl)Ether		0.42 U	45 U	1.6 U	41 U	0.42 U
95-57-8	2-Chlorophenol		0.42 U	45 U	1.6 U	41 U	0.42 U
541-73-1	1,3-Dichlorobenzene		0.42 U	45 U	1.6 U	41 U	0.42 U
106-46-7	1,4-Dichlorobenzene		0.42 U	45 U	1.6 U	41 U	0.42 U
95-50-1	1,2-Dichlorobenzene		0.42 U	45 U	1.6 U	41 U	0.42 U
95-48-7	2-Methylphenol		0.42 U	45 U	1.6 U	41 U	0.42 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.42 U	45 U	1.6 U	41 U	0.42 U
106-44-5	4-Methylphenol		0.42 U	45 U	1.6 U	41 U	0.42 U
621-64-7	N-Nitroso-di-n-propylamine		0.42 U	45 U	1.6 U	41 U	0.42 U
67-72-1	Hexachloroethane		0.42 U	45 U	1.6 U	41 U	0.42 U
98-95-3	Nitrobenzene		0.42 U	45 U	1.6 U	41 U	0.42 U
78-59-1	Isophorone		0.42 U	45 U	1.6 U	41 U	0.42 U
88-75-5	2-Nitrophenol		0.42 U	45 U	1.6 U	41 U	0.42 U
105-67-9	2,4-Dimethylphenol		0.42 U	45 U	1.6 U	41 U	0.42 U
120-83-2	2,4-Dichlorophenol		0.42 U	45 U	1.6 U	41 U	0.42 U
120-82-1	1,2,4-Trichlorobenzene		0.42 U	45 U	1.6 U	41 U	0.42 U
91-20-3	Naphthalene		0.62	280	12	440 D	0.42
106-47-8	4-Chloroaniline		0.42 U	45 U	1.6 U	41 U	0.42 U
87-68-3	Hexachlorobutadiene		0.42 U	45 U	1.6 U	41 U	0.42 U
111-91-1	bis(2-Chloroethoxy)methane		0.42 U	45 U	1.6 U	41 U	0.42 U
59-50-7	4-Chloro-3-Methylphenol		0.42 U	45 U	1.6 U	41 U	0.42 U
91-57-6	2-Methylnaphthalene		0.34 J	170	11	93	0.1 J
77-47-4	Hexachlorocyclopentadiene		0.42 U	45 U	1.6 U	41 U	0.42 U
88-06-2	2,4,6-Trichlorophenol		0.42 U	45 U	1.6 U	41 U	0.42 U
95-95-4	2,4,5-Trichlorophenol		2.1 U	220 U	8.2 U	200 U	2.1 U
91-58-7	2-Chloronaphthalene		0.42 U	45 U	1.6 U	41 U	0.42 U
88-74-4	2-Nitroaniline		2.1 U	220 U	8.2 U	200 U	2.1 U
131-11-3	Dimethylphthalate		0.42 U	45 U	1.6 U	41 U	0.42 U
208-96-8	Acenaphthylene		0.42 U	45 U	0.57 J	24 J	0.42 U
606-20-2	2,6-Dinitrotoluene		0.42 U	45 U	1.6 U	41 U	0.42 U
99-09-2	3-Nitroaniline		2.1 U	220 U	8.2 U	200 U	2.1 U
83-32-9	Acenaphthene		0.17 J	68	6.6	150	0.063 J
51-28-5	2,4-Dinitrophenol		2.1 U	220 U	8.2 U	200 U	2.1 U
100-02-7	4-Nitrophenol		2.1 U	220 U	8.2 U	200 U	2.1 U
132-64-9	Dibenzofuran		0.057 J	4.6 J	0.62 J	110	0.42 U
121-14-2	2,4-Dinitrotoluene		0.42 U	45 U	1.6 U	41 U	0.42 U
84-66-2	Diethylphthalate		0.42 U	69	1.6 U	41 U	0.42 U
7005-72-3	4-Chlorophenyl-phenylether		0.42 U	45 U	1.6 U	41 U	0.42 U
86-73-7	Fluorene		0.13 J	30 J	3.9	160	0.08 J
100-01-6	4-Nitroaniline		2.1 U	220 U	8.2 U	200 U	2.1 U
534-52-1	4,6-Dinitro-2-methylphenol		2.1 U	220 U	8.2 U	200 U	2.1 U
86-30-6	N-Nitrosodiphenylamine		0.42 U	45 U	1.6 U	41 U	0.42 U
101-55-3	4-Bromophenyl-phenylether		0.42 U	45 U	1.6 U	41 U	0.42 U
118-74-1	Hexachlorobenzene		0.42 U	45 U	1.6 U	41 U	0.42 U
87-86-5	Pentachlorophenol		2.1 U	220 U	8.2 U	200 U	2.1 U
85-01-8	Phenanthrene		0.36 J	74	9.2	460 D	0.28 J
120-12-7	Anthracene		0.1 J	22 J	3	160	0.087 J
84-74-2	Di-n-butylphthalate		0.42 U	45 U	1.6 U	41 U	0.42 U
206-44-0	Fluoranthene		0.18 J	19 J	3	320	0.19 J
129-00-0	Pyrene		0.22 J	34 J	5.1	410 D	0.24 J
85-68-7	Butylbenzylphthalate		0.42 U	45 U	1.6 U	41 U	0.42 U
91-94-1	3,3'-Dichlorobenzidine		0.83 U	90 U	3.3 U	81 U	0.83 U
56-55-3	Benzo(a)anthracene		0.078 J	9.2 J	1.7	160	0.082 J
218-01-9	Chrysene		0.072 J	9.2 J	1.6 J	130	0.074 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.42 U	45 U	1.6 U	41 U	0.42 U
117-84-0	Di-n-octylphthalate		0.42 U	45 U	1.6 U	41 U	0.42 U
205-99-2	Benzo(b)fluoranthene		0.42 U	45 U	0.56 J	72	0.042 J
207-08-9	Benzo(k)fluoranthene		0.042 J	45 U	0.56 J	87	0.048 J
50-32-8	Benzo(a)pyrene		0.058 J	5.5 J	1.1 J	120	0.055 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.42 U	45 U	0.49 J	87	0.42 U
53-70-3	Dibenz(a,h)anthracene		0.42 U	45 U	1.6 U	9.8 J	0.42 U
191-24-2	Benzo(g,h,i)perylene		0.42 U	45 U	0.6 J	98	0.42 U
100-51-6	Benzyl Alcohol		0.42 U	45 U	1.6 U	41 U	0.42 U
65-85-0	Benzoic Acid		2.1 U	220 U	8.2 U	200 U	2.1 U
	INORGANICS						
7440-38-2	Arsenic		2.2	9.1	8.2	6.7	3.3
7439-92-1	Lead		7.1 J	472 J	439 J	82.6 J	10.4 J
7439-97-6	Mercury		0.12 U	1.1	0.12 U	0.22 J	0.13 U
7440-66-6	Zinc		47.7 J	168 J	158 J	67.4	64.7 J
57-12-5	Cyanide		R	R	R	R	R

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND		SAMPLE ID:	SB12B	SB12G	SB13O	SB13I	SB14I
			DEPTH:	02-04'	12-14'	06-08'	16-18'	14-18'
			LAB ID:	2909605	2909606	2909607	2909608	3037701
			SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
			SDG:	TARRY2	TARRY2	TARRY2	TARRY2	TARRY4
			MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
			SAMPLED:	9/17/96	9/17/96	9/17/96	9/17/96	1/20/97
			UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES							
71-43-2	Benzene			0.012 U	0.002 J	0.002 J	0.013 U	1.3 J
108-88-3	Toluene			0.012 U	0.013 U	0.002 J	0.013 U	1.7 U
100-41-4	Ethylbenzene			0.012 U	0.013 U	0.012 J	0.013 U	3.6
1330-20-7	Xylene (total)			0.012 U	0.013 U	0.005 J	0.013 U	1.1 J
	SEMIVOLATILES							
108-95-2	Phenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
111-44-4	bis(2-Chloroethyl)Ether			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
95-57-8	2-Chlorophenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
541-73-1	1,3-Dichlorobenzene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
106-46-7	1,4-Dichlorobenzene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
95-50-1	1,2-Dichlorobenzene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
95-48-7	2-Methylphenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
108-60-1	2,2'-oxybis(1-Chloropropane)			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
106-44-5	4-Methylphenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
621-64-7	N-Nitroso-di-n-propylamine			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
67-72-1	Hexachloroethane			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
98-95-3	Nitrobenzene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
78-59-1	Isophorone			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
88-75-5	2-Nitrophenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
105-67-9	2,4-Dimethylphenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
120-83-2	2,4-Dichlorophenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
120-82-1	1,2,4-Trichlorobenzene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
91-20-3	Naphthalene			0.052 J	0.42 U	19	0.068 J	8.8
106-47-8	4-Chloroaniline			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
87-68-3	Hexachlorobutadiene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
111-91-1	bis(2-Chloroethoxy)methane			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
59-50-7	4-Chloro-3-Methylphenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
91-57-6	2-Methylnaphthalene			0.046 J	0.42 U	15	0.05 J	5.2
77-47-4	Hexachlorocyclopentadiene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
88-06-2	2,4,6-Trichlorophenol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
95-95-4	2,4,5-Trichlorophenol			2.1 U	2.1 U	22 U	2.1 U	23 U
91-58-7	2-Chloronaphthalene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
88-74-4	2-Nitroaniline			2.1 U	2.1 U	22 U	2.1 U	23 U
131-11-3	Dimethylphthalate			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
208-96-8	Acenaphthylene			0.42 U	0.42 U	1.2 J	0.43 U	1.2 J
606-20-2	2,6-Dinitrotoluene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
99-09-2	3-Nitroaniline			2.1 U	2.1 U	22 U	2.1 U	23 U
83-32-9	Acenaphthene			0.12 J	0.42 U	18	0.063 J	16
51-28-5	2,4-Dinitrophenol			2.1 U	2.1 U	22 U	2.1 U	23 U
100-02-7	4-Nitrophenol			2.1 U	2.1 U	22 U	2.1 U	23 U
132-64-9	Dibenzofuran			0.073 J	0.42 U	0.85 J	0.43 U	1 J
121-14-2	2,4-Dinitrotoluene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
84-66-2	Diethylphthalate			0.42	0.42 U	4.3 U	0.43 U	4.6 U
7005-72-3	4-Chlorophenyl-phenylether			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
86-73-7	Fluorene			0.11 J	0.42 U	11	0.43 U	7.5
100-01-6	4-Nitroaniline			2.1 U	2.1 U	22 U	2.1 U	23 U
534-52-1	4,6-Dinitro-2-methylphenol			2.1 U	2.1 U	22 U	2.1 U	23 U
86-30-6	N-Nitrosodiphenylamine			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
101-55-3	4-Bromophenyl-phenylether			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
118-74-1	Hexachlorobenzene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
87-86-5	Pentachlorophenol			2.1 U	2.1 U	22 U	2.1 U	23 U
85-01-8	Phenanthrene			1.4	0.42 U	22	0.12 J	25
120-12-7	Anthracene			0.31 J	0.42 U	7.7	0.43 U	7.1
84-74-2	Di-n-butylphthalate			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
206-44-0	Fluoranthene			1.4	0.42 U	6	0.43 U	5.4
129-00-0	Pyrene			1.7	0.42 U	12	0.073 J	7
85-68-7	Butylbenzylphthalate			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
91-94-1	3,3'-Dichlorobenzidine			0.83 U	0.84 U	8.6 U	0.85 U	9.2 U
56-55-3	Benzo(a)anthracene			0.6	0.42 U	3.7 J	0.43 U	2.7 J
218-01-9	Chrysene			0.63	0.42 U	3.6 J	0.43 U	3.2 J
117-81-7	bis(2-Ethylhexyl)phthalate			0.047 J	0.42 U	4.3 U	0.43 U	4.6 U
117-84-0	Di-n-octylphthalate			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
205-99-2	Benzo(b)fluoranthene			0.37 J	0.42 U	0.79 J	0.43 U	1.2 J
207-08-9	Benzo(k)fluoranthene			0.45	0.42 U	1.3 J	0.43 U	1.4 J
50-32-8	Benzo(a)pyrene			0.52	0.42 U	2.3 J	0.43 U	2.4 J
193-39-5	Indeno(1,2,3-cd)pyrene			0.4 J	0.42 U	0.92 J	0.43 U	4.6 U
53-70-3	Dibenz(a,h)anthracene			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
191-24-2	Benzo(g,h,i)perylene			0.47	0.42 U	1.2 J	0.43 U	0.54 J
100-51-6	Benzyl Alcohol			0.42 U	0.42 U	4.3 U	0.43 U	4.6 U
65-85-0	Benzoic Acid			2.1 U	2.1 U	22 U	2.1 U	23 U
	INORGANICS							
7440-38-2	Arsenic			1.7	2.1	0.84 J	0.92 J	14.6
7439-92-1	Lead			187 J	5.2 J	7.2 J	4.2 J	798
7439-97-6	Mercury			0.1 U	0.09 U	0.13 U	0.1 U	0.52
7440-66-6	Zinc			101 J	47.7 J	51.9 J	42.3 J	672 J
57-12-5	Cyanide			R	R	R	R	0.63 U

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	S814J	S815J	S815K	S816G	S816I
		DEPTH:	18-20'	19-21'	21-23'	12-14'	16-18'
		LAB ID:	3037702	3037703	3037704	3037705	3037706
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY4	TARRY4	TARRY4	TARRY4	TARRY4
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/20/97	1/20/97	1/20/97	1/21/97	1/21/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		0.013 U	0.53 J	0.015 U	5.4	0.014 U
108-88-3	Toluene		0.013 U	1.8 U	0.015 U	0.88 J	0.014 U
100-41-4	Ethylbenzene		0.013 U	9.4	0.02	140 D	0.008 J
1330-20-7	Xylene (total)		0.013 U	1.8	0.015 U	95 D	0.014 U
	SEMIVOLATILES						
108-95-2	Phenol		0.44 U	43 U	0.74 U	270 U	0.46 U
111-44-4	bis(2-Chloroethyl)Ether		0.44 U	43 U	0.74 U	270 U	0.46 U
95-57-8	2-Chlorophenol		0.44 U	43 U	0.74 U	270 U	0.46 U
541-73-1	1,3-Dichlorobenzene		0.44 U	43 U	0.74 U	270 U	0.46 U
106-46-7	1,4-Dichlorobenzene		0.44 U	43 U	0.74 U	270 U	0.46 U
95-50-1	1,2-Dichlorobenzene		0.44 U	43 U	0.74 U	270 U	0.46 U
95-48-7	2-Methylphenol		0.44 U	43 U	0.74 U	270 U	0.46 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.44 U	43 U	0.74 U	270 U	0.46 U
106-44-5	4-Methylphenol		0.44 U	43 U	0.74 U	270 U	0.46 U
621-64-7	N-Nitroso-di-n-propylamine		0.44 U	43 U	0.74 U	270 U	0.46 U
67-72-1	Hexachloroethane		0.44 U	43 U	0.74 U	270 U	0.46 U
98-95-3	Nitrobenzene		0.44 U	43 U	0.74 U	270 U	0.46 U
78-59-1	Isophorone		0.44 U	43 U	0.74 U	270 U	0.46 U
88-75-5	2-Nitrophenol		0.44 U	43 U	0.74 U	270 U	0.46 U
105-67-9	2,4-Dimethylphenol		0.44 U	43 U	0.74 U	270 U	0.46 U
120-83-2	2,4-Dichlorophenol		0.44 U	43 U	0.74 U	270 U	0.46 U
120-82-1	1,2,4-Trichlorobenzene		0.44 U	43 U	0.74 U	270 U	0.46 U
91-20-3	Naphthalene		0.13 J	120	2.9	1600	0.9
106-47-8	4-Chloroaniline		0.44 U	54	1.2	700	0.4 J
87-68-3	Hexachlorobutadiene		0.44 U	43 U	0.74 U	270 U	0.46 U
111-91-1	bis(2-Chloroethoxy)methane		0.44 U	43 U	0.74 U	270 U	0.46 U
59-50-7	4-Chloro-3-Methylphenol		0.44 U	43 U	0.74 U	270 U	0.46 U
91-57-6	2-Methylnaphthalene		0.13 J	98	3	1000	0.77
77-47-4	Hexachlorocyclopentadiene		0.44 U	43 U	0.74 U	270 U	0.46 U
88-06-2	2,4,6-Trichlorophenol		0.44 U	43 U	0.74 U	270 U	0.46 U
95-95-4	2,4,5-Trichlorophenol		2.2 U	220 U	3.7 U	1300 U	2.3 U
91-58-7	2-Chloronaphthalene		0.44 U	43 U	0.74 U	270 U	0.46 U
88-74-4	2-Nitroaniline		2.2 U	220 U	3.7 U	1300 U	2.3 U
131-11-3	Dimethylphthalate		0.44 U	43 U	0.74 U	270 U	0.46 U
208-96-8	Acenaphthylene		0.057 J	43 U	0.098 J	30 J	0.46 U
606-20-2	2,6-Dinitrotoluene		0.44 U	43 U	0.74 U	270 U	0.46 U
99-09-2	3-Nitroaniline		2.2 U	220 U	3.7 U	1300 U	2.3 U
83-32-9	Acenaphthene		0.51	52	1.9	510	0.45 J
51-28-5	2,4-Dinitrophenol		2.2 U	220 U	3.7 U	1300 U	2.3 U
100-02-7	4-Nitrophenol		2.2 U	220 U	3.7 U	1300 U	2.3 U
132-64-9	Dibenzofuran		0.44 U	43 U	0.085 J	270 U	0.46 U
121-14-2	2,4-Dinitrotoluene		0.44 U	43 U	0.74 U	270 U	0.46 U
84-66-2	Diethylphthalate		0.44 U	43 U	0.74 U	270 U	0.46 U
7005-72-3	4-Chlorophenyl-phenylether		0.44 U	43 U	0.74 U	270 U	0.46 U
86-73-7	Fluorene		0.23 J	22 J	0.86	250 J	0.26 J
100-01-6	4-Nitroaniline		2.2 U	220 U	3.7 U	1300 U	2.3 U
534-52-1	4,6-Dinitro-2-methylphenol		2.2 U	220 U	3.7 U	1300 U	2.3 U
86-30-6	N-Nitrosodiphenylamine		0.44 U	43 U	0.084 J	270 U	0.46 U
101-55-3	4-Bromophenyl-phenylether		0.44 U	43 U	0.74 U	270 U	0.46 U
118-74-1	Hexachlorobenzene		0.44 U	43 U	0.74 U	270 U	0.46 U
87-86-5	Pentachlorophenol		2.2 U	220 U	3.7 U	1300 U	2.3 U
85-01-8	Phenanthrene		1.4	66	2.8	660	0.76
120-12-7	Anthracene		0.26 J	19 J	0.8	180 J	0.2 J
84-74-2	Di-n-butylphthalate		0.44 U	43 U	0.74 U	270 U	0.46 U
206-44-0	Fluoranthene		0.38 J	16 J	0.68 J	150 J	0.17 J
129-00-0	Pyrene		0.45	26 J	1.1	210 J	0.26 J
85-68-7	Butylbenzylphthalate		0.44 U	43 U	0.74 U	270 U	0.46 U
91-94-1	3,3'-Dichlorobenzidine		0.88 U	86 U	1.5 U	540 U	0.92 U
56-55-3	Benzo(a)anthracene		0.16 J	8.9 J	0.33 J	72 J	0.094 J
218-01-9	Chrysene		0.19 J	9.1 J	0.37 J	79 J	0.1 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.44 J	43 U	0.74 U	270 U	0.12 J
117-84-0	Di-n-octylphthalate		0.063 J	43 U	0.74 U	270 U	0.46 U
205-99-2	Benzo(b)fluoranthene		0.09 J	43 U	0.11 J	270 U	0.46 U
207-08-9	Benzo(k)fluoranthene		0.099 J	43 U	0.74 U	270 U	0.46 U
50-32-8	Benzo(a)pyrene		0.14 J	6 J	0.24 J	50 J	0.065 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.44 U	43 U	0.74 U	270 U	0.46 U
53-70-3	Dibenz(a,h)anthracene		0.44 U	43 U	0.74 U	270 U	0.46 U
191-24-2	Benzo(g,h,i)perylene		0.44 U	43 U	0.74 U	270 U	0.46 U
100-51-6	Benzyl Alcohol		0.44 U	43 U	0.74 U	270 U	0.46 U
65-85-0	Benzoic Acid		2.2 U	220 U	3.7 U	1300 U	2.3 U
	INORGANICS						
7440-38-2	Arsenic		4.8	7	5.5	9	5.7
7439-92-1	Lead		7.7	67.8	3.4	589	7
7439-97-6	Mercury		0.13 U	0.15 U	0.11 U	0.16 U	0.45
7440-66-6	Zinc		46.2 J	181 J	26.5 J	502 J	52.2 J
57-12-5	Cyanide		0.53 U	0.74 U	0.5 U	0.76 U	0.63 U

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	SB17D	SB17H	SB117H	SB18B	SB18G
		DEPTH:	06-08'	12-16'	12-16'	02-04'	12-14'
		LAB ID:	3037707	3037708	3037711	3037712	3037713
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY4	TARRY4	TARRY4	TARRY4	TARRY4
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/21/97	1/21/97	1/21/97	1/21/97	1/21/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		0.011 U	0.012 U	0.012 U	0.012 U	0.013 U
108-88-3	Toluene		0.011 U	0.012 U	0.012 U	0.012 U	0.013 U
100-41-4	Ethylbenzene		0.011 U	0.012 U	0.012 U	0.012 U	0.013 U
1330-20-7	Xylene (total)		0.011 U	0.012 U	0.012 U	0.012 U	0.013 U
	SEMIVOLATILES						
108-95-2	Phenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
111-44-4	bis(2-Chloroethyl)Ether		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
95-57-8	2-Chlorophenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
541-73-1	1,3-Dichlorobenzene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
106-46-7	1,4-Dichlorobenzene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
95-50-1	1,2-Dichlorobenzene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
95-48-7	2-Methylphenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
108-60-1	2,2'-oxybis(1-Chloropropane)		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
106-44-5	4-Methylphenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
621-64-7	N-Nitroso-di-n-propylamine		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
67-72-1	Hexachloroethane		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
98-95-3	Nitrobenzene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
78-59-1	Isophorone		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
88-75-5	2-Nitrophenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
105-67-9	2,4-Dimethylphenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
120-83-2	2,4-Dichlorophenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
120-82-1	1,2,4-Trichlorobenzene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
91-20-3	Naphthalene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
106-47-8	4-Chloroaniline		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
87-68-3	Hexachlorobutadiene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
111-91-1	bis(2-Chloroethoxy)methane		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
59-50-7	4-Chloro-3-Methylphenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
91-57-6	2-Methylnaphthalene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
77-47-4	Hexachlorocyclopentadiene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
88-06-2	2,4,6-Trichlorophenol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
95-95-4	2,4,5-Trichlorophenol		9.5 U	2 U	2 U	1.9 U	2.2 U
91-58-7	2-Chloronaphthalene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
88-74-4	2-Nitroaniline		9.5 U	2 U	2 U	1.9 U	2.2 U
131-11-3	Dimethylphthalate		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
208-96-8	Acenaphthylene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
606-20-2	2,6-Dinitrotoluene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
99-09-2	3-Nitroaniline		9.5 U	2 U	2 U	1.9 U	2.2 U
83-32-9	Acenaphthene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
51-28-5	2,4-Dinitrophenol		9.5 U	2 U	2 U	1.9 U	2.2 U
100-02-7	4-Nitrophenol		9.5 U	2 U	2 U	1.9 U	2.2 U
132-64-9	Dibenzofuran		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
121-14-2	2,4-Dinitrotoluene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
84-66-2	Diethylphthalate		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
7005-72-3	4-Chlorophenyl-phenylether		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
86-73-7	Fluorene		0.21 J	0.41 U	0.4 U	0.39 U	0.44 U
100-01-6	4-Nitroaniline		9.5 U	2 U	2 U	1.9 U	2.2 U
534-52-1	4,6-Dinitro-2-methylphenol		9.5 U	2 U	2 U	1.9 U	2.2 U
86-30-6	N-Nitrosodiphenylamine		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
101-55-3	4-Bromophenyl-phenylether		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
118-74-1	Hexachlorobenzene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
87-86-5	Pentachlorophenol		9.5 U	2 U	2 U	1.9 U	2.2 U
85-01-8	Phenanthrene		1.5 J	0.41 U	0.4 U	0.057 J	0.44 U
120-12-7	Anthracene		0.48 J	0.41 U	0.4 U	0.39 U	0.44 U
84-74-2	Di-n-butylphthalate		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
206-44-0	Fluoranthene		4.4	0.41 U	0.041 J	0.18 J	0.44 U
129-00-0	Pyrene		4.5	0.41 U	0.05 J	0.14 J	0.44 U
85-68-7	Butylbenzylphthalate		0.24 J	0.41 U	0.4 U	0.39 U	0.44 U
91-94-1	3,3'-Dichlorobenzidine		3.8 U	0.81 U	0.79 U	0.78 U	0.89 U
56-55-3	Benzo(a)anthracene		1.2 J	0.41 U	0.4 U	0.071 J	0.44 U
218-01-9	Chrysene		1.3 J	0.41 U	0.4 U	0.077 J	0.44 U
117-81-7	bis(2-Ethylhexyl)phthalate		1.9 U	0.094 J	0.12 J	0.39 U	0.1 J
117-84-0	Di-n-octylphthalate		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
205-99-2	Benzo(b)fluoranthene		1.7 J	0.41 U	0.4 U	0.11 J	0.44 U
207-08-9	Benzo(k)fluoranthene		1.9	0.41 U	0.4 U	0.13 J	0.44 U
50-32-8	Benzo(a)pyrene		1.4 J	0.41 U	0.4 U	0.081 J	0.44 U
193-39-5	Indeno(1,2,3-cd)pyrene		0.33 J	0.41 U	0.4 U	0.39 U	0.44 U
53-70-3	Dibenz(a,h)anthracene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
191-24-2	Benzo(g,h,i)perylene		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
100-51-6	Benzyl Alcohol		1.9 U	0.41 U	0.4 U	0.39 U	0.44 U
65-85-0	Benzoic Acid		9.5 U	2 U	2 U	1.9 U	2.2 U
	INORGANICS						
7440-38-2	Arsenic		4.6	2.5	1.7	3.3	1.3
7439-92-1	Lead		92.3	16.1	5.6	38.5	3.2
7439-97-6	Mercury		0.29	0.12 U	0.12 U	0.12 U	0.13 U
7440-66-6	Zinc		98.6 J	49.3 J	30 J	49.4 J	34.9 J
57-12-5	Cyanide		0.49 U	0.59 U	0.54 U	0.48 U	0.64 U

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	SB19G	SB19J	SB20I	SB20K	SB21H
		DEPTH:	12-14'	18-20'	14-16'	20.5-22	14-16'
		LAB ID:	3037714	3037715	3038501	3038502	3038503
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY4	TARRY4	TARRY5	TARRY5	TARRY5
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/21/97	1/21/97	1/21/97	1/21/97	1/21/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX/VOLATILES						
71-43-2	Benzene		1.5 U	1.8 U	0.013 U	0.012 U	0.014 U
108-88-3	Toluene		1.5 U	1.3 J	0.013 U	0.012 U	0.014 U
100-41-4	Ethylbenzene		1.8	18	0.013 U	0.012 U	0.014 U
1330-20-7	Xylene (total)		1.2 J	30	0.013 U	0.012 U	0.005 J
	SEMIVOLATILES						
108-95-2	Phenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
111-44-4	bis(2-Chloroethyl)Ether		4.2 U	100 U	0.44 U	0.4 U	1.9 U
95-57-8	2-Chlorophenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
541-73-1	1,3-Dichlorobenzene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
106-46-7	1,4-Dichlorobenzene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
95-50-1	1,2-Dichlorobenzene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
95-48-7	2-Methylphenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
108-60-1	2,2'-oxybis(1-Chloropropane)		4.2 U	100 U	0.44 U	0.4 U	1.9 U
106-44-5	4-Methylphenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
621-64-7	N-Nitroso-di-n-propylamine		4.2 U	100 U	0.44 U	0.4 U	1.9 U
67-72-1	Hexachloroethane		4.2 U	100 U	0.44 U	0.4 U	1.9 U
98-95-3	Nitrobenzene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
78-59-1	Isophorone		4.2 U	100 U	0.44 U	0.4 U	1.9 U
88-75-5	2-Nitrophenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
105-67-9	2,4-Dimethylphenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
120-83-2	2,4-Dichlorophenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
120-82-1	1,2,4-Trichlorobenzene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
91-20-3	Naphthalene		3.5 J	180	0.18 J	0.096 J	0.39 J
106-47-8	4-Chloroaniline		2.4 J	100 U	0.44 U	0.4 U	1.9 U
87-68-3	Hexachlorobutadiene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
111-91-1	bis(2-Chloroethoxy)methane		4.2 U	100 U	0.44 U	0.4 U	1.9 U
59-50-7	4-Chloro-3-Methylphenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
91-57-6	2-Methylnaphthalene		4.2 U	230	0.44 U	0.14 J	1.9 U
77-47-4	Hexachlorocyclopentadiene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
88-06-2	2,4,6-Trichlorophenol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
95-95-4	2,4,5-Trichlorophenol		21 U	510 U	2.2 U	2 U	9.5 U
91-58-7	2-Chloronaphthalene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
88-74-4	2-Nitroaniline		21 U	510 U	2.2 U	2 U	9.5 U
131-11-3	Dimethylphthalate		4.2 U	100 U	0.44 U	0.4 U	1.9 U
208-96-8	Acenaphthylene		4.1 J	12 J	0.44 U	0.4 U	0.24 J
606-20-2	2,6-Dinitrotoluene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
99-09-2	3-Nitroaniline		21 U	510 U	2.2 U	2 U	9.5 U
83-32-9	Acenaphthene		3.4 J	110	0.087 J	0.16 J	0.28 J
51-28-5	2,4-Dinitrophenol		21 U	510 U	2.2 U	2 U	9.5 U
100-02-7	4-Nitrophenol		21 U	510 U	2.2 U	2 U	9.5 U
132-64-9	Dibenzofuran		0.87 J	100 U	0.048 J	0.4 U	1.9 U
121-14-2	2,4-Dinitrotoluene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
84-66-2	Diethylphthalate		4.2 U	100 U	0.44 U	0.4 U	1.9 U
7005-72-3	4-Chlorophenyl-phenylether		4.2 U	100 U	0.44 U	0.4 U	1.9 U
86-73-7	Fluorene		8.8	61 J	0.092 J	0.12 J	0.3 J
100-01-6	4-Nitroaniline		21 U	510 U	2.2 U	2 U	9.5 U
534-52-1	4,6-Dinitro-2-methylphenol		21 U	510 U	2.2 U	2 U	9.5 U
86-30-6	N-Nitrosodiphenylamine		1.1 J	100 U	0.44 U	0.4 U	1.9 U
101-55-3	4-Bromophenyl-phenylether		4.2 U	100 U	0.44 U	0.4 U	1.9 U
118-74-1	Hexachlorobenzene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
87-86-5	Pentachlorophenol		21 U	510 U	2.2 U	2 U	9.5 U
85-01-8	Phenanthrene		29	230	0.59	0.39 J	4.4
120-12-7	Anthracene		14	68 J	0.17 J	0.1 J	3.1
84-74-2	Di-n-butylphthalate		4.2 U	100 U	0.44 U	0.4 U	1.9 U
206-44-0	Fluoranthene		24	87 J	1	0.14 J	13
129-00-0	Pyrene		32 D	130	0.81	0.23 J	6.9
85-68-7	Butylbenzylphthalate		4.2 U	100 U	0.44 U	0.4 U	1.9 U
91-94-1	3,3'-Dichlorobenzidine		8.4 U	200 U	0.88 U	0.8 U	3.8 U
56-55-3	Benzo(a)anthracene		9.5	39 J	0.48	0.065 J	5
218-01-9	Chrysene		9.9	40 J	0.54	0.069 J	4.8
117-81-7	bis(2-Ethylhexyl)phthalate		4.2 U	100 U	0.44 U	0.4 U	1.9 U
117-84-0	Di-n-octylphthalate		4.2 U	100 U	0.44 U	0.4 U	1.9 U
205-99-2	Benzo(b)fluoranthene		5.3	17 J	0.88	0.4 U	4.8
207-08-9	Benzo(k)fluoranthene		7.3	32 J	0.93	0.4 U	5.1
50-32-8	Benzo(a)pyrene		6.8	30 J	0.81	0.049 J	4.5
193-39-5	Indeno(1,2,3-cd)pyrene		0.98 J	100 U	0.11 J	0.4 U	0.5 J
53-70-3	Dibenz(a,h)anthracene		4.2 U	100 U	0.44 U	0.4 U	1.9 U
191-24-2	Benzo(g,h,i)perylene		4.2 U	100 U	0.11 J	0.037 J	0.41 J
100-51-6	Benzyl Alcohol		4.2 U	100 U	0.44 U	0.4 U	1.9 U
65-85-0	Benzoic Acid		21 U	510 U	2.2 U	2 U	9.5 U
	INORGANICS						
7440-38-2	Arsenic		6.2	14.5	4.4	0.97 J	7.6
7439-92-1	Lead		108	166	1160 J	4.2 J	27.8 J
7439-97-6	Mercury		0.14	1.9	0.32	0.1 J	1.1
7440-66-6	Zinc		95.9 J	1540 J	110	35.7	82.4
57-12-5	Cyanide		0.57 U	0.83 U	0.53 UJ	0.58 U	0.75 UJ

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	SB24E	SB24J	SB24K	SB25I	SB25K
		DEPTH:	08-10'	18-20'	20-22'	16-18'	20-22'
		LAB ID:	3040203	3040204	3040205	3040206	3040207
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY5	TARRY5	TARRY5	TARRY5	TARRY5
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	1/22/97	1/22/97	1/22/97	1/22/97	1/22/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX VOLATILES						
71-43-2	Benzene		1.9 U	1.9 U	0.014 U	0.012 U	0.014 U
108-88-3	Toluene		1.9 U	0.3 J	0.014 U	0.012 U	0.014 U
100-41-4	Ethylbenzene		1.9 U	1.7 J	0.014 U	0.012 U	0.014 U
1330-20-7	Xylene (total)		1.9 U	2.2	0.014 U	0.012 U	0.014 U
	SEMIVOLATILES						
108-95-2	Phenol		21 U	0.54 U	0.45 U	0.8 U	4.8 U
111-44-4	bis(2-Chloroethyl)Ether		21 U	0.54 U	0.45 U	0.8 U	4.8 U
95-57-8	2-Chlorophenol		21 U	0.54 U	0.45 U	0.8 U	4.8 U
541-73-1	1,3-Dichlorobenzene		21 U	0.54 U	0.45 U	0.8 U	4.8 U
106-46-7	1,4-Dichlorobenzene		21 U	0.54 U	0.45 U	0.8 U	4.8 U
95-50-1	1,2-Dichlorobenzene		21 U	0.54 U	0.45 U	0.8 U	4.8 U
95-48-7	2-Methylphenol		21 U	0.54 U	0.45 U	0.8 U	4.8 U
108-60-1	2,2'-oxybis(1-Chloropropane)		21 U	0.54 U	0.45 U	0.8 U	4.8 U
106-44-5	4-Methylphenol		21 U	0.54 U	0.45 U	0.8 U	4.8 U
621-64-7	N-Nitroso-di-n-propylamine		21 U	0.54 U	0.45 U	0.8 U	4.8 U
67-72-1	Hexachloroethane		21 U	0.54 U	0.45 U	0.8 U	4.8 U
98-95-3	Nitrobenzene		21 U	0.54 U	0.45 U	0.8 U	4.8 U
78-59-1	Isophorone		21 U	0.54 U	0.45 U	0.8 U	4.8 U
88-75-5	2-Nitrophenol		21 U	0.54 U	0.45 U	0.8 U	4.8 U
105-67-9	2,4-Dimethylphenol		21 U	0.54 U	0.45 U	0.8 U	4.8 U
120-83-2	2,4-Dichlorophenol		21 U	0.54 U	0.45 U	0.8 U	4.8 U
120-82-1	1,2,4-Trichlorobenzene		21 U	0.54 U	0.45 U	0.8 U	4.8 U
91-20-3	Naphthalene		8.8 JD	0.72	0.33 J	0.73 J	1.2 J
106-47-8	4-Chloroaniline		21 U	0.54 U	0.45 U	0.8 U	4.8 U
87-68-3	Hexachlorobutadiene		21 U	0.54 U	0.45 U	0.8 U	4.8 U
111-91-1	bis(2-Chloroethoxy)methane		21 U	0.54 U	0.45 U	0.8 U	4.8 U
59-50-7	4-Chloro-3-Methylphenol		21 U	0.54 U	0.45 U	0.8 U	4.8 U
91-57-6	2-Methylnaphthalene		21 U	0.39 J	0.32 J	0.14 J	1.5 J
77-47-4	Hexachlorocyclopentadiene		10 U	0.54 U	0.45 U	0.8 U	4.8 U
88-06-2	2,4,6-Trichlorophenol		10 U	0.54 U	0.45 U	0.8 U	4.8 U
95-95-4	2,4,5-Trichlorophenol		52 U	2.7 U	2.2 U	4 U	24 U
91-58-7	2-Chloronaphthalene		10 U	0.54 U	0.45 U	0.8 U	4.8 U
88-74-4	2-Nitroaniline		52 U	2.7 U	2.2 U	4 U	24 U
131-11-3	Dimethylphthalate		10 U	0.54 U	0.45 U	0.8 U	4.8 U
208-96-8	Acenaphthylene		12	0.39 J	0.45 U	0.8 U	1.2 J
606-20-2	2,6-Dinitrotoluene		10 U	0.54 U	0.45 U	0.8 U	4.8 U
99-09-2	3-Nitroaniline		52 U	2.7 U	2.2 U	4 U	24 U
83-32-9	Acenaphthene		73	1.4	0.22 J	2.5	5.6
51-28-5	2,4-Dinitrophenol		52 U	2.7 U	2.2 U	4 U	24 U
100-02-7	4-Nitrophenol		52 U	2.7 U	2.2 U	4 U	24 U
132-64-9	Dibenzofuran		10 U	0.54 U	0.45 U	0.24 J	4.8 U
121-14-2	2,4-Dinitrotoluene		10 U	0.54 U	0.45 U	0.8 U	4.8 U
84-66-2	Diethylphthalate		10 U	0.54 U	0.45 U	0.8 U	4.8 U
7005-72-3	4-Chlorophenyl-phenylether		10 U	0.54 U	0.45 U	0.8 U	4.8 U
86-73-7	Fluorene		43	1.2	0.14 J	0.55 J	4 J
100-01-6	4-Nitroaniline		52 U	2.7 U	2.2 U	4 U	24 U
534-52-1	4,6-Dinitro-2-methylphenol		52 U	2.7 U	2.2 U	4 U	24 U
86-30-6	N-Nitrosodiphenylamine		10 U	0.54 U	0.45 U	0.8 U	4.8 U
101-55-3	4-Bromophenyl-phenylether		10 U	0.54 U	0.45 U	0.8 U	4.8 U
118-74-1	Hexachlorobenzene		10 U	0.54 U	0.45 U	0.8 U	4.8 U
87-86-5	Pentachlorophenol		52 U	2.7 U	2.2 U	4 U	24 U
85-01-8	Phenanthrene		87 D	3.5	0.48	3	21
120-12-7	Anthracene		41	1.1	0.13 J	0.96	7.6
84-74-2	Di-n-butylphthalate		10 U	0.54 U	0.45 U	0.8 U	4.8 U
206-44-0	Fluoranthene		35	0.99	0.13 J	1.2	10
129-00-0	Pyrene		59	1.8	0.23 J	0.8 U	16
85-68-7	Butylbenzylphthalate		10 U	0.1 J	0.059 J	0.8 U	4.8 U
91-94-1	3,3'-Dichlorobenzidine		21 U	1.1 U	0.9 U	1.6 U	9.5 U
56-55-3	Benzo(a)anthracene		22	0.63	0.079 J	0.5 J	8
218-01-9	Chrysene		21	0.64	0.074 J	0.58 J	7.6
117-81-7	bis(2-Ethylhexyl)phthalate		10 U	0.32 J	0.29 J	0.14 J	4.8 U
117-84-0	Di-n-octylphthalate		10 U	0.54 U	0.45 U	0.8 U	4.8 U
205-99-2	Benzo(b)fluoranthene		6.1 J	0.2 J	0.45 U	0.34 J	2.4 J
207-08-9	Benzo(k)fluoranthene		7.6 J	0.3 J	0.45 U	0.3 J	3.5 J
50-32-8	Benzo(a)pyrene		12	0.4 J	0.45 U	0.43 J	5.4
193-39-5	Indeno(1,2,3-cd)pyrene		3.7 J	0.15 J	0.45 U	0.22 J	1.8 J
53-70-3	Dibenz(a,h)anthracene		10 U	0.54 U	0.45 U	0.8 U	4.8 U
191-24-2	Benzo(g,h,i)perylene		4.1 J	0.18 J	0.45 U	0.25 J	2 J
100-51-6	Benzyl Alcohol		10 U	0.54 U	0.45 U	0.8 U	4.8 U
65-85-0	Benzoic Acid		52 U	2.7 U	2.2 U	4 U	24 U
	INORGANICS						
7440-38-2	Arsenic		10.4	20.9	4.7	2.5	9.1
7439-92-1	Lead		373 J	1360 J	8.4 J	522 J	173 J
7439-97-6	Mercury		1.1	0.46	0.06 U	0.81	1.7
7440-66-6	Zinc		461	642	54.2	150	147
57-12-5	Cyanide		0.86 UJ	0.78 UJ	0.63 UJ	0.57 UJ	0.79 UJ

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	SB217D	SB218C	SB220C	SB220G	RB01
		DEPTH:	07-09'	04-06'	04-06'		12
		LAB ID:	3038509	3038510	3040201	3040202	2909601
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY5	TARRY5	TARRY5	TARRY5	TARRY2
		MATRIX:	SOIL	SOIL	SOIL	SOIL	WATER
		SAMPLED:	1/22/97	1/22/97	1/22/97	1/22/97	9/17/96
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	ug/L
	BTEX VOLATILES						
71-43-2	Benzene		0.18 J	3.6	3.5	0.06 J	10 U
108-88-3	Toluene		0.26 J	0.49 J	0.28 J	0.064 U	10 U
100-41-4	Ethylbenzene		0.8 J	24	14	0.055 J	10 U
1330-20-7	Xylene (total)		0.48 J	5.7	7.2	0.1	10 U
	SEMIVOLATILES						
108-95-2	Phenol		42 U	39 U	18 U	17 U	10 U
111-44-4	bis(2-Chloroethyl)Ether		42 U	39 U	18 U	17 U	10 U
95-57-8	2-Chlorophenol		42 U	39 U	18 U	17 U	10 U
541-73-1	1,3-Dichlorobenzene		42 U	39 U	18 U	17 U	10 U
106-46-7	1,4-Dichlorobenzene		42 U	39 U	18 U	17 U	10 U
95-50-1	1,2-Dichlorobenzene		42 U	39 U	18 U	17 U	10 U
95-48-7	2-Methylphenol		42 U	39 U	18 U	17 U	10 U
108-60-1	2,2'-oxybis(1-Chloropropane)		42 U	39 U	18 U	17 U	10 U
106-44-5	4-Methylphenol		42 U	39 U	18 U	17 U	10 U
621-64-7	N-Nitroso-di-n-propylamine		42 U	39 U	18 U	17 U	10 U
67-72-1	Hexachloroethane		42 U	39 U	18 U	17 U	10 U
98-95-3	Nitrobenzene		42 U	39 U	18 U	17 U	10 U
78-59-1	Isophorone		42 U	39 U	18 U	17 U	10 U
88-75-5	2-Nitrophenol		42 U	39 U	18 U	17 U	10 U
105-67-9	2,4-Dimethylphenol		42 U	39 U	18 U	17 U	10 U
120-83-2	2,4-Dichlorophenol		42 U	39 U	18 U	17 U	10 U
120-82-1	1,2,4-Trichlorobenzene		42 U	39 U	18 U	17 U	10 U
91-20-3	Naphthalene		110	39 U	33	5 J	10 U
106-47-8	4-Chloroaniline		42 U	39 U	18 U	17 U	10 U
87-68-3	Hexachlorobutadiene		42 U	39 U	18 U	17 U	10 U
111-91-1	bis(2-Chloroethoxy)methane		42 U	39 U	18 U	17 U	10 U
59-50-7	4-Chloro-3-Methylphenol		42 U	39 U	18 U	17 U	10 U
91-57-6	2-Methylnaphthalene		50	280	120	11 J	10 U
77-47-4	Hexachlorocyclopentadiene		42 U	39 U	18 U	17 U	10 U
88-06-2	2,4,6-Trichlorophenol		42 U	39 U	18 U	17 U	10 U
95-95-4	2,4,5-Trichlorophenol		210 U	200 U	89 U	85 U	50 U
91-58-7	2-Chloronaphthalene		42 U	39 U	18 U	17 U	10 U
88-74-4	2-Nitroaniline		210 U	200 U	89 U	85 U	50 U
131-11-3	Dimethylphthalate		42 U	39 U	18 U	17 U	10 U
208-96-8	Acenaphthylene		9.5 J	39 U	18 U	5 J	10 U
606-20-2	2,6-Dinitrotoluene		42 U	39 U	18 U	17 U	10 U
99-09-2	3-Nitroaniline		210 U	200 U	89 U	85 U	50 U
83-32-9	Acenaphthene		100	13 J	9.2 J	36	10 U
51-28-5	2,4-Dinitrophenol		210 U	200 U	89 U	85 U	50 U
100-02-7	4-Nitrophenol		210 U	200 U	89 U	85 U	50 U
132-64-9	Dibenzofuran		76	39 U	18 U	17 U	10 U
121-14-2	2,4-Dinitrotoluene		42 U	39 U	18 U	17 U	10 U
84-66-2	Diethylphthalate		42 U	39 U	18 U	17 U	10 U
7005-72-3	4-Chlorophenyl-phenylether		42 U	39 U	18 U	17 U	10 U
86-73-7	Fluorene		110	34 J	16 J	22	10 U
100-01-6	4-Nitroaniline		210 U	200 U	89 U	85 U	50 U
534-52-1	4,6-Dinitro-2-methylphenol		210 U	200 U	89 U	85 U	50 U
86-30-6	N-Nitrosodiphenylamine		42 U	39 U	18 U	17 U	10 U
101-55-3	4-Bromophenyl-phenylether		42 U	39 U	18 U	17 U	10 U
118-74-1	Hexachlorobenzene		42 U	39 U	18 U	17 U	10 U
87-86-5	Pentachlorophenol		210 U	200 U	89 U	85 U	50 U
85-01-8	Phenanthrene		1000 D	78	38	86	10 U
120-12-7	Anthracene		210	39 U	6 J	26	10 U
84-74-2	Di-n-butylphthalate		42 U	39 U	18 U	17 U	10 U
206-44-0	Fluoranthene		900 D	14 J	29	35	10 U
129-00-0	Pyrene		470 D	16 J	32	17 U	10 U
85-68-7	Butylbenzylphthalate		42 U	39 U	18 U	17 U	10 U
91-94-1	3,3'-Dichlorobenzidine		84 U	78 U	36 U	34 U	20 U
56-55-3	Benzo(a)anthracene		200	5.3 J	18	20	10 U
218-01-9	Chrysene		200	5.8 J	17 J	21	10 U
117-81-7	bis(2-Ethylhexyl)phthalate		42 U	39 U	18 U	17 U	10 U
117-84-0	Di-n-octylphthalate		170 U	39 U	18 U	17 U	10 U
205-99-2	Benzo(b)fluoranthene		250 D	5.1 J	14 J	9.8 J	10 U
207-08-9	Benzo(k)fluoranthene		310 D	5.2 J	15 J	9.6 J	10 U
50-32-8	Benzo(a)pyrene		260 D	5.6 J	16 J	13 J	10 U
193-39-5	Indeno(1,2,3-cd)pyrene		35 JD	39 U	8.7 J	5 J	10 U
53-70-3	Dibenz(a,h)anthracene		170 U	39 U	18 U	17 U	10 U
191-24-2	Benzo(g,h,i)perylene		32 JD	39 U	9.2 J	5.6 J	10 U
100-51-6	Benzyl Alcohol		170 U	39 U	18 U	17 U	10 U
65-85-0	Benzoic Acid		840 U	200 U	89 U	85 U	50 U
	INORGANICS						
7440-38-2	Arsenic		3.7	4.8	3.6	7.2	5.2 U
7439-92-1	Lead		172 J	91.8 J	1610 J	333 J	2.2 U
7439-97-6	Mercury		0.13	0.17	0.54	0.35	0.2 U
7440-66-6	Zinc		67.9	77.8	304	299	17.3 B
57-12-5	Cyanide		0.72 UJ	0.6 UJ	0.64 UJ	0.5 UJ	10 U

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

SOIL SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB02	TB01
		DEPTH:	14'	
		LAB ID:	3040209	2909602
		SOURCE:	NYTEST	NYTEST
		SDG:	TARRY5	TARRY2
		MATRIX:	WATER	WATER
		SAMPLED:	1/22/97	9/17/96
		UNITS:	ug/L	ug/L
	BTEX VOLATILES			
71-43-2	Benzene		10 U	10 U
108-88-3	Toluene		10 U	10 U
100-41-4	Ethylbenzene		10 U	10 U
1330-20-7	Xylene (total)		10 U	10 U
	SEMIVOLATILES			
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	
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	
111-91-1	bis(2-Chloroethoxy)methane		10 U	
59-50-7	4-Chloro-3-Methylphenol		10 U	
91-57-6	2-Methylnaphthalene		10 U	
77-47-4	Hexachlorocyclopentadiene		10 U	
88-06-2	2,4,6-Trichlorophenol		10 U	
95-95-4	2,4,5-Trichlorophenol		53 U	
91-58-7	2-Chloronaphthalene		10 U	
88-74-4	2-Nitroaniline		53 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		53 U	
83-32-9	Acenaphthene		10 U	
51-28-5	2,4-Dinitrophenol		53 U	
100-02-7	4-Nitrophenol		53 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-phenylether		10 U	
86-73-7	Fluorene		10 U	
100-01-6	4-Nitroaniline		53 U	
534-52-1	4,6-Dinitro-2-methylphenol		53 U	
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		53 U	
85-01-8	Phenanthrene		10 U	
120-12-7	Anthracene		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		21 U	
56-55-3	Benzo(a)anthracene		10 U	
218-01-9	Chrysene		10 U	
117-81-7	bis(2-Ethylhexyl)phthalate		10 U	
117-84-0	Di-n-octylphthalate		10 U	
205-99-2	Benzo(b)fluoranthene		10 U	
207-08-9	Benzo(k)fluoranthene		10 U	
50-32-8	Benzo(a)pyrene		10 U	
193-39-5	Indeno(1,2,3-cd)pyrene		10 U	
53-70-3	Dibenz(a,h)anthracene		10 U	
191-24-2	Benzo(g,h,i)perylene		10 U	
100-51-6	Benzyl Alcohol		10 U	
65-85-0	Benzoic Acid		53 U	
	INORGANICS			
7440-38-2	Arsenic		4.1 U	
7439-92-1	Lead		1.8 U	
7439-97-6	Mercury		0.17 J	
7440-66-6	Zinc		11.6 J	
57-12-5	Cyanide		10 U	

(1) Duplicate sample of SB03J
(2) Duplicate sample of SB17H

TEST PIT RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID: LAB ID: SOURCE: SDG: MATRIX: SAMPLED: UNITS:	TP03SO 2901301 NYTEST 29013 SOIL 9/09/96 mg/L	TP04SO 2901302 NYTEST 29013 SOIL 9/09/96 mg/L
	TCLP VOLATILES			
75-01-4	Vinyl Chloride		.05 U	.05 U
75-35-4	1,1-Dichloroethene		.05 U	.05 U
67-66-3	Chloroform		.05 U	.05 U
107-06-2	1,2-Dichloroethane		.05 U	.05 U
78-93-3	2-Butanone		.05 U	.05 U
56-23-5	Carbon Tetrachloride		.05 U	.05 U
79-01-6	Trichloroethene		.05 U	.05 U
71-43-2	Benzene		0.58	0.59
127-18-4	Tetrachloroethene		.05 U	.05 U
108-90-7	Chlorobenzene		.05 U	.05 U

GROUNWATER SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	MW07	MW10	MW11	MW12	MW101 (1)
		LAB ID:	2914307	2914305	2914306	2914301	2914304
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY3	TARRY3	TARRY3	TARRY3	TARRY3
		MATRIX:	WATER	WATER	WATER	WATER	WATER
		SAMPLED:	9/19/96	9/19/96	9/19/96	9/19/96	9/19/96
CAS NO.	COMPOUND	UNITS:	ug/L	ug/L	ug/L	ug/L	ug/L
	VOLATILES						
71-43-2	Benzene		140	1100 D	930 D	10 U	10 U
108-88-3	Toluene		8 J	140 D	51	10 U	10 U
100-41-4	Ethylbenzene		200	49 JD	200 D	10 U	10 U
1330-20-7	Xylene (total)		120	120 D	200 D	10	10
	SEMIVOLATILES						
108-95-2	Phenol		11 U	22	11 U	12 U	11 U
111-44-4	bis(2-Chloroethyl)Ether		11 U	11 U	11 U	12 U	11 U
95-57-8	2-Chlorophenol		11 U	11 U	11 U	12 U	11 U
541-73-1	1,3-Dichlorobenzene		11 U	11 U	11 U	12 U	11 U
106-46-7	1,4-Dichlorobenzene		11 U	11 U	11 U	12 U	11 U
95-50-1	1,2-Dichlorobenzene		11 U	11 U	11 U	12 U	11 U
95-48-7	2-Methylphenol		11 U	11 U	11 U	12 U	11 U
108-60-1	2,2'-oxybis(1-Chloropropane)		11 U	11 U	11 U	12 U	11 U
106-44-5	4-Methylphenol		42	11 U	11 U	12 U	11 U
621-64-7	N-Nitroso-di-n-propylamine		11 U	11 U	11 U	12 U	11 U
67-72-1	Hexachloroethane		11 U	11 U	11 U	12 U	11 U
98-95-3	Nitrobenzene		11 U	11 U	11 U	12 U	11 U
78-59-1	Isophorone		11 U	11 U	11 U	12 U	11 U
88-75-5	2-Nitrophenol		11 U	11 U	11 U	12 U	11 U
105-67-9	2,4-Dimethylphenol		11 U	74	11 U	12 U	11 U
120-83-2	2,4-Dichlorophenol		11 U	11 U	11 U	12 U	11 U
120-82-1	1,2,4-Trichlorobenzene		11 U	11 U	11 U	12 U	11 U
91-20-3	Naphthalene		770 D	370 D	680 D	16	13
106-47-8	4-Chloroaniline		11 U	11 U	11 U	12 U	11 U
87-68-3	Hexachlorobutadiene		11 U	11 U	11 U	12 U	11 U
111-91-1	bis(2-Chloroethoxy)methane		11 U	11 U	11 U	12 U	11 U
59-50-7	4-Chloro-3-Methylphenol		11 U	11 U	11 U	12 U	11 U
91-57-6	2-Methylnaphthalene		34	37 JD	76 JD	12 U	11 U
77-47-4	Hexachlorocyclopentadiene		11 U	11 U	11 U	12 U	11 U
88-06-2	2,4,6-Trichlorophenol		11 U	11 U	11 U	12 U	11 U
95-95-4	2,4,5-Trichlorophenol		57 U	54 U	55 U	60 U	54 U
91-58-7	2-Chloronaphthalene		11 U	11 U	11 U	12 U	11 U
88-74-4	2-Nitroaniline		57 U	54 U	55 U	60 U	54 U
131-11-3	Dimethylphthalate		11 U	11 U	11 U	12 U	11 U
208-96-8	Acenaphthylene		11 U	42	11 U	9 J	9 J
606-20-2	2,6-Dinitrotoluene		11 U	11 U	11 U	12 U	11 U
99-09-2	3-Nitroaniline		57 U	54 U	55 U	60 U	54 U
83-32-9	Acenaphthene		210 D	18	98 J	7 J	7 J
51-28-5	2,4-Dinitrophenol		57 U	54 U	55 U	60 U	54 U
100-02-7	4-Nitrophenol		57 U	54 U	55 U	60 U	54 U
132-64-9	Dibenzofuran		17	7 J	5 J	12 U	11 U
121-14-2	2,4-Dinitrotoluene		11 U	11 U	11 U	12 U	11 U
84-66-2	Diethylphthalate		11 U	11 U	11 U	12 U	11 U
7005-72-3	4-Chlorophenyl-phenylether		11 U	11 U	11 U	12 U	11 U
86-73-7	Fluorene		71	24	43	12 U	11 U
100-01-6	4-Nitroaniline		57 U	54 U	55 U	60 U	54 U
534-52-1	4,6-Dinitro-2-methylphenol		57 U	54 U	55 U	60 U	54 U
86-30-6	N-Nitrosodiphenylamine		11 U	11 U	11 U	12 U	11 U
101-55-3	4-Bromophenyl-phenylether		11 U	11 U	11 U	12 U	11 U
118-74-1	Hexachlorobenzene		11 U	11 U	11 U	12 U	11 U
87-86-5	Pentachlorophenol		57 U	54 U	55 U	60 U	54 U
85-01-8	Phenanthrene		75	25	31	12 U	11 U
120-12-7	Anthracene		18	6 J	7 J	12 U	11 U
84-74-2	Di-n-butylphthalate		11 U	11 U	11 U	12 U	11 U
206-44-0	Fluoranthene		10 J	11 U	2 J	12 U	11 U
129-00-0	Pyrene		12	3 J	3 J	12 U	11 U
85-68-7	Butylbenzylphthalate		11 U	11 U	11 U	12 U	11 U
91-94-1	3,3'-Dichlorobenzidine		23 U	22 U	22 U	24 U	22 U
56-55-3	Benzo(a)anthracene		2 J	11 U	11 U	12 U	11 U
218-01-9	Chrysene		2 J	11 U	11 U	12 U	11 U
117-81-7	bis(2-Ethylhexyl)phthalate		11 U	11 U	11 U	12 U	11 U
117-84-0	Di-n-octylphthalate		11 U	11 U	11 U	12 U	11 U
205-99-2	Benzo(b)fluoranthene		11 U	11 U	11 U	12 U	11 U
207-08-9	Benzo(k)fluoranthene		11 U	11 U	11 U	12 U	11 U
50-32-8	Benzo(a)pyrene		11 U	11 U	11 U	12 U	11 U
193-39-5	Indeno(1,2,3-cd)pyrene		11 U	11 U	11 U	12 U	11 U
53-70-3	Dibenz(a,h)anthracene		11 U	11 U	11 U	12 U	11 U
191-24-2	Benzo(g,h,i)perylene		11 U	11 U	11 U	12 U	11 U
100-51-6	Benzyl Alcohol		11 U	11 U	11 U	12 U	11 U
65-85-0	Benzoic Acid		57 U	54 U	55 U	60 U	54 U
	INORGANICS						
7440-38-2	Arsenic		26.5	45.5	5.2 U	10.3	10.7
7439-92-1	Lead		3.7	153	5	4.5	2.3 J
7439-97-6	Mercury		0.2 U	0.65	0.2 U	0.2 U	0.2 U
7440-66-6	Zinc		86.5	734	24	42.8	30.5
57-12-5	Cyanide		660	280	10 U	10 UJ	109 J

(1) - Duplicate sample of MW12
(2) - Duplicate sample of MW15

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	BA0101	BA0201	RB0104	RB0148	RB01810
		DEPTH:	0'-1'	0'-1'	0'-4'	4'-8'	8'-10'
		LAB ID:	3113208	3113209	3111901	3111902	3111903
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY7	TARRY7	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/24/97	4/24/97	4/21/97	4/21/97	4/21/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX						
71-43-2	Benzene	mg/kg	0.028 UJ	0.028 UJ	0.015 J	0.41 J	0.013 U
108-88-3	Toluene	mg/kg	0.028 UJ	0.028 UJ	0.009 J	1.7 U	0.013 U
100-41-4	Ethylbenzene	mg/kg	0.028 UJ	0.028 UJ	0.15	22	0.029
1330-20-7	Xylene (total)	mg/kg	0.028 UJ	0.028 UJ	0.26	14	0.025
	SEMIVOLATILES						
108-95-2	Phenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
111-44-4	bis(2-Chloroethyl)Ether	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
95-57-8	2-Chlorophenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
541-73-1	1,3-Dichlorobenzene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
106-46-7	1,4-Dichlorobenzene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
95-50-1	1,2-Dichlorobenzene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
95-48-7	2-Methylphenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
108-60-1	2,2'-oxybis(1-Chloropropane)	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
106-44-5	4-Methylphenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
621-64-7	N-Nitroso-di-n-propylamine	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
67-72-1	Hexachloroethane	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
98-95-3	Nitrobenzene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
78-59-1	Isophorone	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
88-75-5	2-Nitrophenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
105-67-9	2,4-Dimethylphenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
120-83-2	2,4-Dichlorophenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
120-82-1	1,2,4-Trichlorobenzene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
91-20-3	Naphthalene	mg/kg	0.92 UJ	0.95 UJ	27 D	270 D	1.2
106-47-8	4-Chloroaniline	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
87-68-3	Hexachlorobutadiene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
111-91-1	bis(2-Chloroethoxy)methane	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
59-50-7	4-Chloro-3-Methylphenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
91-57-6	2-Methylnaphthalene	mg/kg	0.92 UJ	0.95 UJ	18	160 D	0.92
77-47-4	Hexachlorocyclopentadiene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
88-06-2	2,4,6-Trichlorophenol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
95-95-4	2,4,5-Trichlorophenol	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
91-58-7	2-Chloronaphthalene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
88-74-4	2-Nitroaniline	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
131-11-3	Dimethylphthalate	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
208-96-8	Acenaphthylene	mg/kg	0.92 UJ	0.95 UJ	2.1 J	5.7	0.42 U
606-20-2	2,6-Dinitrotoluene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
99-09-2	3-Nitroaniline	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
83-32-9	Acenaphthene	mg/kg	0.92 UJ	0.95 UJ	15	84 D	0.52
51-28-5	2,4-Dinitrophenol	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
100-02-7	4-Nitrophenol	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
132-64-9	Dibenzofuran	mg/kg	0.92 UJ	0.95 UJ	1.3 J	6.2	0.42 U
121-14-2	2,4-Dinitrotoluene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
84-66-2	Diethylphthalate	mg/kg	0.13 J	0.95 UJ	2.6 U	4.7 U	0.42 U
7005-72-3	4-Chlorophenyl-phenylether	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
86-73-7	Fluorene	mg/kg	0.92 UJ	0.95 UJ	8.6	43 JD	0.29 J
100-01-6	4-Nitroaniline	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
534-52-1	4,6-Dinitro-2-methylphenol	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
86-30-6	N-Nitrosodiphenylamine	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
101-55-3	4-Bromophenyl-phenylether	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
118-74-1	Hexachlorobenzene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
87-86-5	Pentachlorophenol	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
85-01-8	Phenanthrene	mg/kg	0.17 J	0.17 J	34 D	120 D	0.95
120-12-7	Anthracene	mg/kg	0.92 UJ	0.95 UJ	9.4	34	0.26 J
84-74-2	Di-n-butylphthalate	mg/kg	0.11 J	0.95 UJ	2.6 U	4.7 U	0.42 U
206-44-0	Fluoranthene	mg/kg	0.31 J	0.42 J	13	33	0.3 J
129-00-0	Pyrene	mg/kg	0.18 J	0.25 J	9.3	23	0.32 J
85-68-7	Butylbenzylphthalate	mg/kg	0.25 J	0.19 J	2.6 U	4.7 U	0.42 U
91-94-1	3,3'-Dichlorobenzidine	mg/kg	1.8 UJ	1.9 UJ	5.1 U	9.4 U	0.84 U
56-55-3	Benzo(a)anthracene	mg/kg	0.16 J	0.18 J	6	15	0.13 J
218-01-9	Chrysene	mg/kg	0.19 J	0.24 J	6	15	0.13 J
117-81-7	bis(2-Ethylhexyl)phthalate	mg/kg	0.32 J	0.47 J	0.36 J	4.7 U	0.42 U
117-84-0	Di-n-octylphthalate	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
205-99-2	Benzo(b)fluoranthene	mg/kg	0.26 J	0.23 J	4.1	9.6	0.044 J
207-08-9	Benzo(k)fluoranthene	mg/kg	0.22 J	0.3 J	3.9	12	0.063 J
50-32-8	Benzo(a)pyrene	mg/kg	0.19 J	0.23 J	5	12	0.085 J
193-39-5	Indeno(1,2,3-cd)pyrene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
53-70-3	Dibenz(a,h)anthracene	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
191-24-2	Benzo(g,h,i)perylene	mg/kg	0.92 UJ	0.95 UJ	0.32 J	0.67 J	0.42 U
100-51-6	Benzyl Alcohol	mg/kg	0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
65-85-0	Benzoic Acid	mg/kg	4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
	INORGANICS						
7440-38-2	Arsenic	mg/Kg	9.2 J	10.8 J	7.3 J	8.6 J	2 J
7439-92-1	Lead	mg/Kg	102 J	96.3 J	67.7	170	7.2
7439-97-6	Mercury	mg/Kg	1 J	1.1 J	0.73	0.85	0.04 U
7440-66-6	Zinc	mg/Kg	242 J	233 J	154	371	39.3
	OTHER						
57-12-5	Total Cyanide	mg/Kg	1.4 UJ	1.45 UJ			
7440-44-0	Total Organic Carbon	mg/Kg	46100 J	27200 J	18000	18300	13600

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB0204	RB02810	RB021012(1)	RB03610	RB0402
		DEPTH:	0'-4'	8'-10'	8'-10'	6'-10'	0'-2'
		LAB ID:	3111904	3111905	3111906	3111907	3111908
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY6	TARRY6	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/22/97	4/22/97	4/22/97	4/22/97	4/22/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX						
71-43-2	Benzene	mg/kg	0.014 U	0.013 U	0.013 U	0.011 U	0.02 U
108-88-3	Toluene	mg/kg	0.014 U	0.013 U	0.013 U	0.011 U	0.02 U
100-41-4	Ethylbenzene	mg/kg	0.005 J	0.013 U	0.013 U	0.004 J	0.02 U
1330-20-7	Xylene (total)	mg/kg	0.014 U	0.013 U	0.013 U	0.011 U	0.02 U
	SEMIVOLATILES						
108-95-2	Phenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
111-44-4	bis(2-Chloroethyl)Ether	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
95-57-8	2-Chlorophenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
541-73-1	1,3-Dichlorobenzene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
106-46-7	1,4-Dichlorobenzene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
95-50-1	1,2-Dichlorobenzene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
95-48-7	2-Methylphenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
108-60-1	2,2'-oxybis(1-Chloropropane)	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
106-44-5	4-Methylphenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
621-64-7	N-Nitroso-di-n-propylamine	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
67-72-1	Hexachloroethane	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
98-95-3	Nitrobenzene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
78-59-1	Isophorone	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
88-75-5	2-Nitrophenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
105-67-9	2,4-Dimethylphenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
120-83-2	2,4-Dichlorophenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
120-82-1	1,2,4-Trichlorobenzene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
91-20-3	Naphthalene	mg/kg	0.11 J	0.44 U	0.44 U	0.19 J	0.14 J
106-47-8	4-Chloroaniline	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
87-68-3	Hexachlorobutadiene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
111-91-1	bis(2-Chloroethoxy)methane	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
59-50-7	4-Chloro-3-Methylphenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
91-57-6	2-Methylnaphthalene	mg/kg	0.094 J	0.44 U	0.44 U	0.36 J	0.24 J
77-47-4	Hexachlorocyclopentadiene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
88-06-2	2,4,6-Trichlorophenol	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
95-95-4	2,4,5-Trichlorophenol	mg/kg	2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
91-58-7	2-Chloronaphthalene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
88-74-4	2-Nitroaniline	mg/kg	2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
131-11-3	Dimethylphthalate	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
208-96-8	Acenaphthylene	mg/kg	0.58	0.44 U	0.44 U	0.091 J	0.65 U
606-20-2	2,6-Dinitrotoluene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
99-09-2	3-Nitroaniline	mg/kg	2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
83-32-9	Acenaphthene	mg/kg	0.44 J	0.44 U	0.44 U	0.93	0.38 J
51-28-5	2,4-Dinitrophenol	mg/kg	2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
100-02-7	4-Nitrophenol	mg/kg	2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
132-64-9	Dibenzofuran	mg/kg	0.053 J	0.44 U	0.44 U	0.049 J	0.65 U
121-14-2	2,4-Dinitrotoluene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
84-66-2	Diethylphthalate	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
7005-72-3	4-Chlorophenyl-phenylether	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
86-73-7	Fluorene	mg/kg	0.18 J	0.44 U	0.44 U	0.42	0.15 J
100-01-6	4-Nitroaniline	mg/kg	2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
534-52-1	4,6-Dinitro-2-methylphenol	mg/kg	2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
86-30-6	N-Nitrosodiphenylamine	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
101-55-3	4-Bromophenyl-phenylether	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
118-74-1	Hexachlorobenzene	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
87-86-5	Pentachlorophenol	mg/kg	2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
85-01-8	Phenanthrene	mg/kg	2.6	0.44 U	0.44 U	1.6	0.69
120-12-7	Anthracene	mg/kg	1	0.44 U	0.44 U	0.49	0.18 J
84-74-2	Di-n-butylphthalate	mg/kg	0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
206-44-0	Fluoranthene	mg/kg	2.9	0.44 U	0.44 U	0.68	0.42 J
129-00-0	Pyrene	mg/kg	1.8	0.44 U	0.44 U	0.63	0.28 J
85-68-7	Butylbenzylphthalate	mg/kg	0.077 J	0.44 U	0.44 U	0.38 U	0.29 J
91-94-1	3,3'-Dichlorobenzidine	mg/kg	0.9 U	0.88 U	0.88 U	0.77 U	1.3 U
56-55-3	Benzo(a)anthracene	mg/kg	1.4	0.44 U	0.44 U	0.31 J	0.15 J
218-01-9	Chrysene	mg/kg	1.4	0.44 U	0.44 U	0.31 J	0.17 J
117-81-7	bis(2-Ethylhexyl)phthalate	mg/kg	0.15 J	0.44 U	0.44 U	0.044 J	0.28 J
117-84-0	Di-n-octylphthalate	mg/kg	0.45 UJ	0.44 U	0.44 U	0.38 U	0.65 U
205-99-2	Benzo(b)fluoranthene	mg/kg	0.91 J	0.44 U	0.44 U	0.12 J	0.16 J
207-08-9	Benzo(k)fluoranthene	mg/kg	1.3 J	0.44 U	0.44 U	0.19 J	0.17 J
50-32-8	Benzo(a)pyrene	mg/kg	1.2 J	0.44 U	0.44 U	0.22 J	0.15 J
193-39-5	Indeno(1,2,3-cd)pyrene	mg/kg	0.085 J	0.44 U	0.44 U	0.38 U	0.65 U
53-70-3	Dibenz(a,h)anthracene	mg/kg	0.45 UJ	0.44 U	0.44 U	0.38 U	0.65 U
191-24-2	Benzo(g,h,i)perylene	mg/kg	0.079 J	0.44 U	0.44 U	0.38 U	0.65 U
100-51-6	Benzyl Alcohol	mg/kg	0.45 UJ	0.44 U	0.44 U	0.38 U	0.65 U
65-85-0	Benzoic Acid	mg/kg	2.2 UJ	2.2 U	2.2 U	1.9 U	3.3 U
	INORGANICS						
7440-38-2	Arsenic	mg/Kg	2.5 J	5.3 J	5.5 J	4.1 J	7.4 J
7439-92-1	Lead	mg/Kg	38.5	8.9	9	7.3	76.9
7439-97-6	Mercury	mg/Kg	0.32	0.04 U	0.04 U	0.03 U	1.2
7440-66-6	Zinc	mg/Kg	65.4	56.2	58.6	45.3	185
	OTHER						
57-12-5	Total Cyanide	mg/Kg					
7440-44-0	Total Organic Carbon	mg/Kg	33100	84200	31400	24400	7270

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID: / DEPTH: / LAB ID: / SOURCE: / SDG: / MATRIX: / SAMPLED: / UNITS:	RB04810 5'-10' 3111909 NYTEST TARRY6 SOIL 4/22/97 mg/Kg	RB0504 0'-4' 3113101 NYTEST TARRY6 SOIL 4/23/97 mg/Kg	RB0508 6'-8' 3113104 NYTEST TARRY6 SOIL 4/23/97 mg/Kg	RB0502 0'-2' 3113105 NYTEST TARRY6 SOIL 4/23/97 mg/Kg	RB0508 5'-8' 3113106 NYTEST TARRY6 SOIL 4/23/97 mg/Kg
	BTEX						
71-43-2	Benzene	mg/kg	0.011 U	0.005 J	0.012 U	0.026 UJ	0.012 U
108-88-3	Toluene	mg/kg	0.011 U	0.011 U	0.012 U	0.026 UJ	0.012 U
100-41-4	Ethylbenzene	mg/kg	0.011 U	0.076	0.012 U	0.026 UJ	0.012 U
1330-20-7	Xylene (total)	mg/kg	0.011 U	0.15	0.012 U	0.026 UJ	0.012 U
	SEMIVOLATILES						
108-95-2	Phenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
111-44-4	bis(2-Chloroethyl)Ether	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
95-57-8	2-Chlorophenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
541-73-1	1,3-Dichlorobenzene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
106-46-7	1,4-Dichlorobenzene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
95-50-1	1,2-Dichlorobenzene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
95-48-7	2-Methylphenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
108-60-1	2,2'-oxybis(1-Chloropropane)	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
106-44-5	4-Methylphenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
621-64-7	N-Nitroso-di-n-propylamine	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
67-72-1	Hexachloroethane	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
98-95-3	Nitrobenzene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
78-59-1	Isophorone	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
88-75-5	2-Nitrophenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
105-67-9	2,4-Dimethylphenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
120-83-2	2,4-Dichlorophenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
120-82-1	1,2,4-Trichlorobenzene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
91-20-3	Naphthalene	mg/kg	0.38 U	1.2	0.42 U	0.31 J	0.42 U
106-47-8	4-Chloroaniline	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
87-68-3	Hexachlorobutadiene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
111-91-1	bis(2-Chloroethoxy)methane	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
59-50-7	4-Chloro-3-Methylphenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
91-57-6	2-Methylnaphthalene	mg/kg	0.38 U	0.34 J	0.42 U	0.88 UJ	0.42 U
77-47-4	Hexachlorocyclopentadiene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
88-06-2	2,4,6-Trichlorophenol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
95-95-4	2,4,5-Trichlorophenol	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
91-58-7	2-Chloronaphthalene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
88-74-4	2-Nitroaniline	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
131-11-3	Dimethylphthalate	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
208-96-8	Acenaphthylene	mg/kg	0.38 U	0.13 J	0.42 U	0.22 J	0.42 U
606-20-2	2,6-Dinitrotoluene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
99-09-2	3-Nitroaniline	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
83-32-9	Acenaphthene	mg/kg	0.38 U	0.4	0.42 U	0.36 J	0.42 U
51-28-5	2,4-Dinitrophenol	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
100-02-7	4-Nitrophenol	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
132-64-9	Dibenzofuran	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
121-14-2	2,4-Dinitrotoluene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
84-66-2	Diethylphthalate	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
7005-72-3	4-Chlorophenyl-phenylether	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
86-73-7	Fluorene	mg/kg	0.38 U	0.2 J	0.42 U	0.34 J	0.42 U
100-01-6	4-Nitroaniline	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
534-52-1	4,6-Dinitro-2-methylphenol	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
86-30-6	N-Nitrosodiphenylamine	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
101-55-3	4-Bromophenyl-phenylether	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
118-74-1	Hexachlorobenzene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
87-86-5	Pentachlorophenol	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
85-01-8	Phenanthrene	mg/kg	0.38 U	0.65	0.42 U	1.4 J	0.42 U
120-12-7	Anthracene	mg/kg	0.38 U	0.21 J	0.42 U	0.44 J	0.42 U
84-74-2	Di-n-butylphthalate	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	3.1
206-44-0	Fluoranthene	mg/kg	0.38 U	0.42	0.42 U	1 J	0.42 U
129-00-0	Pyrene	mg/kg	0.38 U	0.39	0.42 U	0.78 J	0.42 U
85-68-7	Butylbenzylphthalate	mg/kg	0.38 U	0.17 J	0.42 U	0.59 J	0.42 U
91-94-1	3,3'-Dichlorobenzidine	mg/kg	0.75 U	0.76 U	0.83 U	1.8 UJ	0.83 U
56-55-3	Benzo(a)anthracene	mg/kg	0.38 U	0.22 J	0.42 U	0.42 J	0.42 U
218-01-9	Chrysene	mg/kg	0.38 U	0.23 J	0.42 U	0.47 J	0.42 U
117-81-7	bis(2-Ethylhexyl)phthalate	mg/kg	0.38 U	0.13 J	0.096 J	0.5 J	0.053 J
117-84-0	Di-n-octylphthalate	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
205-99-2	Benzo(b)fluoranthene	mg/kg	0.38 U	0.096 J	0.42 U	0.2 J	0.42 U
207-08-9	Benzo(k)fluoranthene	mg/kg	0.38 U	0.13 J	0.42 U	0.22 J	0.42 U
50-32-8	Benzo(a)pyrene	mg/kg	0.38 U	0.2 J	0.42 U	0.36 J	0.42 U
193-39-5	Indeno(1,2,3-cd)pyrene	mg/kg	0.38 U	0.12 J	0.42 U	0.19 J	0.42 U
53-70-3	Dibenz(a,h)anthracene	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
191-24-2	Benzo(g,h,i)perylene	mg/kg	0.38 U	0.15 J	0.42 U	0.2 J	0.42 U
100-51-6	Benzyl Alcohol	mg/kg	0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
65-85-0	Benzoic Acid	mg/kg	1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
	INORGANICS						
7440-38-2	Arsenic	mg/Kg	0.88 J	4.9	2.3	9.1 J	3.9
7439-92-1	Lead	mg/Kg	5.6	43.3 J	7.4 J	83.4 J	7 J
7439-97-6	Mercury	mg/Kg	0.03 U	0.51	0.04 U	1.1 J	0.04 U
7440-66-6	Zinc	mg/Kg	31.1	102 J	49.1 J	211 J	43.6 J
	OTHER						
57-12-5	Total Cyanide	mg/Kg		0.57 U	0.62 U	1.31 UJ	0.62 U
7440-44-0	Total Organic Carbon	mg/Kg	9900	7380 J	7011 J	10800 J	25300 J

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	RB0702	RB7810	RB0804	RB0868	RB0924
		DEPTH:	0'-2'	8'-10'	0'-4'	6'-8'	2'-4'
		LAB ID:	3113107	3113108	3113109	3113110	3113111
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY6	TARRY6	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/23/97	4/23/97	4/23/97	4/23/97	4/24/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX						
71-43-2	Benzene	mg/kg	0.024 UJ	0.012 U	0.021 UJ	0.011 U	0.02 U
108-88-3	Toluene	mg/kg	0.024 UJ	0.012 U	0.021 UJ	0.011 U	0.02 U
100-41-4	Ethylbenzene	mg/kg	0.035 J	0.012 U	0.018 J	0.011 U	0.02 U
1330-20-7	Xylene (total)	mg/kg	0.034 J	0.012 U	0.047 J	0.011 U	0.02 U
	SEMIVOLATILES						
108-95-2	Phenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
111-44-4	bis(2-Chloroethyl)Ether	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
95-57-8	2-Chlorophenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
541-73-1	1,3-Dichlorobenzene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
106-46-7	1,4-Dichlorobenzene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
95-50-1	1,2-Dichlorobenzene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
95-48-7	2-Methylphenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
108-60-1	2,2'-oxybis(1-Chloropropane)	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
106-44-5	4-Methylphenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
621-64-7	N-Nitroso-di-n-propylamine	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
67-72-1	Hexachloroethane	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
98-95-3	Nitrobenzene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
78-59-1	Isophorone	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
88-75-5	2-Nitrophenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
105-67-9	2,4-Dimethylphenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
120-83-2	2,4-Dichlorophenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
120-82-1	1,2,4-Trichlorobenzene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
91-20-3	Naphthalene	mg/kg	0.79 J	0.42 U	1.9 J	0.37 U	0.58 J
106-47-8	4-Chloroaniline	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.26 J
87-68-3	Hexachlorobutadiene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
111-91-1	bis(2-Chloroethoxy)methane	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
59-50-7	4-Chloro-3-Methylphenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
91-57-6	2-Methylnaphthalene	mg/kg	0.49 J	0.42 U	0.89 J	0.37 U	0.34 J
77-47-4	Hexachlorocyclopentadiene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
88-06-2	2,4,6-Trichlorophenol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
95-95-4	2,4,5-Trichlorophenol	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
91-58-7	2-Chloronaphthalene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
88-74-4	2-Nitroaniline	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
131-11-3	Dimethylphthalate	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
208-96-8	Acenaphthylene	mg/kg	0.23 J	0.42 U	0.36 J	0.37 U	0.2 J
606-20-2	2,6-Dinitrotoluene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
99-09-2	3-Nitroaniline	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
83-32-9	Acenaphthene	mg/kg	0.57 J	0.42 U	1.1 J	0.37 U	0.47 J
1-28-5	2,4-Dinitrophenol	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
00-02-7	4-Nitrophenol	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
132-64-9	Dibenzofuran	mg/kg	0.81 UJ	0.42 U	0.08 J	0.37 U	0.65 U
121-14-2	2,4-Dinitrotoluene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
84-66-2	Diethylphthalate	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
7005-72-3	4-Chlorophenyl-phenylether	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
86-73-7	Fluorene	mg/kg	0.33 J	0.42 U	0.68 J	0.37 U	0.2 J
100-01-6	4-Nitroaniline	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
534-52-1	4,6-Dinitro-2-methylphenol	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
86-30-6	N-Nitrosodiphenylamine	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
101-55-3	4-Bromophenyl-phenylether	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
118-74-1	Hexachlorobenzene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
87-86-5	Pentachlorophenol	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
85-01-8	Phenanthrene	mg/kg	1.2 J	0.42 U	2.5 J	0.37 U	0.93
120-12-7	Anthracene	mg/kg	0.42 J	0.42 U	0.83 J	0.37 U	0.34 J
84-74-2	Di-n-butylphthalate	mg/kg	0.81 UJ	2.6	0.072 J	0.37 U	0.65 U
206-44-0	Fluoranthene	mg/kg	0.87 J	0.42 U	1.6 J	0.37 U	0.7
129-00-0	Pyrene	mg/kg	0.7 J	0.42 U	2 J	0.37 U	0.85
85-68-7	Butylbenzylphthalate	mg/kg	0.19 J	0.42 U	0.29 J	0.37 U	0.28 J
91-94-1	3,3'-Dichlorobenzidine	mg/kg	1.6 UJ	0.83 U	1.4 UJ	0.74 U	1.3 U
56-55-3	Benzo(a)anthracene	mg/kg	0.42 J	0.42 U	0.93 J	0.37 U	0.39 J
218-01-9	Chrysene	mg/kg	0.45 J	0.42 U	0.93 J	0.37 U	0.42 J
117-81-7	bis(2-Ethylhexyl)phthalate	mg/kg	0.32 J	0.096 J	0.4 J	0.091 J	0.26 J
117-84-0	Di-n-octylphthalate	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
205-99-2	Benzo(b)fluoranthene	mg/kg	0.19 J	0.42 U	0.38 J	0.37 U	0.19 J
207-08-9	Benzo(k)fluoranthene	mg/kg	0.23 J	0.42 U	0.43 J	0.37 U	0.26 J
50-32-8	Benzo(a)pyrene	mg/kg	0.36 J	0.42 U	0.74 J	0.37 U	0.37 J
193-39-5	Indeno(1,2,3-cd)pyrene	mg/kg	0.16 J	0.42 U	0.4 J	0.37 U	0.28 J
53-70-3	Dibenz(a,h)anthracene	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
191-24-2	Benzo(g,h,i)perylene	mg/kg	0.17 J	0.42 U	0.51 J	0.37 U	0.37 J
100-51-6	Benzyl Alcohol	mg/kg	0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
65-85-0	Benzoic Acid	mg/kg	4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
	INORGANICS						
7440-38-2	Arsenic	mg/Kg	9.9 J	2.5	8.1 J	0.7 J	8.1
7439-92-1	Lead	mg/Kg	80.8 J	7.8 J	81.2 J	5 J	66.8 J
7439-97-6	Mercury	mg/Kg	1.1 J	0.04 U	1 J	0.03 U	1.1
7440-66-6	Zinc	mg/Kg	207 J	53.8 J	186 J	24.2 J	159 J
	OTHER						
57-12-5	Total Cyanide	mg/Kg	1.21 UJ	0.63 U	1.06 UJ	0.56 U	0.98 U
7440-44-0	Total Organic Carbon	mg/Kg	9313 J	5070 J	9950 J	3880 J	2210 J

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID: / DEPTH: / LAB ID: / SOURCE: / SDG: / MATRIX: / SAMPLED: / UNITS:	RB1204 / 0'-4' / 3113206 / NYTEST / TARRY7 / SOIL / 4/24/97 / mg/Kg	RB1246 / 4'-5' / 3113207 / NYTEST / TARRY7 / SOIL / 4/24/97 / mg/Kg
	BTEX			
71-43-2	Benzene	mg/kg	0.011 J	0.03
108-88-3	Toluene	mg/kg	0.03	0.013 U
100-41-4	Ethylbenzene	mg/kg	0.2	0.11
1330-20-7	Xylene (total)	mg/kg	0.27	0.054
	SEMIVOLATILES			
108-95-2	Phenol	mg/kg	4.6 U	1.8 U
111-44-4	bis(2-Chloroethyl)Ether	mg/kg	4.6 U	1.8 U
95-57-8	2-Chlorophenol	mg/kg	4.6 U	1.8 U
541-73-1	1,3-Dichlorobenzene	mg/kg	4.6 U	1.8 U
106-46-7	1,4-Dichlorobenzene	mg/kg	4.6 U	1.8 U
95-50-1	1,2-Dichlorobenzene	mg/kg	4.6 U	1.8 U
95-48-7	2-Methylphenol	mg/kg	4.6 U	1.8 U
108-60-1	2,2'-oxybis(1-Chloropropane)	mg/kg	4.6 U	1.8 U
106-44-5	4-Methylphenol	mg/kg	4.6 U	1.8 U
621-64-7	N-Nitroso-di-n-propylamine	mg/kg	4.6 U	1.8 U
67-72-1	Hexachloroethane	mg/kg	4.6 U	1.8 U
98-95-3	Nitrobenzene	mg/kg	4.6 U	0.44 U
78-59-1	Isophorone	mg/kg	4.6 U	0.44 U
88-75-5	2-Nitrophenol	mg/kg	4.6 U	0.44 U
105-67-9	2,4-Dimethylphenol	mg/kg	4.6 U	0.44 U
120-83-2	2,4-Dichlorophenol	mg/kg	4.6 U	0.44 U
120-82-1	1,2,4-Trichlorobenzene	mg/kg	4.6 U	0.44 U
91-20-3	Naphthalene	mg/kg	15	4.6 D
106-47-8	4-Chloroaniline	mg/kg	4.6 U	0.44 U
87-68-3	Hexachlorobutadiene	mg/kg	4.6 U	0.44 U
111-91-1	bis(2-Chloroethoxy)methane	mg/kg	4.6 U	0.44 U
59-50-7	4-Chloro-3-Methylphenol	mg/kg	4.6 U	0.44 U
91-57-6	2-Methylnaphthalene	mg/kg	11	1.7
77-47-4	Hexachlorocyclopentadiene	mg/kg	4.6 U	0.44 U
88-06-2	2,4,6-Trichlorophenol	mg/kg	4.6 U	0.44 U
95-95-4	2,4,5-Trichlorophenol	mg/kg	23 U	2.2 U
91-58-7	2-Chloronaphthalene	mg/kg	4.6 U	0.44 U
88-74-4	2-Nitroaniline	mg/kg	23 U	2.2 U
131-11-3	Dimethylphthalate	mg/kg	4.6 U	0.44 U
208-96-8	Acenaphthylene	mg/kg	1.8 J	0.44 U
606-20-2	2,6-Dinitrotoluene	mg/kg	4.6 U	0.44 U
99-09-2	3-Nitroaniline	mg/kg	23 U	2.2 U
83-32-9	Acenaphthene	mg/kg	10	0.65
51-28-5	2,4-Dinitrophenol	mg/kg	23 U	2.2 U
100-02-7	4-Nitrophenol	mg/kg	23 U	2.2 U
132-64-9	Dibenzofuran	mg/kg	0.89 J	0.44 U
121-14-2	2,4-Dinitrotoluene	mg/kg	4.6 U	0.44 U
84-66-2	Diethylphthalate	mg/kg	4.6 U	0.44 U
7005-72-3	4-Chlorophenyl-phenylether	mg/kg	4.6 U	0.44 U
86-73-7	Fluorene	mg/kg	5.4	0.21 J
100-01-6	4-Nitroaniline	mg/kg	23 U	2.2 U
534-52-1	4,6-Dinitro-2-methylphenol	mg/kg	23 U	2.2 U
86-30-6	N-Nitrosodiphenylamine	mg/kg	4.6 U	0.44 U
101-55-3	4-Bromophenyl-phenylether	mg/kg	4.6 U	0.44 U
118-74-1	Hexachlorobenzene	mg/kg	4.6 U	0.44 U
87-86-5	Pentachlorophenol	mg/kg	23 U	2.2 U
85-01-8	Phenanthrene	mg/kg	23	0.26 J
120-12-7	Anthracene	mg/kg	6.4	0.05 J
84-74-2	Di-n-butylphthalate	mg/kg	4.6 U	0.067 J
206-44-0	Fluoranthene	mg/kg	8.7	0.44 U
129-00-0	Pyrene	mg/kg	8	0.44 U
85-68-7	Butylbenzylphthalate	mg/kg	4.6 U	0.44 U
91-94-1	3,3'-Dichlorobenzidine	mg/kg	9.2 U	0.89 U
56-55-3	Benzo(a)anthracene	mg/kg	4.4 J	0.44 U
218-01-9	Chrysene	mg/kg	4.4 J	0.44 U
117-81-7	bis(2-Ethylhexyl)phthalate	mg/kg	4.6 U	0.16 J
117-84-0	Di-n-octylphthalate	mg/kg	4.6 U	0.44 U
205-99-2	Benzo(b)fluoranthene	mg/kg	2.7 J	0.44 U
207-08-9	Benzo(k)fluoranthene	mg/kg	2.7 J	0.44 U
50-32-8	Benzo(a)pyrene	mg/kg	3.6 J	0.44 U
193-39-5	Indeno(1,2,3-cd)pyrene	mg/kg	4.6 U	0.44 U
53-70-3	Dibenz(a,h)anthracene	mg/kg	4.6 U	0.44 U
191-24-2	Benzo(g,h,i)perylene	mg/kg	4.6 U	0.44 U
100-51-6	Benzyl Alcohol	mg/kg	4.6 U	0.44 U
65-85-0	Benzoic Acid	mg/kg	23 U	2.2 U
	INORGANICS			
7440-38-2	Arsenic	mg/Kg	3.5	11.4
7439-92-1	Lead	mg/Kg	25.9	10.9
7439-97-6	Mercury	mg/Kg	0.28	0.04 U
7440-66-6	Zinc	mg/Kg	57.2 J	62.1 J
	OTHER			
57-12-5	Total Cyanide	mg/Kg	0.69 UJ	0.67 UJ
7440-44-0	Total Organic Carbon	mg/Kg	35900	28600

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	BA0101	BA0201	RB0104	RB0148	RB01810
		DEPTH:	0'-1'	0'-1'	0'-4'	4'-8'	8'-10'
		LAB ID:	3113208	3113209	3111901	3111902	3111903
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY7	TARRY7	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/24/97	4/24/97	4/21/97	4/21/97	4/21/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX						
71-43-2	Benzene		0.028 UJ	0.028 UJ	0.015 J	0.41 J	0.013 U
108-88-3	Toluene		0.028 UJ	0.028 UJ	0.009 J	1.7 U	0.013 U
100-41-4	Ethylbenzene		0.028 UJ	0.028 UJ	0.16	22	0.029
1330-20-7	Xylene (total)		0.028 UJ	0.028 UJ	0.26	14	0.025
	SEMIVOLATILES						
108-95-2	Phenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
111-44-4	bis(2-Chloroethyl)Ether		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
95-57-8	2-Chlorophenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
541-73-1	1,3-Dichlorobenzene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
106-46-7	1,4-Dichlorobenzene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
95-50-1	1,2-Dichlorobenzene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
95-48-7	2-Methylphenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
106-44-5	4-Methylphenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
621-64-7	N-Nitroso-di-n-propylamine		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
67-72-1	Hexachloroethane		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
98-95-3	Nitrobenzene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
78-59-1	Isophorone		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
88-75-5	2-Nitrophenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
105-67-9	2,4-Dimethylphenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
120-83-2	2,4-Dichlorophenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
120-82-1	1,2,4-Trichlorobenzene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
91-20-3	Naphthalene		0.92 UJ	0.95 UJ	27 D	270 D	1.2
106-47-8	4-Chloroaniline		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
87-68-3	Hexachlorobutadiene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
111-91-1	bis(2-Chloroethoxy)methane		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
59-50-7	4-Chloro-3-Methylphenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
91-57-6	2-Methylnaphthalene		0.92 UJ	0.95 UJ	18	160 D	0.92
77-47-4	Hexachlorocyclopentadiene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
88-06-2	2,4,6-Trichlorophenol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
95-95-4	2,4,5-Trichlorophenol		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
91-58-7	2-Chloronaphthalene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
88-74-4	2-Nitroaniline		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
131-11-3	Dimethylphthalate		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
208-96-8	Acenaphthylene		0.92 UJ	0.95 UJ	2.1 J	5.7	0.42 U
606-20-2	2,6-Dinitrotoluene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
99-09-2	3-Nitroaniline		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
83-32-9	Acenaphthene		0.92 UJ	0.95 UJ	15	84 D	0.52
51-28-5	2,4-Dinitrophenol		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
100-02-7	4-Nitrophenol		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
132-64-9	Dibenzofuran		0.92 UJ	0.95 UJ	1.3 J	6.2	0.42 U
121-14-2	2,4-Dinitrotoluene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
84-66-2	Diethylphthalate		0.13 J	0.95 UJ	2.6 U	4.7 U	0.42 U
7005-72-3	4-Chlorophenyl-phenylether		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
86-73-7	Fluorene		0.92 UJ	0.95 UJ	8.5	43 JD	0.29 J
100-01-6	4-Nitroaniline		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
534-52-1	4,6-Dinitro-2-methylphenol		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
86-30-6	N-Nitrosodiphenylamine		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
101-55-3	4-Bromophenyl-phenylether		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
118-74-1	Hexachlorobenzene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
87-86-5	Pentachlorophenol		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
85-01-8	Phenanthrene		0.17 J	0.17 J	34 D	120 D	0.95
120-12-7	Anthracene		0.92 UJ	0.95 UJ	9.4	34	0.26 J
84-74-2	Di-n-butylphthalate		0.11 J	0.95 UJ	2.6 U	4.7 U	0.42 U
206-44-0	Fluoranthene		0.31 J	0.42 J	13	33	0.3 J
129-00-0	Pyrene		0.18 J	0.25 J	9.3	23	0.32 J
85-68-7	Butylbenzylphthalate		0.25 J	0.19 J	2.6 U	4.7 U	0.42 U
91-94-1	3,3'-Dichlorobenzidine		1.8 UJ	1.9 UJ	5.1 U	9.4 U	0.84 U
56-55-3	Benzo(a)anthracene		0.16 J	0.18 J	6	15	0.13 J
218-01-9	Chrysene		0.19 J	0.24 J	6	15	0.13 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.32 J	0.47 J	0.36 J	4.7 U	0.42 U
117-84-0	Di-n-octylphthalate		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
205-99-2	Benzo(b)fluoranthene		0.26 J	0.23 J	4.1	9.6	0.044 J
207-08-9	Benzo(k)fluoranthene		0.22 J	0.3 J	3.9	12	0.063 J
50-32-8	Benzo(a)pyrene		0.19 J	0.23 J	5	12	0.085 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
53-70-3	Dibenz(a,h)anthracene		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
191-24-2	Benzo(g,h,i)perylene		0.92 UJ	0.95 UJ	0.32 J	0.67 J	0.42 U
100-51-6	Benzyl Alcohol		0.92 UJ	0.95 UJ	2.6 U	4.7 U	0.42 U
65-85-0	Benzoic Acid		4.6 UJ	4.8 UJ	13 U	23 U	2.1 U
	INORGANICS						
7440-38-2	Arsenic		9.2 J	10.8 J	7.3 J	8.6 J	2 J
7439-92-1	Lead		102 J	96.3 J	67.7	170	7.2
7439-97-6	Mercury		1 J	1.1 J	0.73	0.85	0.04 U
7440-66-6	Zinc		242 J	233 J	154	371	39.3
	OTHER						
57-12-5	Total Cyanide		1.4 UJ	1.45 UJ			
7440-44-0	Total Organic Carbon		46100 J	27200 J	18000	18300	13600

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB0204	RB02810	RB021012(1)	RB03610	RB0402
		DEPTH:	0'-4'	8'-10'	8'-10'	6'-10'	0'-2'
		LAB ID:	3111904	3111905	3111906	3111907	3111908
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY6	TARRY6	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/22/97	4/22/97	4/22/97	4/22/97	4/22/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX						
71-43-2	Benzene		0.014 U	0.013 U	0.013 U	0.011 U	0.02 U
108-88-3	Toluene		0.014 U	0.013 U	0.013 U	0.011 U	0.02 U
100-41-4	Ethylbenzene		0.005 J	0.013 U	0.013 U	0.004 J	0.02 U
1330-20-7	Xylene (total)		0.014 U	0.013 U	0.013 U	0.011 U	0.02 U
	SEMIVOLATILES						
108-95-2	Phenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
111-44-4	bis(2-Chloroethyl)Ether		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
95-57-8	2-Chlorophenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
541-73-1	1,3-Dichlorobenzene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
106-46-7	1,4-Dichlorobenzene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
95-50-1	1,2-Dichlorobenzene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
95-48-7	2-Methylphenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
106-44-5	4-Methylphenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
621-64-7	N-Nitroso-di-n-propylamine		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
67-72-1	Hexachloroethane		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
98-95-3	Nitrobenzene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
78-59-1	Isophorone		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
88-75-5	2-Nitrophenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
105-67-9	2,4-Dimethylphenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
120-83-2	2,4-Dichlorophenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
120-82-1	1,2,4-Trichlorobenzene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
91-20-3	Naphthalene		0.11 J	0.44 U	0.44 U	0.19 J	0.14 J
106-47-8	4-Chloroaniline		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
87-68-3	Hexachlorobutadiene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
111-91-1	bis(2-Chloroethoxy)methane		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
59-50-7	4-Chloro-3-Methylphenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
91-57-6	2-Methylnaphthalene		0.094 J	0.44 U	0.44 U	0.36 J	0.24 J
77-47-4	Hexachlorocyclopentadiene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
88-06-2	2,4,6-Trichlorophenol		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
95-95-4	2,4,5-Trichlorophenol		2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
91-58-7	2-Chloronaphthalene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
88-74-4	2-Nitroaniline		2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
131-11-3	Dimethylphthalate		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
208-96-8	Acenaphthylene		0.58	0.44 U	0.44 U	0.091 J	0.65 U
606-20-2	2,6-Dinitrotoluene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
99-09-2	3-Nitroaniline		2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
83-32-9	Acenaphthene		0.44 J	0.44 U	0.44 U	0.93	0.38 J
51-28-5	2,4-Dinitrophenol		2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
100-02-7	4-Nitrophenol		2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
132-64-9	Dibenzofuran		0.053 J	0.44 U	0.44 U	0.049 J	0.65 U
121-14-2	2,4-Dinitrotoluene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
84-66-2	Diethylphthalate		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
7005-72-3	4-Chlorophenyl-phenylether		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
86-73-7	Fluorene		0.18 J	0.44 U	0.44 U	0.42	0.15 J
100-01-6	4-Nitroaniline		2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
534-52-1	4,6-Dinitro-2-methylphenol		2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
86-30-6	N-Nitrosodiphenylamine		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
101-55-3	4-Bromophenyl-phenylether		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
118-74-1	Hexachlorobenzene		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
87-86-5	Pentachlorophenol		2.2 U	2.2 U	2.2 U	1.9 U	3.3 U
85-01-8	Phenanthrene		2.6	0.44 U	0.44 U	1.6	0.69
120-12-7	Anthracene		1	0.44 U	0.44 U	0.49	0.18 J
84-74-2	Di-n-butylphthalate		0.45 U	0.44 U	0.44 U	0.38 U	0.65 U
206-44-0	Fluoranthene		2.9	0.44 U	0.44 U	0.68	0.42 J
129-00-0	Pyrene		1.8	0.44 U	0.44 U	0.63	0.28 J
85-68-7	Butylbenzylphthalate		0.077 J	0.44 U	0.44 U	0.38 U	0.29 J
91-94-1	3,3'-Dichlorobenzidine		0.9 U	0.88 U	0.88 U	0.77 U	1.3 U
56-55-3	Benzo(a)anthracene		1.4	0.44 U	0.44 U	0.31 J	0.15 J
218-01-9	Chrysene		1.4	0.44 U	0.44 U	0.31 J	0.17 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.15 J	0.44 U	0.44 U	0.044 J	0.28 J
117-84-0	Di-n-octylphthalate		0.45 UJ	0.44 U	0.44 U	0.38 U	0.65 U
205-99-2	Benzo(b)fluoranthene		0.91 J	0.44 U	0.44 U	0.12 J	0.16 J
207-08-9	Benzo(k)fluoranthene		1.3 J	0.44 U	0.44 U	0.19 J	0.17 J
50-32-8	Benzo(a)pyrene		1.2 J	0.44 U	0.44 U	0.22 J	0.15 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.085 J	0.44 U	0.44 U	0.38 U	0.65 U
53-70-3	Dibenz(a,h)anthracene		0.45 UJ	0.44 U	0.44 U	0.38 U	0.65 U
191-24-2	Benzo(g,h,i)perylene		0.079 J	0.44 U	0.44 U	0.38 U	0.65 U
100-51-6	Benzyl Alcohol		0.45 UJ	0.44 U	0.44 U	0.38 U	0.65 U
65-85-0	Benzoic Acid		2.2 UJ	2.2 U	2.2 U	1.9 U	3.3 U
	INORGANICS						
7440-38-2	Arsenic		2.5 J	5.3 J	5.5 J	4.1 J	7.4 J
7439-92-1	Lead		38.5	8.9	9	7.3	76.9
7439-97-6	Mercury		0.32	0.04 U	0.04 U	0.03 U	1.2
7440-66-6	Zinc		65.4	56.2	58.6	45.3	185
	OTHER						
57-12-5	Total Cyanide						
7440-44-0	Total Organic Carbon		33100	84200	31400	24400	7270

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB04810	RB0504	RB0568	RB0602	RB0668
		DEPTH:	8'-10'	0'-4'	6'-8'	0'-2'	6'-8'
		LAB ID:	3111909	3113101	3113104	3113105	3113106
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY6	TARRY6	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/22/97	4/23/97	4/23/97	4/23/97	4/23/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX						
71-43-2	Benzene		0.011 U	0.005 J	0.012 U	0.026 UJ	0.012 U
108-88-3	Toluene		0.011 U	0.011 U	0.012 U	0.026 UJ	0.012 U
100-41-4	Ethylbenzene		0.011 U	0.076	0.012 U	0.026 UJ	0.012 U
1330-20-7	Xylene (total)		0.011 U	0.15	0.012 U	0.026 UJ	0.012 U
	SEMIVOLATILES						
108-95-2	Phenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
111-44-4	bis(2-Chloroethyl)Ether		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
95-57-8	2-Chlorophenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
541-73-1	1,3-Dichlorobenzene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
106-46-7	1,4-Dichlorobenzene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
95-50-1	1,2-Dichlorobenzene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
95-48-7	2-Methylphenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
106-44-5	4-Methylphenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
621-64-7	N-Nitroso-di-n-propylamine		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
67-72-1	Hexachloroethane		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
98-95-3	Nitrobenzene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
78-59-1	Isophorone		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
88-75-5	2-Nitrophenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
105-67-9	2,4-Dimethylphenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
120-83-2	2,4-Dichlorophenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
120-82-1	1,2,4-Trichlorobenzene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
91-20-3	Naphthalene		0.38 U	1.2	0.42 U	0.31 J	0.42 U
106-47-8	4-Chloroaniline		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
87-68-3	Hexachlorobutadiene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
111-91-1	bis(2-Chloroethoxy)methane		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
59-50-7	4-Chloro-3-Methylphenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
91-57-6	2-Methylnaphthalene		0.38 U	0.34 J	0.42 U	0.88 UJ	0.42 U
77-47-4	Hexachlorocyclopentadiene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
88-06-2	2,4,6-Trichlorophenol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
95-95-4	2,4,5-Trichlorophenol		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
91-58-7	2-Chloronaphthalene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
88-74-4	2-Nitroaniline		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
131-11-3	Dimethylphthalate		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
208-96-8	Acenaphthylene		0.38 U	0.13 J	0.42 U	0.22 J	0.42 U
606-20-2	2,6-Dinitrotoluene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
99-09-2	3-Nitroaniline		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
83-32-9	Acenaphthene		0.38 U	0.4	0.42 U	0.36 J	0.42 U
51-28-5	2,4-Dinitrophenol		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
100-02-7	4-Nitrophenol		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
132-64-9	Dibenzofuran		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
121-14-2	2,4-Dinitrotoluene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
84-66-2	Diethylphthalate		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
7005-72-3	4-Chlorophenyl-phenylether		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
86-73-7	Fluorene		0.38 U	0.2 J	0.42 U	0.34 J	0.42 U
100-01-6	4-Nitroaniline		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
534-52-1	4,6-Dinitro-2-methylphenol		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
86-30-6	N-Nitrosodiphenylamine		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
101-55-3	4-Bromophenyl-phenylether		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
118-74-1	Hexachlorobenzene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
87-86-5	Pentachlorophenol		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
85-01-8	Phenanthrene		0.38 U	0.65	0.42 U	1.4 J	0.42 U
120-12-7	Anthracene		0.38 U	0.21 J	0.42 U	0.44 J	0.42 U
84-74-2	Di-n-butylphthalate		0.38 U	0.38 U	0.42 U	0.88 UJ	3.1
206-44-0	Fluoranthene		0.38 U	0.42	0.42 U	1 J	0.42 U
129-00-0	Pyrene		0.38 U	0.39	0.42 U	0.78 J	0.42 U
85-68-7	Butylbenzylphthalate		0.38 U	0.17 J	0.42 U	0.59 J	0.42 U
91-94-1	3,3'-Dichlorobenzidine		0.76 U	0.76 U	0.83 U	1.8 UJ	0.83 U
56-55-3	Benzo(a)anthracene		0.38 U	0.22 J	0.42 U	0.42 J	0.42 U
218-01-9	Chrysene		0.38 U	0.23 J	0.42 U	0.47 J	0.42 U
117-81-7	bis(2-Ethylhexyl)phthalate		0.38 U	0.13 J	0.096 J	0.5 J	0.053 J
117-84-0	Di-n-octylphthalate		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
205-99-2	Benzo(b)fluoranthene		0.38 U	0.096 J	0.42 U	0.2 J	0.42 U
207-08-9	Benzo(k)fluoranthene		0.38 U	0.13 J	0.42 U	0.22 J	0.42 U
50-32-8	Benzo(a)pyrene		0.38 U	0.2 J	0.42 U	0.36 J	0.42 U
193-39-5	Indeno(1,2,3-cd)pyrene		0.38 U	0.12 J	0.42 U	0.19 J	0.42 U
53-70-3	Dibenz(a,h)anthracene		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
191-24-2	Benzo(g,h,i)perylene		0.38 U	0.15 J	0.42 U	0.2 J	0.42 U
100-51-6	Benzyl Alcohol		0.38 U	0.38 U	0.42 U	0.88 UJ	0.42 U
65-85-0	Benzoic Acid		1.9 U	1.9 U	2.1 U	4.4 UJ	2.1 U
	INORGANICS						
7440-38-2	Arsenic		0.88 J	4.9	2.3	9.1 J	3.9
7439-92-1	Lead		5.6	43.3 J	7.4 J	83.4 J	7 J
7439-97-6	Mercury		0.03 U	0.61	0.04 U	1.1 J	0.04 U
7440-66-6	Zinc		31.1	102 J	49.1 J	211 J	43.6 J
	OTHER						
57-12-5	Total Cyanide			0.57 U	0.62 U	1.31 UJ	0.62 U
7440-44-0	Total Organic Carbon		9900	7380 J	7011 J	10800 J	25300 J

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB0702	RB7810	RB0804	RB0868	RB0924
		DEPTH:	0'-2'	6'-10'	0'-4'	6'-8'	2'-4'
		LAB ID:	3113107	3113108	3113109	3113110	3113111
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY6	TARRY6	TARRY6	TARRY6	TARRY6
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/23/97	4/23/97	4/23/97	4/23/97	4/24/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX						
71-43-2	Benzene		0.024 UJ	0.012 U	0.021 UJ	0.011 U	0.02 U
108-88-3	Toluene		0.024 UJ	0.012 U	0.021 UJ	0.011 U	0.02 U
100-41-4	Ethylbenzene		0.035 J	0.012 U	0.018 J	0.011 U	0.02 U
1330-20-7	Xylene (total)		0.034 J	0.012 U	0.047 J	0.011 U	0.02 U
	SEMIVOLATILES						
108-95-2	Phenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
111-44-4	bis(2-Chloroethyl)Ether		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
95-57-8	2-Chlorophenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
541-73-1	1,3-Dichlorobenzene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
106-46-7	1,4-Dichlorobenzene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
95-50-1	1,2-Dichlorobenzene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
95-48-7	2-Methylphenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
108-60-1	2,2'-oxybis(1-Chloropropane)		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
106-44-5	4-Methylphenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
621-64-7	N-Nitroso-di-n-propylamine		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
67-72-1	Hexachloroethane		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
98-95-3	Nitrobenzene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
78-59-1	Isophorone		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
88-75-5	2-Nitrophenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
105-67-9	2,4-Dimethylphenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
120-83-2	2,4-Dichlorophenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
120-82-1	1,2,4-Trichlorobenzene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
91-20-3	Naphthalene		0.79 J	0.42 U	1.9 J	0.37 U	0.58 J
106-47-8	4-Chloroaniline		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.26 J
87-68-3	Hexachlorobutadiene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
111-91-1	bis(2-Chloroethoxy)methane		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
59-50-7	4-Chloro-3-Methylphenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
91-57-6	2-Methylnaphthalene		0.49 J	0.42 U	0.89 J	0.37 U	0.34 J
77-47-4	Hexachlorocyclopentadiene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
88-06-2	2,4,6-Trichlorophenol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
95-95-4	2,4,5-Trichlorophenol		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
91-58-7	2-Chloronaphthalene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
88-74-4	2-Nitroaniline		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
131-11-3	Dimethylphthalate		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
208-96-8	Acenaphthylene		0.23 J	0.42 U	0.36 J	0.37 U	0.2 J
606-20-2	2,6-Dinitrotoluene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
99-09-2	3-Nitroaniline		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
83-32-9	Acenaphthene		0.57 J	0.42 U	1.1 J	0.37 U	0.47 J
51-28-5	2,4-Dinitrophenol		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
100-02-7	4-Nitrophenol		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
132-64-9	Dibenzofuran		0.81 UJ	0.42 U	0.08 J	0.37 U	0.65 U
121-14-2	2,4-Dinitrotoluene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
84-66-2	Diethylphthalate		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
7005-72-3	4-Chlorophenyl-phenylether		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
86-73-7	Fluorene		0.33 J	0.42 U	0.68 J	0.37 U	0.2 J
100-01-6	4-Nitroaniline		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
534-52-1	4,6-Dinitro-2-methylphenol		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
86-30-6	N-Nitrosodiphenylamine		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
101-55-3	4-Bromophenyl-phenylether		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
118-74-1	Hexachlorobenzene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
87-86-5	Pentachlorophenol		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
85-01-8	Phenanthrene		1.2 J	0.42 U	2.5 J	0.37 U	0.93
120-12-7	Anthracene		0.42 J	0.42 U	0.83 J	0.37 U	0.34 J
84-74-2	Di-n-butylphthalate		0.81 UJ	2.6	0.072 J	0.37 U	0.65 U
206-44-0	Fluoranthene		0.87 J	0.42 U	1.6 J	0.37 U	0.7
129-00-0	Pyrene		0.7 J	0.42 U	2 J	0.37 U	0.85
85-68-7	Butylbenzylphthalate		0.19 J	0.42 U	0.29 J	0.37 U	0.28 J
91-94-1	3,3'-Dichlorobenzidine		1.6 UJ	0.83 U	1.4 UJ	0.74 U	1.3 U
56-55-3	Benzo(a)anthracene		0.42 J	0.42 U	0.93 J	0.37 U	0.39 J
218-01-9	Chrysene		0.45 J	0.42 U	0.93 J	0.37 U	0.42 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.32 J	0.096 J	0.4 J	0.091 J	0.26 J
117-84-0	Di-n-octylphthalate		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
205-99-2	Benzo(b)fluoranthene		0.19 J	0.42 U	0.38 J	0.37 U	0.19 J
207-08-9	Benzo(k)fluoranthene		0.23 J	0.42 U	0.43 J	0.37 U	0.26 J
50-32-8	Benzo(a)pyrene		0.36 J	0.42 U	0.74 J	0.37 U	0.37 J
193-39-5	Indeno(1,2,3-cd)pyrene		0.16 J	0.42 U	0.4 J	0.37 U	0.28 J
53-70-3	Dibenz(a,h)anthracene		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
191-24-2	Benzo(g,h,i)perylene		0.17 J	0.42 U	0.51 J	0.37 U	0.37 J
100-51-6	Benzyl Alcohol		0.81 UJ	0.42 U	0.71 UJ	0.37 U	0.65 U
65-85-0	Benzoic Acid		4.1 UJ	2.1 U	3.5 UJ	1.8 U	3.3 U
	INORGANICS						
7440-38-2	Arsenic		9.9 J	2.5	8.1 J	0.7 J	8.1
7439-92-1	Lead		80.8 J	7.8 J	81.2 J	5 J	66.8 J
7439-97-6	Mercury		1.1 J	0.04 U	1 J	0.03 U	1.1
7440-66-6	Zinc		207 J	53.8 J	186 J	24.2 J	159 J
	OTHER						
57-12-5	Total Cyanide		1.21 UJ	0.63 U	1.06 UJ	0.56 U	0.98 U
7440-44-0	Total Organic Carbon		9313 J	5070 J	9950 J	3880 J	2210 J

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

CAS NO.	COMPOUND	SAMPLE ID:	RB91214 (2)	RB9810	RB1068	RB10810	RB1106
		DEPTH:	2'-4'	8'-10'	6'-8'	8'-10'	0'-6'
		LAB ID:	3113201	3113202	3113203	3113204	3113205
		SOURCE:	NYTEST	NYTEST	NYTEST	NYTEST	NYTEST
		SDG:	TARRY7	TARRY7	TARRY7	TARRY7	TARRY7
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	4/24/97	4/24/97	4/24/97	4/24/97	4/24/97
		UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	BTEX						
71-43-2	Benzene		0.02 U	0.013 U	0.012 U	0.013 U	0.022 UJ
108-88-3	Toluene		0.02 U	0.013 U	0.012 U	0.013 U	0.022 UJ
100-41-4	Ethylbenzene		0.02 U	0.013 U	0.012 U	0.013 U	0.064 J
1330-20-7	Xylene (total)		0.02 U	0.013 U	0.012 U	0.013 U	0.14 J
	SEMIVOLATILES						
108-95-2	Phenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
111-44-4	bis(2-Chloroethyt)Ether		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
95-57-8	2-Chlorophenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
541-73-1	1,3-Dichlorobenzene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
106-46-7	1,4-Dichlorobenzene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
95-50-1	1,2-Dichlorobenzene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
95-48-7	2-Methylphenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
108-60-1	2,2'-oxybis(1-Chloropropane)		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
106-44-5	4-Methylphenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
621-64-7	N-Nitroso-di-n-propylamine		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
67-72-1	Hexachloroethane		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
98-95-3	Nitrobenzene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
78-59-1	Isophorone		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
88-75-5	2-Nitrophenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
105-67-9	2,4-Dimethylphenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
120-83-2	2,4-Dichlorophenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
120-82-1	1,2,4-Trichlorobenzene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
91-20-3	Naphthalene		0.78	0.43 U	0.42 U	0.44 U	5.4 J
106-47-8	4-Chloroaniline		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
87-68-3	Hexachlorobutadiene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
111-91-1	bis(2-Chloroethoxy)methane		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
59-50-7	4-Chloro-3-Methylphenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
91-57-6	2-Methylnaphthalene		0.86	0.43 U	0.42 U	0.44 U	3.2 J
77-47-4	Hexachlorocyclopentadiene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
88-06-2	2,4,6-Trichlorophenol		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
95-95-4	2,4,5-Trichlorophenol		3.3 U	2.1 U	2.1 U	2.2 U	3.7 UJ
91-58-7	2-Chloronaphthalene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
88-74-4	2-Nitroaniline		3.3 U	2.1 U	2.1 U	2.2 U	3.7 UJ
131-11-3	Dimethylphthalate		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
208-96-8	Acenaphthylene		0.26 J	0.43 U	0.42 U	0.44 U	1.3 J
606-20-2	2,6-Dinitrotoluene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
99-09-2	3-Nitroaniline		3.3 U	2.1 U	2.1 U	2.2 U	3.7 UJ
83-32-9	Acenaphthene		0.95	0.43 U	0.42 U	0.44 U	7.2 DJ
51-28-5	2,4-Dinitrophenol		3.3 U	2.1 U	2.1 U	2.2 U	3.7 UJ
100-02-7	4-Nitrophenol		3.3 U	2.1 U	2.1 U	2.2 U	3.7 UJ
132-64-9	Dibenzofuran		0.082 J	0.43 U	0.42 U	0.44 U	0.51 J
121-14-2	2,4-Dinitrotoluene		0.67 U	0.43 U	0.42 U	0.44 U	0.14 J
84-66-2	Diethylphthalate		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
7005-72-3	4-Chlorophenyl-phenylether		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
86-73-7	Fluorene		0.56 J	0.43 U	0.42 U	0.44 U	3.6 J
100-01-6	4-Nitroaniline		3.3 U	2.1 U	2.1 U	2.2 U	3.7 UJ
534-52-1	4,6-Dinitro-2-methylphenol		3.3 U	2.1 U	2.1 U	2.2 U	3.7 UJ
86-30-6	N-Nitrosodiphenylamine		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
101-55-3	4-Bromophenyl-phenylether		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
118-74-1	Hexachlorobenzene		0.67 U	0.43 U	0.42 U	0.44 U	0.74 UJ
87-86-5	Pentachlorophenol		3.3 U	2.1 U	2.1 U	2.2 U	3.7 UJ
85-01-8	Phenanthrene		2	0.43 U	0.42 U	0.44 U	13 DJ
120-12-7	Anthracene		0.57 J	0.43 U	0.42 U	0.44 U	3.4 J
84-74-2	Di-n-butylphthalate		4	0.43 U	0.42 U	0.44 U	4.9 J
206-44-0	Fluoranthene		1.4	0.43 U	0.14 J	0.055 J	5.3 DJ
129-00-0	Pyrene		0.78	0.43 U	0.19 J	0.074 J	3.7 J
85-68-7	Butylbenzylphthalate		0.15 J	0.43 U	0.048 J	0.44 U	0.64 J
91-94-1	3,3'-Dichlorobenzidine		1.3 U	0.85 U	0.83 U	0.88 U	1.5 UJ
56-55-3	Benzo(a)anthracene		0.6 J	0.43 U	0.075 J	0.44 U	2.6 J
218-01-9	Chrysene		0.65 J	0.43 U	0.073 J	0.44 U	2.6 J
117-81-7	bis(2-Ethylhexyl)phthalate		0.38 J	0.11 J	0.11 J	0.18 J	0.58 J
117-84-0	Di-n-octylphthalate		0.67 U	0.43 U	0.42 U	0.44 U	3 UJ
205-99-2	Benzo(b)fluoranthene		0.6 J	0.43 U	0.42 U	0.44 U	1.8 JD
207-08-9	Benzo(k)fluoranthene		0.73	0.43 U	0.42 U	0.44 U	2 JD
50-32-8	Benzo(a)pyrene		0.57 J	0.43 U	0.054 J	0.44 U	2.5 JD
193-39-5	Indeno(1,2,3-cd)pyrene		0.67 U	0.43 U	0.42 U	0.44 U	3 UJ
53-70-3	Dibenz(a,h)anthracene		0.67 U	0.43 U	0.42 U	0.44 U	3 UJ
191-24-2	Benzo(g,h,i)perylene		0.67 U	0.43 U	0.42 U	0.44 U	3 UJ
100-51-6	Benzyl Alcohol		0.67 U	0.43 U	0.42 U	0.44 U	3 UJ
65-85-0	Benzoic Acid		3.3 U	2.1 U	2.1 U	2.2 U	15 UJ
	INORGANICS						
7440-38-2	Arsenic		8.7	2.8	5.5	4.4	8.6 J
7439-92-1	Lead		87.8	9.4	6.3	13.3	81.5 J
7439-97-6	Mercury		0.86	0.04 U	0.04 U	0.04 U	0.98 J
7440-66-6	Zinc		191 J	63.7 J	36.4 J	71 J	186 J
	OTHER						
57-12-5	Total Cyanide		1 UJ	0.64 UJ	0.62 UJ	0.66 UJ	1.11 UJ
7440-44-0	Total Organic Carbon		14900	7530	17200	15800	27000 J

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

RIVER BORING SEDIMENT SAMPLE RESULTS
TARRYTOWN SITE

		SAMPLE ID:	RB1204	RB1248
		DEPTH:	0'-4'	4'-6'
		LAB ID:	3113206	3113207
		SOURCE:	NYTEST	NYTEST
		SDG:	TARRY7	TARRY7
		MATRIX:	SOIL	SOIL
		SAMPLED:	4/24/97	4/24/97
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg
	BTEX			
71-43-2	Benzene		0.011 J	0.03
108-88-3	Toluene		0.03	0.013 U
100-41-4	Ethylbenzene		0.2	0.11
1330-20-7	Xylene (total)		0.27	0.054
	SEMIVOLATILES			
108-95-2	Phenol		4.6 U	1.8 U
111-44-4	bis(2-Chloroethyl)Ether		4.6 U	1.8 U
95-57-8	2-Chlorophenol		4.6 U	1.8 U
541-73-1	1,3-Dichlorobenzene		4.6 U	1.8 U
106-46-7	1,4-Dichlorobenzene		4.6 U	1.8 U
95-50-1	1,2-Dichlorobenzene		4.6 U	1.8 U
95-48-7	2-Methylphenol		4.6 U	1.8 U
108-60-1	2,2'-oxybis(1-Chloropropane)		4.6 U	1.8 U
106-44-5	4-Methylphenol		4.6 U	1.8 U
621-64-7	N-Nitroso-di-n-propylamine		4.6 U	1.8 U
67-72-1	Hexachloroethane		4.6 U	1.8 U
98-95-3	Nitrobenzene		4.6 U	0.44 U
78-59-1	Isophorone		4.6 U	0.44 U
88-75-5	2-Nitrophenol		4.6 U	0.44 U
105-67-9	2,4-Dimethylphenol		4.6 U	0.44 U
120-83-2	2,4-Dichlorophenol		4.6 U	0.44 U
120-82-1	1,2,4-Trichlorobenzene		4.6 U	0.44 U
91-20-3	Naphthalene		15	4.6 D
106-47-8	4-Chloroaniline		4.6 U	0.44 U
87-68-3	Hexachlorobutadiene		4.6 U	0.44 U
111-91-1	bis(2-Chloroethoxy)methane		4.6 U	0.44 U
59-50-7	4-Chloro-3-Methylphenol		4.6 U	0.44 U
91-57-6	2-Methylnaphthalene		11	1.7
77-47-4	Hexachlorocyclopentadiene		4.6 U	0.44 U
88-06-2	2,4,6-Trichlorophenol		4.6 U	0.44 U
95-95-4	2,4,5-Trichlorophenol		23 U	2.2 U
91-58-7	2-Chloronaphthalene		4.6 U	0.44 U
88-74-4	2-Nitroaniline		23 U	2.2 U
131-11-3	Dimethylphthalate		4.6 U	0.44 U
208-96-8	Acenaphthylene		1.8 J	0.44 U
606-20-2	2,6-Dinitrotoluene		4.6 U	0.44 U
99-09-2	3-Nitroaniline		23 U	2.2 U
83-32-9	Acenaphthene		10	0.65
1-28-5	2,4-Dinitrophenol		23 U	2.2 U
100-02-7	4-Nitrophenol		23 U	2.2 U
132-64-9	Dibenzofuran		0.89 J	0.44 U
121-14-2	2,4-Dinitrotoluene		4.6 U	0.44 U
84-66-2	Diethylphthalate		4.6 U	0.44 U
7005-72-3	4-Chlorophenyl-phenylether		4.6 U	0.44 U
86-73-7	Fluorene		5.4	0.21 J
100-01-6	4-Nitroaniline		23 U	2.2 U
534-52-1	4,6-Dinitro-2-methylphenol		23 U	2.2 U
86-30-6	N-Nitrosodiphenylamine		4.6 U	0.44 U
101-55-3	4-Bromophenyl-phenylether		4.6 U	0.44 U
118-74-1	Hexachlorobenzene		4.6 U	0.44 U
87-86-5	Pentachlorophenol		23 U	2.2 U
85-01-8	Phenanthrene		23	0.26 J
120-12-7	Anthracene		6.4	0.05 J
84-74-2	Di-n-butylphthalate		4.6 U	0.067 J
206-44-0	Fluoranthene		8.7	0.44 U
129-00-0	Pyrene		8	0.44 U
85-68-7	Butylbenzylphthalate		4.6 U	0.44 U
91-94-1	3,3'-Dichlorobenzidine		9.2 U	0.89 U
56-55-3	Benzo(a)anthracene		4.4 J	0.44 U
218-01-9	Chrysene		4.4 J	0.44 U
117-81-7	bis(2-Ethylhexyl)phthalate		4.6 U	0.16 J
117-84-0	Di-n-octylphthalate		4.6 U	0.44 U
205-99-2	Benzo(b)fluoranthene		2.7 J	0.44 U
207-08-9	Benzo(k)fluoranthene		2.7 J	0.44 U
50-32-8	Benzo(a)pyrene		3.6 J	0.44 U
193-39-5	Indeno(1,2,3-cd)pyrene		4.6 U	0.44 U
53-70-3	Dibenz(a,h)anthracene		4.6 U	0.44 U
191-24-2	Benzo(g,h,i)perylene		4.6 U	0.44 U
100-51-6	Benzyl Alcohol		4.6 U	0.44 U
65-85-0	Benzoic Acid		23 U	2.2 U
	INORGANICS			
7440-38-2	Arsenic		3.5	11.4
7439-92-1	Lead		25.9	10.9
7439-97-6	Mercury		0.28	0.04 U
7440-66-6	Zinc		57.2 J	62.1 J
	OTHER			
57-12-5	Total Cyanide		0.69 UJ	0.67 UJ
7440-44-0	Total Organic Carbon		35900	28600

(1) Duplicate sample of RB02810
(2) Duplicate sample of RB0924

APPENDIX F

GC/FID FINGERPRINT RESULTS

ETA Environmental, Inc.
49 Clarendon Street
Watertown, MA 02172
TEL: (617) 923-4662
FAX: (617) 923-4610

October 23, 1996

Mr. Imants Reks
Parsons Engineering Science, Inc.
290 Elwood Davis Road
Liverpool, New York 13088

RE: *Results of Analysis of Samples from the Tarrytown Site*

Dear Mr. Reks:

META Environmental, Inc. (META) has completed the analysis of five soil or sediment samples, three water samples, and four non-aqueous phase liquid (NAPL) samples. The methods used and the results generated are described in the following paragraphs.

Methods

For soil and sediment samples, approximately 2 grams of sample was extracted with methylene chloride by a microscale solvent extraction procedure developed by META for EPRI. Following extraction, the solvent was concentrated using the Kuderna-Danish technique, spiked ith internal standards, and analyzed by gas chromatography with flame ionization detection (GC/FID) for monocyclic aromatic hydrocarbons (MAHs), polycyclic aromatic hydrocarbons (PAHs), and GC/FID fingerprint.

Water samples were microextracted using a modification of ASTM Method D-5241-92. The extracts also were analyzed for MAHs, PAHs, and GC/FID fingerprint.

NAPL samples were quantitatively diluted into methylene chloride and analyzed for MAHs, PAHs, and GC/FID fingerprint.

Because of subsampling difficulties, the actual matrix that was extracted for several samples consisted of some proportion of NAPL, soil or sediment, and water. The results for those samples were reported on a wet weight basis, and should not be compared to dry weight soil results or Federal or State concentration-based standards which are based on dry weight. Similarly, the sheens and emulsified NAPLs associated with several water samples were intentionally collected and extracted. The results are reported in mg/L but should not be considered representative of the concentration of dissolved constituents solely.

Results

The GC/FID fingerprints and the tabulated concentrations of MAHs and PAHs for the samples are attached to this letter report. Also, Table 1 summarizes the findings. The discussion of the results which follows refers to those data.

Samples TP01H2, TP04SO, SB10FP, SW1, MW13SED, and MW14SED all exhibit the characteristics commonly observed in tar samples, for example:

- The samples are dominated by unsubstituted MAHs and PAHs, with relatively large amounts of naphthalene.
- The relative proportion of the identified PAHs to the unresolved complex mixture (UCM) or "hump" is very large.
- There are no significant paraffinic or major isoprenoid hydrocarbons (e.g., pristane or phytane) typical of diesel range petroleum products in the chromatograms.

Nearly all target MAHs and PAHs are detectable and quantified in the samples, and the abundances and distributions of MAHs and PAHs in the samples are typical of MGP tars. The sample chromatograms are very similar, however there are some differences among the samples in this group. For example, none of the samples show any UCM except sample TP04SO which has a relatively small UCM. The source of this UCM is unknown, however the presence of minor UCMs in MGP tars is not uncommon, particularly in tars from carburetted water gas and oil gas plants.

Also, the relative amount of MAHs to PAHs is much greater in sample SW1 than in the other samples. This difference is most likely an artifact of the subsampling process in the laboratory where only a small amount of NAPL (the sheen) was extracted along with a larger sample of groundwater. Thus, the sample chromatogram more closely resembles a groundwater extract showing the preferential solubility of one- and two-ring aromatic compounds over tar components of higher molecular weight.

In addition to the samples categorized as tarry, sample SED1 was a wet sediment without visible NAPL or sheens, which contained low concentrations of MAHs and PAHs in the characteristic pattern of tar, and with no indication of other sources of detectable compounds.

Samples MW13 Sheen and MW14 Sheen were primarily water samples which were subsampled prior to extraction so as to collect as much of the sheen as possible. Both samples appear to be the water soluble fraction (WSF) of tar with some contribution from the components of the sheen.

Sample TP03H2 was substantially different from all other samples. The relative abundance of PAHs to other components of the sample was high, however the chromatogram also showed a substantial UCM. The high relative abundance of PAHs is indicative of tar, and not indicative of petroleum products. However, the UCM appears to be a weathered middle weight petroleum fuel. A second extract of the sample was prepared, however greater effort

was made to collect only the droplets of NAPL which were at the bottom of the sample bottle. The second replicate (PA960911-02 DUP) had more PAHs relative to the UCM, indicating a larger fraction of the material consisting of tar.

Finally, when received, sample MW03 contained a floating organic phase (LNAPL), a water phase, and a dense sediment/water/organic mixture. The LNAPL and the sediment were sampled and analyzed separately, and their chromatograms indicated that they contained the same highly weathered middle weight petroleum fuel. In addition, moderately high levels of PAHs were detectable, suggesting two or more sources of contamination.

If you have any questions, or would like META to do additional analyses, please do not hesitate to call me.

Sincerely,

David M. Mauro

David M. Mauro
V. President

Attachments

Table 1
Results of GC/FID Fingerprint Analysis
of Samples from the Tarrytown Site

Sample ID	Source	Comments
TP01H2 (PA960911-01)	tar	black sediment/water/NAPL mix at bottom of sample bottle
TP03H2 (PA960911-02)	tar plus weathered mid-weight petroleum product	brown sediment/water/NAPL mix at bottom of sample bottle
TP04SO (PA960911-03)	tar	wet soil or sediment with sheens and odors
SB10FP (PA960918-01)	tar	NAPL
SW1 (PA960918-02)	tar	water sample with sheen
SED1 (PA960918-03)	PAHs	wet soil or sediment with sheens and odors
MW13 SED (PA960921-01)	tar	sediment/water/NAPL mix at bottom of sample bottle
MW13 Sheen (PA960921-02)	WSF tar [1]	water sample with sheen
MW14 SED (PA960921-03)	tar	sediment/water/NAPL mix at bottom of sample bottle
MW14 Sheen (PA960921-04)	WSF tar	water sample with sheen
MW03 DNAPL (PA960921-05D)	highly weathered mid-weight petroleum product, plus PAHs	sediment/water/NAPL mix at bottom of sample bottle
MW03 LNAPL (PA960921-05L)	highly weathered mid-weight petroleum product, plus PAHs	LNAPL

[1] WSF tar - the composition of the water soluble fraction of tar depends upon the relative composition of the tar contacting the water and the solubilities of the individual components of the tar; it consists primarily of MAHs and two-ring PAHs.

ANALYTICAL RESULTS

Monocyclic Aromatic Hydrocarbons (MAH) and Polycyclic Aromatic Hydrocarbons (PAH)

Client: Parsons Project: Tarrytown

Lab ID	PA960911-01		PA960911-02		PA960911-03
Field ID:	TP01H2		TP03H2		TP04SO
MAHs:					
Benzene	143		0.85		74.5
Toluene	55.1	U	0.01	J	27.4
Ethylbenzene	1,130		0.62		566
m/p-Xylene	1,000		0.27		306
Styrene	38.5	J	0.02		58.3
o-Xylene	498		0.14		248
1,2,4-Trimethylbenzene	783		0.31		641
Total MAHs:	2,810		1.90		1,280
PAHs:					
Naphthalene	13,600		7.18		8,740
2-Methylnaphthalene	6,220		1.05		1,800
1-Methylnaphthalene	4,280		1.93		5,530
Acenaphthylene	419		0.46		508
Acenaphthene	3,100		1.74		3,220
Dibenzofuran	465		0.15		229
Fluorene	1,600		0.61		1,460
Phenanthrene	4,470		1.70		3,480
[illegible]racene	1,250		1.02		1,080
[illegible]anthene	1,460		0.49		763
Pyrene	1,830		0.73		1,140
Benz(a)anthracene	825		0.30		591
Chrysene	704		0.32		459
Benzo(b)fluoranthene	248		0.08		122
Benzo(k)fluoranthene	331		0.09		174
Benzo(a)pyrene	547		0.20		295
Indeno(1,2,3-cd)pyrene	179		0.06		78.0
Dibenz(a,h)anthracene	45.2	J	0.02	J	27.7
Benzo(g,h,i)perylene	201		0.08		72.9
Total PAHs:	41,300		18.1		29,500
Concentration Units	mg/kg		mg/L		mg/kg
Surrogate #1 %Recovery	100 IS		ND		61
Surrogate #2 %Recovery	99 IS		I		I
Percent Solids	Not Applicable		Not Applicable		50.6%

E = Estimated value, above calibration range

I = Interference

J = Estimated value

L = Coeluted with compound listed below

IS = Internal standard recovery; surrogates not applicable

ND = Not detected

NR = Not requested by the client

U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.

Total PAHs does not include Dibenzofuran.

ANALYTICAL RESULTS

Monocyclic Aromatic Hydrocarbons (MAH) and Polycyclic Aromatic Hydrocarbons (PAH)

Client: Parsons Project: Tarrytown

Lab ID	PA960919-AB		PA960919-SB		PA960911-03D
Field ID:	Water Blank		Soil Blank		TP04SO Dup
MAHs:					
Benzene	0.01	U	0.20	U	73.3
Toluene	0.01	U	0.20	U	32.0
Ethylbenzene	0.01	U	0.20	U	519
m/p-Xylene	0.01	U	0.20	U	273
Styrene	0.01	U	0.20	U	59.9
o-Xylene	0.01	U	0.20	U	219
1,2,4-Trimethylbenzene	0.01	U	0.20	U	590
Total MAHs:	ND		ND		1,180
PAHs:					
Naphthalene	0.01	U	0.20	U	7,980
2-Methylnaphthalene	0.01	U	0.20	U	1,620
1-Methylnaphthalene	0.01	U	0.20	U	5,040
Acenaphthylene	0.01	U	0.20	U	472
Acenaphthene	0.01	U	0.20	U	2,760
Dibenzofuran	0.01	U	0.20	U	373
Fluorene	0.01	U	0.20	U	1,330
Phenanthrene	0.01	U	0.20	U	3,190
Anthracene	0.01	U	0.20	U	968
Fluoranthene	0.01	U	0.20	U	690
Pyrene	0.01	U	0.20	U	1,030
Benz(a)anthracene	0.01	U	0.20	U	550
Chrysene	0.01	U	0.20	U	422
Benzo(b)fluoranthene	0.01	U	0.20	U	108
Benzo(k)fluoranthene	0.01	U	0.20	U	154
Benzo(a)pyrene	0.01	U	0.20	U	263
Indeno(1,2,3-cd)pyrene	0.01	U	0.20	U	67.5
Dibenz(a,h)anthracene	0.01	U	0.20	U	22.3
Benzo(g,h,i)perylene	0.01	U	0.20	U	70.9
Total PAHs:	ND		ND		26,700
Concentration Units	mg/L		mg/kg		mg/kg
Surrogate #1 %Recovery	108		68		62
Surrogate #2 %Recovery	109		84		I
Percent Solids	Not Applicable		Not Applicable		50.6%

E = Estimated value, above calibration range

I = Interference

J = Estimated value

L = Coeluted with compound listed below

IS = Internal standard recovery, surrogates not applicable

ND = Not detected

NR = Not requested by the client

U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.

Total PAHs does not include Dibenzofuran.

ANALYTICAL RESULTS

Monocyclic Aromatic Hydrocarbons (MAH) and Polycyclic Aromatic Hydrocarbons (PAH)

Client: Parsons Project: Tarrytown

Lab ID	PA960911-02D	
Field ID:	TP03H2 Dup	
MAHs:		
Benzene	62.8	U
Toluene	62.8	U
Ethylbenzene	157	
m/p-Xylene	75.6	
Styrene	62.8	U
o-Xylene	62.8	U
1,2,4-Trimethylbenzene	198	
Total MAHs:	233	
PAHs:		
Naphthalene	4,940	
2-Methylnaphthalene	1,370	
1-Methylnaphthalene	2,380	
Acenaphthylene	353	
Acenaphthene	2,390	
Dibenzofuran	242	
Fluorene	932	
Phenanthrene	2,630	
Anthracene	919	
Fluoranthene	1,010	
Pyrene	1,230	
Benz(a)anthracene	503	
Chrysene	398	
Benzo(b)fluoranthene	138	
Benzo(k)fluoranthene	189	
Benzo(a)pyrene	386	
Indeno(1,2,3-cd)pyrene	91.6	
Dibenz(a,h)anthracene	62.8	U
Benzo(g,h,i)perylene	121	
Total PAHs:	20,000	
Surrogate #1 %Recovery	101 IS	
Surrogate #2 %Recovery	102 IS	
Percent Solids	Not Applicable	

E = Estimated value, above calibration range

I = Interference

J = Estimated value

L = Coeluted with compound listed below

IS = Internal standard recovery, surrogates not applicable

ND = Not detected

NR = Not requested by the client

U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.

Total PAHs does not include Dibenzofuran.

ANALYTICAL RESULTS

Monocyclic Aromatic Hydrocarbons (MAH) and Polycyclic Aromatic Hydrocarbons (PAH)

Client: Parsons Project: Tarrytown

Lab ID	PA960918-01		PA960918-02		PA960918-03	
Field ID:	SB10FP		SW1		SED1	
MAHs:						
Benzene	284		4.67		0.32	U
Toluene	267	U	0.27		0.70	
Ethylbenzene	4,530		2.76		1.32	
m/p-Xylene	1,140		2.34		0.82	
Styrene	267	U	0.01	J	1.90	
o-Xylene	1,310		1.27		0.32	U
1,2,4-Trimethylbenzene	3,360		0.65		2.64	
Total MAHs:	7,260		11.3		4.75	
PAHs:						
Naphthalene	44,800		13.1		17.0	
2-Methylnaphthalene	27,900		2.66		13.7	
1-Methylnaphthalene	18,200		1.95		11.4	
Acenaphthylene	1,830		0.13		4.55	
Acenaphthene	13,600		1.02		11.7	
Dibenzofuran	2,380		0.21		1.67	
Fluorene	5,780		0.46		6.34	
Phenanthrene	16,300		1.17		20.1	
Anthracene	5,420		0.34		1.15	
Fluoranthene	4,970		0.34		9.90	
Pyrene	6,430		0.44		12.4	
Benz(a)anthracene	3,310		0.21		7.12	
Chrysene	2,800		0.26		5.83	
Benzo(b)fluoranthene	937		0.07		2.66	
Benzo(k)fluoranthene	1,160		0.08		3.16	
Benzo(a)pyrene	1,940		0.14		7.06	
Indeno(1,2,3-cd)pyrene	643		0.06		2.51	
Dibenz(a,h)anthracene	202	J	0.02		0.85	
Benzo(g,h,i)perylene	700		0.07		3.03	
Total PAHs:	157,000		22.6		140	
Concentration Units	mg/kg		mg/L		mg/kg	
Surrogate #1 %Recovery	100.8 IS		I		72	
Surrogate #2 %Recovery	102.6 IS		I		73	
Percent Solids	Not Applicable		Not Applicable		39.5%	

E = Estimated value, above calibration range

= Interference

S = Internal standard recovery, surrogate not applicable

J = Estimated value

_ = Coeluted with compound listed below

ND = Not detected

NR = Not requested by the client

U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.

Total PAHs does not include Dibenzofuran.

ANALYTICAL RESULTS

Monocyclic Aromatic Hydrocarbons (MAH) and Polycyclic Aromatic Hydrocarbons (PAH)

Client: Parsons Project: Tarrytown

Lab ID	PA960919-A8		PA960919-SB		PA960918-01D	
Field ID:	Water Blank		Soil Blank		SB10FP Dup	
MAHs:						
Benzene	0.01	U	0.20	U	263	J
Toluene	0.01	U	0.20	U	291	U
Ethylbenzene	0.01	U	0.20	U	4,350	
m/p-Xylene	0.01	U	0.20	U	1,110	
Styrene	0.01	U	0.20	U	291	U
o-Xylene	0.01	U	0.20	U	1,260	
1,2,4-Trimethylbenzene	0.01	U	0.20	U	3,260	
Total MAHs:	ND		ND		6,980	
PAHs:						
Naphthalene	0.01	U	0.20	U	43,700	
2-Methylnaphthalene	0.01	U	0.20	U	27,200	
1-Methylnaphthalene	0.01	U	0.20	U	17,700	
Acenaphthylene	0.01	U	0.20	U	1,780	
Acenaphthene	0.01	U	0.20	U	13,400	
Dibenzofuran	0.01	U	0.20	U	2,320	
Fluorene	0.01	U	0.20	U	5,660	
Phenanthrene	0.01	U	0.20	U	15,900	
Anthracene	0.01	U	0.20	U	5,270	
Fluoranthene	0.01	U	0.20	U	4,800	
Pyrene	0.01	U	0.20	U	6,140	
Benz(a)anthracene	0.01	U	0.20	U	3,210	
Chrysene	0.01	U	0.20	U	2,730	
Benzo(b)fluoranthene	0.01	U	0.20	U	886	
Benzo(k)fluoranthene	0.01	U	0.20	U	1,130	
Benzo(a)pyrene	0.01	U	0.20	U	1,880	
Indeno(1,2,3-cd)pyrene	0.01	U	0.20	U	589	
Dibenz(a,h)anthracene	0.01	U	0.20	U	159	
Benzo(g,h,i)perylene	0.01	U	0.20	U	688	
Total PAHs:	ND		ND		153,000	
Concentration Units	mg/L		mg/kg		mg/kg	
Surrogate #1 %Recovery	108		68		98.2 IS	
Surrogate #2 %Recovery	109		84		99.5 IS	
Percent Solids	Not Applicable		Not Applicable		Not Applicable	

E = Estimated value, above calibration range

= Interference

S = Internal standard recovery, surrogate not applicable

J = Estimated value

_ = Coeluted with compound listed below

ND = Not detected

NR = Not requested by the client

U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.

Total PAHs does not include Dibenzofuran.

ANALYTICAL RESULTS

Monocyclic Aromatic Hydrocarbons (MAH) and Polycyclic Aromatic Hydrocarbons (PAH)

Client: Parsons Project: Tarrytown

Lab ID	PA960921-01	PA960921-02	PA960921-03
Field ID:	MW13 SED	MW13 Sheen	MW14 SED
MAHs:			
Benzene	6.57	1.02	13.3
Toluene	3.48	0.19	1.09 J
Ethylbenzene	134	2.18	28.5
m/p-Xylene	49.3	0.76	22.4
Styrene	2.46 U	0.02 U	2.05 U
o-Xylene	39.7	0.63	14.4
1,2,4-Trimethylbenzene	81.7	0.44	19.5
Total MAHs:	233	4.78	79.6
PAHs:			
Naphthalene	1,400	8.61	298
2-Methylnaphthalene	898	1.59	140
1-Methylnaphthalene	570	1.09	105
Acenaphthylene	55.5	0.04	16.7
Acenaphthene	462	0.43	84.4
Dibenzofuran	64.5	0.04	29.1
Fluorene	192	0.10	54.6
Phenanthrene	463	0.17	162
hracene	151	0.05	52.5
oranthene	138	0.03	89.2
Pyrene	174	0.04	81.2
Benz(a)anthracene	44.4	0.02 U	42.4
Chrysene	64.2	0.02 U	37.7
Benzo(b)fluoranthene	22.1	0.02 U	21.1
Benzo(k)fluoranthene	30.8	0.02 U	25.1
Benzo(a)pyrene	50.2	0.02 U	34.6
Indeno(1,2,3-cd)pyrene	17.7	0.02 U	16.8
Dibenz(a,h)anthracene	5.52	0.02 U	4.87
Benzo(g,h,i)perylene	18.0	0.02 U	14.8
Total PAHs:	4,750	12.1	1,280
Concentration Units	mg/kg	mg/L	mg/kg
Surrogate #1 %Recovery	138	95	I
Surrogate #2 %Recovery	I	109	I
Percent Solids	Not Applicable	Not Applicable	Not Applicable

E = Estimated value, above calibration range

I = Interference

IS = Internal standard recovery, surrogate not applicable

J = Estimated value

L = Coeluted with compound listed below

ND = Not detected

NR = Not requested by the client

U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.

Total PAHs does not include Dibenzofuran.

ANALYTICAL RESULTS

Monocyclic Aromatic Hydrocarbons (MAH) and Polycyclic Aromatic Hydrocarbons (PAH)

Client: Parsons Project: Tarrytown

Lab ID	PA960921-04		PA960921-05D		PA960921-05L	
Field ID:	MW14		MW03D		MW03 L	
MAHs:						
Benzene	5.18		8.90		8.85	
Toluene	0.14		7.14		14.5	
Ethylbenzene	1.56		17.1		8.13	
m/p-Xylene	1.17		42.9		19.6	
Styrene	0.02	U	5.97		2.83	
o-Xylene	0.74		4.74		2.11	U
1,2,4-Trimethylbenzene	0.39		73.7		32.8	
Total MAHs:	8.79		86.8		54.0	
PAHs:						
Naphthalene	6.88		203		89.1	
2-Methylnaphthalene	1.13		252		125	
1-Methylnaphthalene	0.94		260		127	
Acenaphthylene	0.07		2.29	U	2.11	U
Acenaphthene	0.44		213		100	
Dibenzofuran	0.19		2.29	U	2.11	U
Fluorene	0.28		40.6		18.0	
Phenanthrene	0.37		104		39.5	
[illegible]racene	0.11		33.4		10.9	
[illegible].anthene	0.13		26.1		11.0	
Pyrene	0.13		39.4		13.5	
Benz(a)anthracene	0.04		9.98		3.56	
Chrysene	0.09		10.9		3.90	
Benzo(b)fluoranthene	0.02	U	4.75		2.34	
Benzo(k)fluoranthene	0.02	U	4.63		1.85	J
Benzo(a)pyrene	0.03		6.60		2.58	
Indeno(1,2,3-cd)pyrene	0.02	U	2.64		2.11	U
Dibenz(a,h)anthracene	0.02	U	2.29	U	2.11	U
Benzo(g,h,i)perylene	0.02	U	5.29		1.64	J
Total PAHs:	10.6		1,220		550	
Concentration Units	mg/L		mg/kg		mg/kg	
Surrogate #1 %Recovery	95		I		I	
Surrogate #2 %Recovery	113		I		I	
Percent Solids	Not Applicable		Not Applicable		Not Applicable	

E = Estimated value, above calibration range

I = Interference

IS = Internal standard recovery, surrogate not applicable

J = Estimated value

L = Coeluted with compound listed below

ND = Not detected

NR = Not requested by the client

U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.

Total PAHs does not include Dibenzofuran.

ANALYTICAL RESULTS

Monocyclic Aromatic Hydrocarbons (MAH) and Polycyclic Aromatic Hydrocarbons (PAH)

Client: Parsons Project: Tarrytown

Lab ID	PA960921-A8	
Field ID:	Water Blank	
MAHs:		
Benzene	0.01	U
Toluene	0.01	U
Ethylbenzene	0.01	U
m/p-Xylene	0.01	U
Styrene	0.01	U
o-Xylene	0.01	U
1,2,4-Trimethylbenzene	0.01	U
Total MAHs:	ND	
PAHs:		
Naphthalene	0.01	U
2-Methylnaphthalene	0.01	U
1-Methylnaphthalene	0.01	U
Acenaphthylene	0.01	U
Acenaphthene	0.01	U
Dibenzofuran	0.01	U
Fluorene	0.01	U
Phenanthrene	0.01	U
Anthracene	0.01	U
Fluoranthene	0.01	U
Pyrene	0.01	U
Benz(a)anthracene	0.01	U
Chrysene	0.01	U
Benzo(b)fluoranthene	0.01	U
Benzo(k)fluoranthene	0.01	U
Benzo(a)pyrene	0.01	U
Indeno(1,2,3-cd)pyrene	0.01	U
Dibenz(a,h)anthracene	0.01	U
Benzo(g,h,i)perylene	0.01	U
Total PAHs:	ND	
Concentration Units	mg/L	
Surrogate #1 %Recovery	110	
Surrogate #2 %Recovery	107	
Percent Solids	Not Applicable	

E = Estimated value, above calibration range

I = Interference

IS = Internal standard recovery, surrogate not applicable

J = Estimated value

L = Coeluted with compound listed below

ND = Not detected

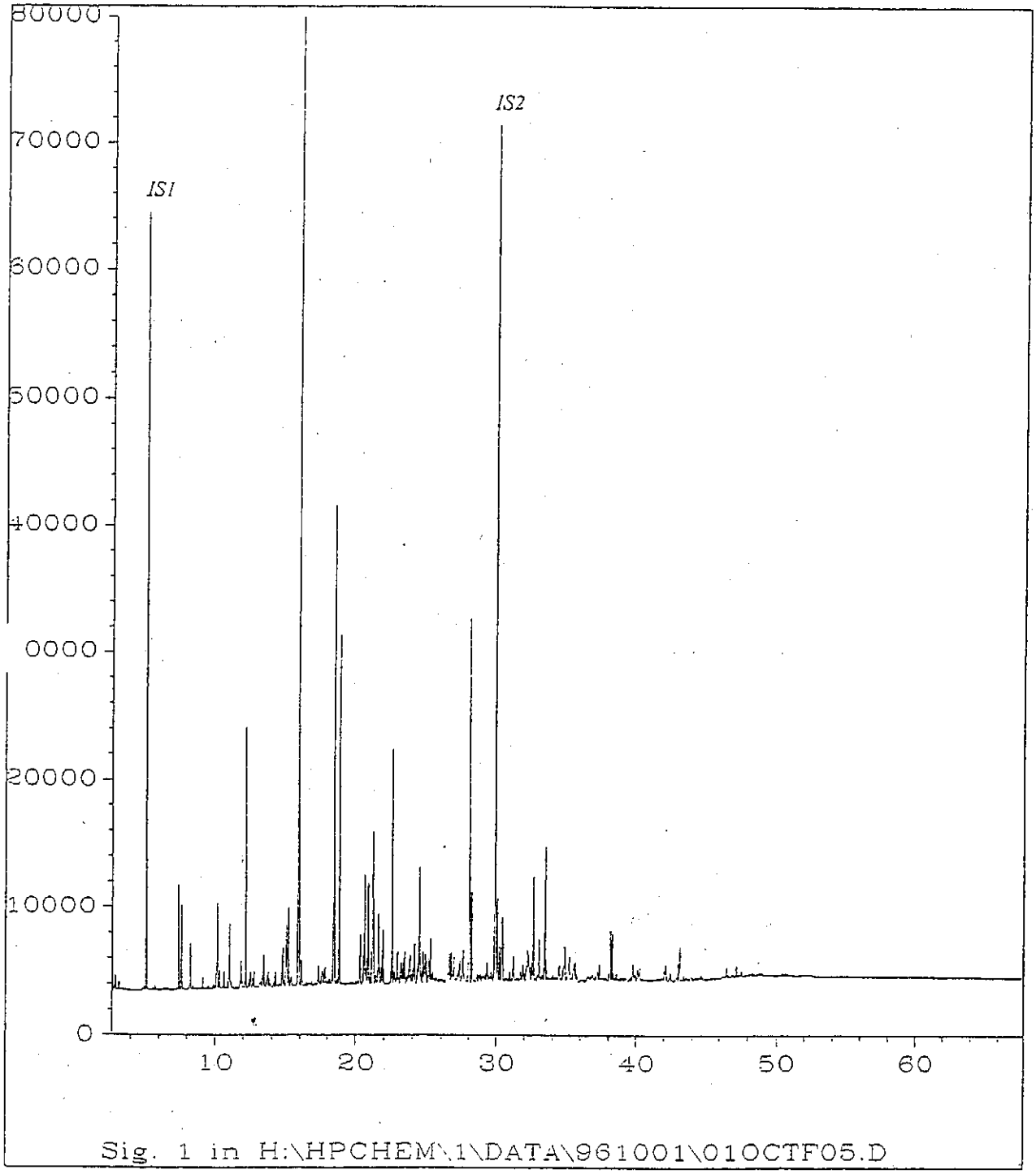
NR = Not requested by the client

U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.

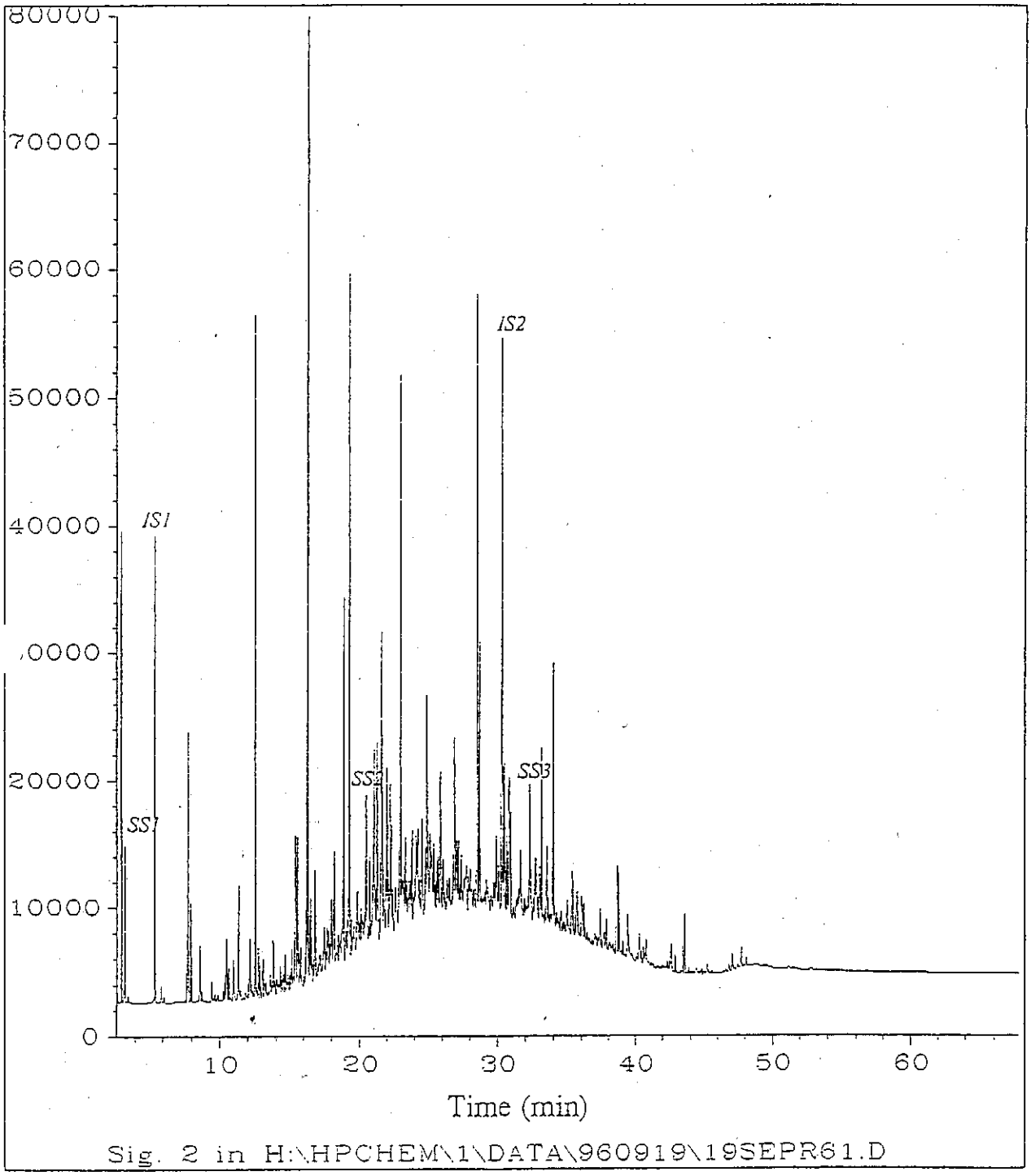
Total PAHs does not include Dibenzofuran.

GC/FID Fingerprint



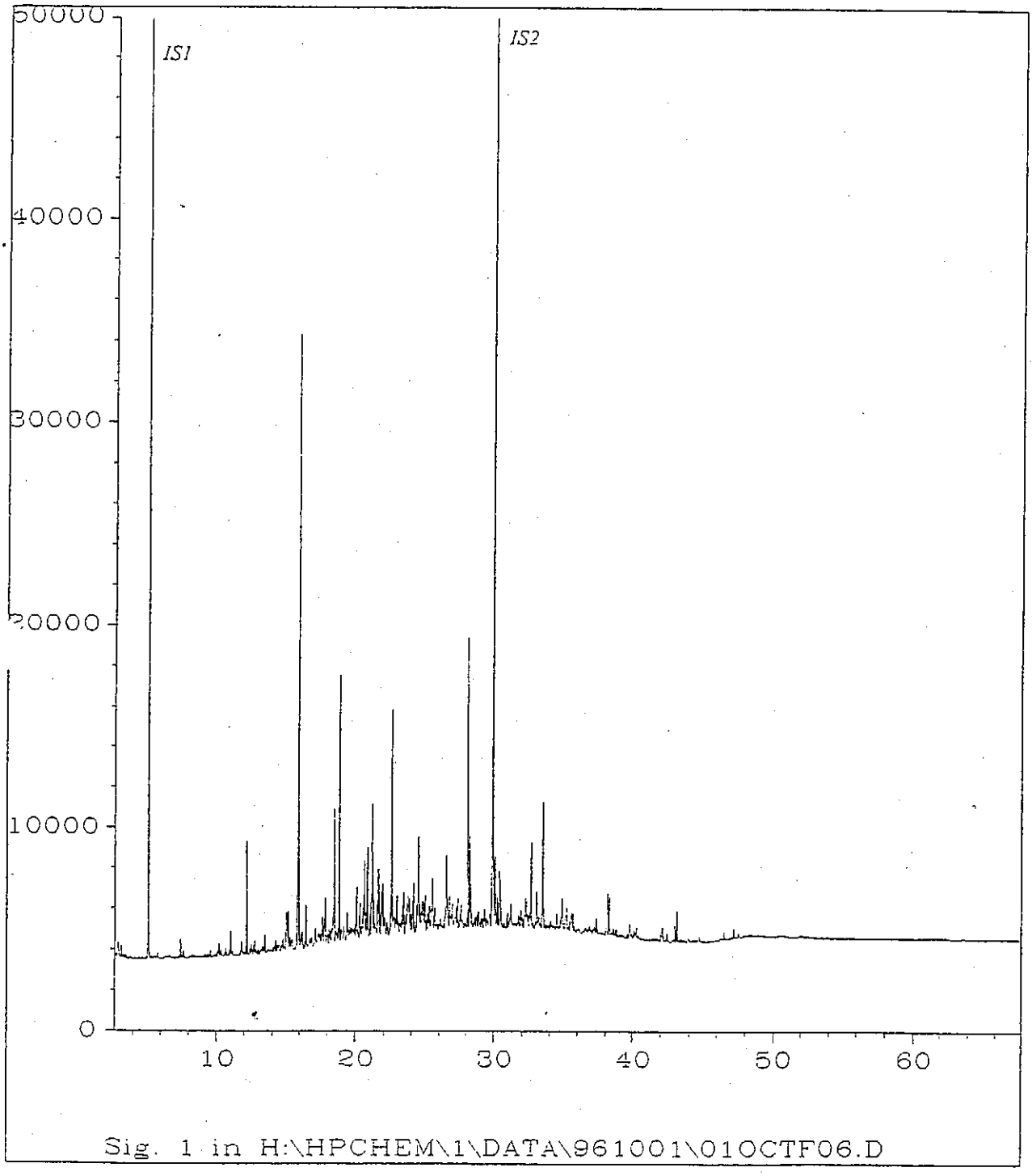
Field ID:	TP01H2
Laboratory ID:	PA960911-01
Method:	MET4007S

GC/FID Fingerprint



Field ID:	TP03H2
Laboratory ID:	PA960911-02
Method:	MET4007S

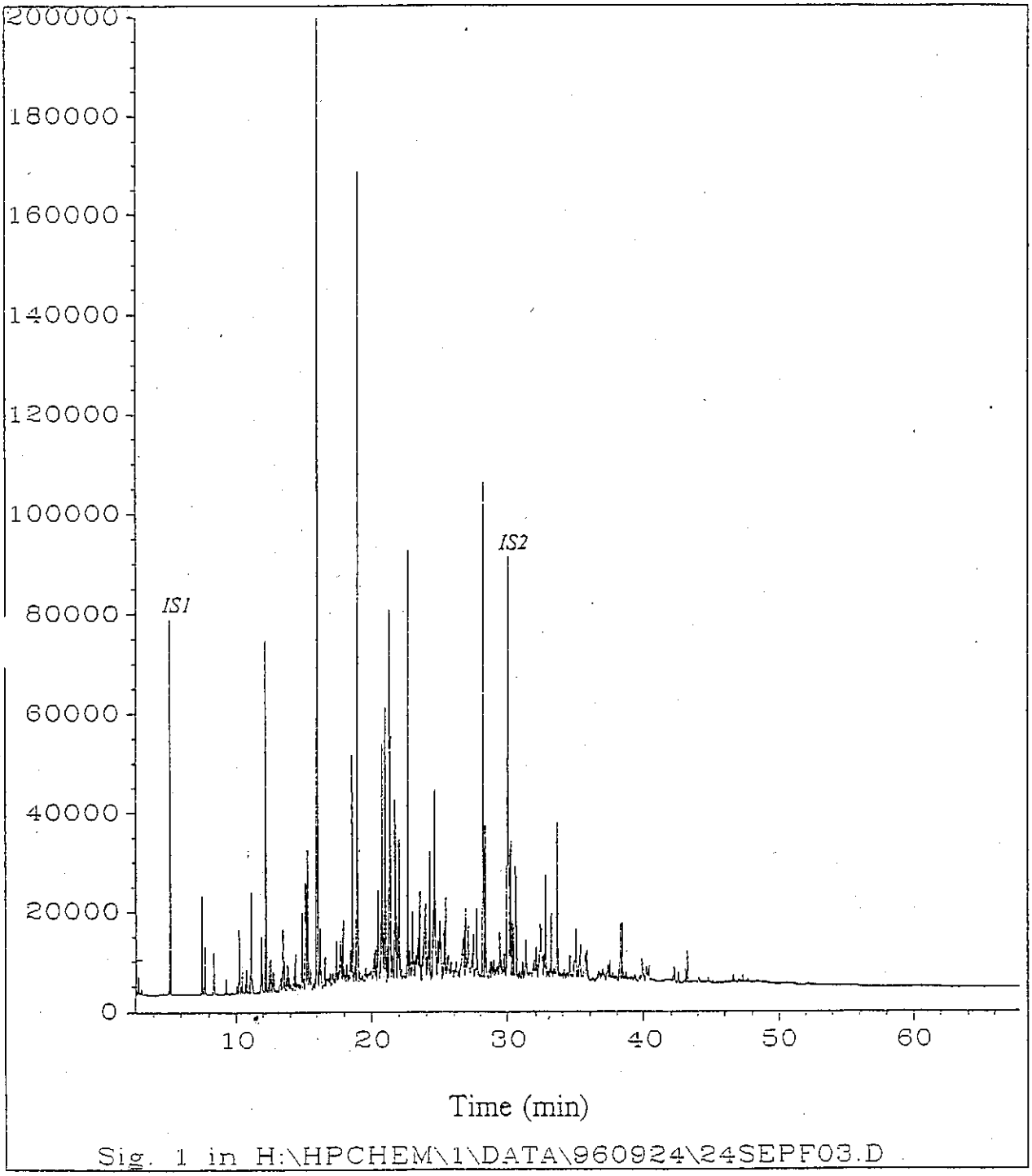
GC/FID Fingerprint



Field ID:	**TP03H2**
Laboratory ID:	PA960911-02 DUP
Method:	MET4007S

1, DMM
6

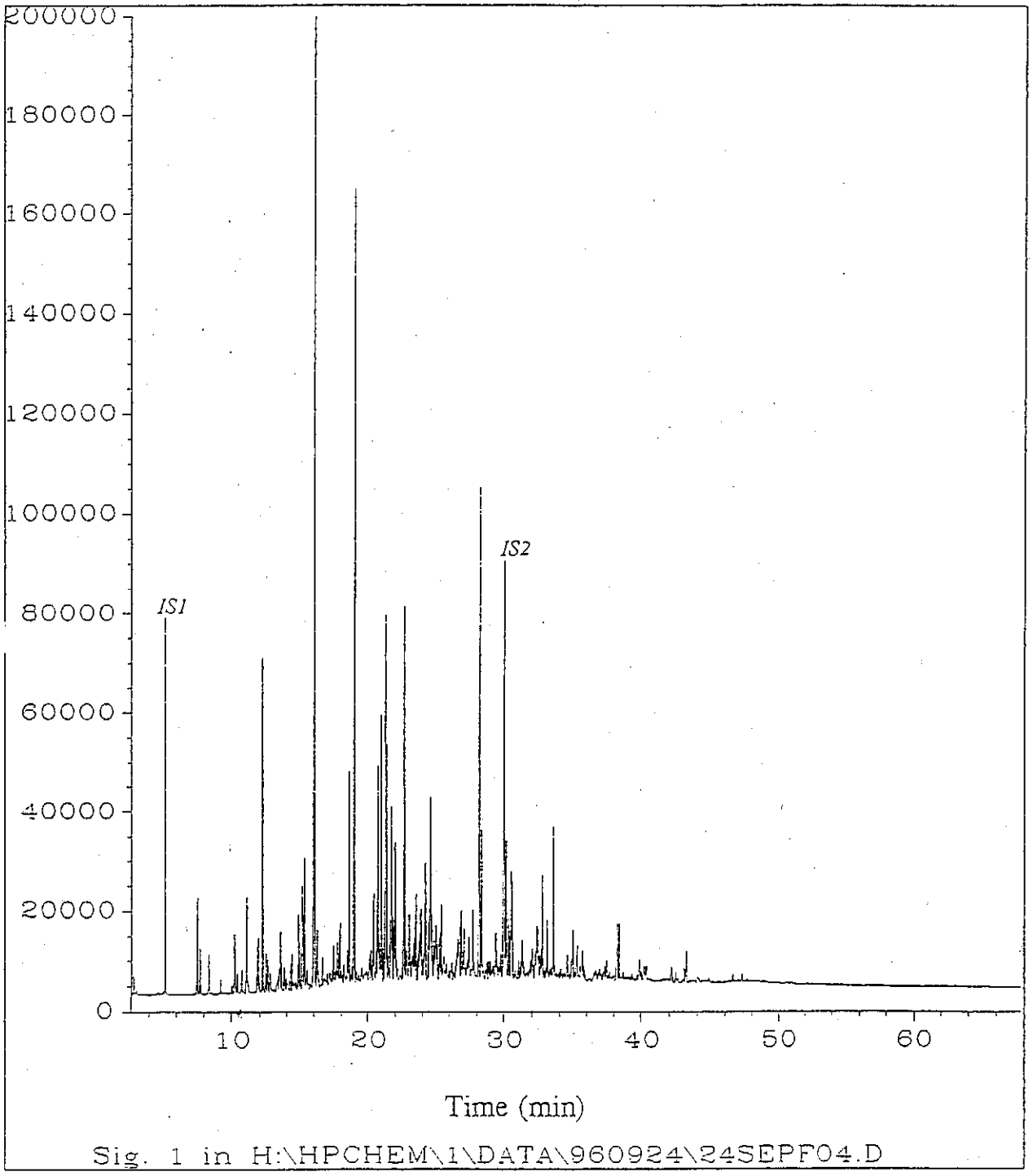
GC/FID Fingerprint



Field ID:	**TP04SO**
Laboratory ID:	PA960911-03
Method:	MET4007S

1, DMM
3

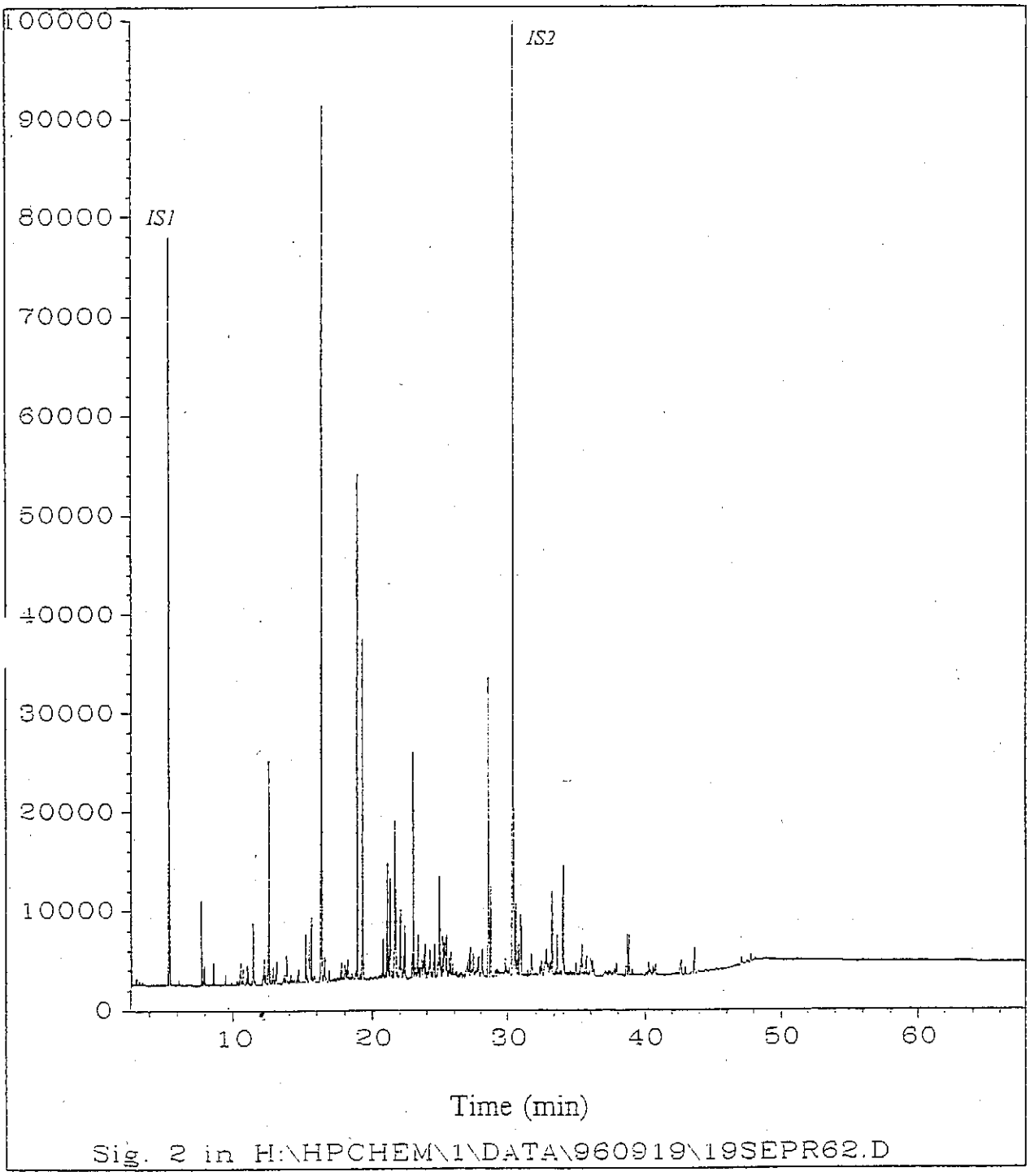
GC/FID Fingerprint



Field ID:	TP04SO
Laboratory ID:	PA960911-03DUP
Method:	MET4007S

01, DMM
96

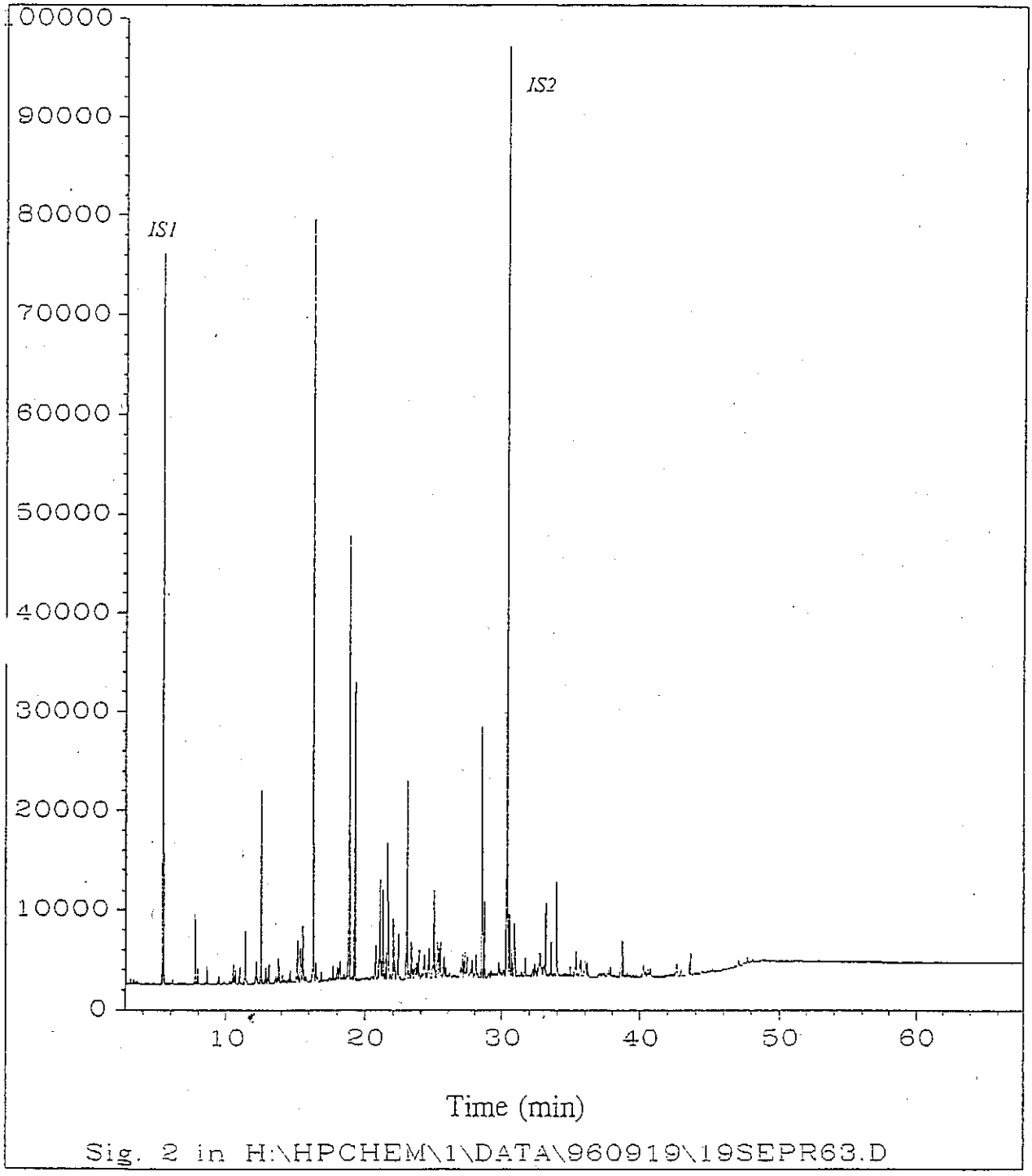
GC/FID Fingerprint



Field ID:	10 SB01FP
Laboratory ID:	PA960918-01
Method:	MET4007S

DMM

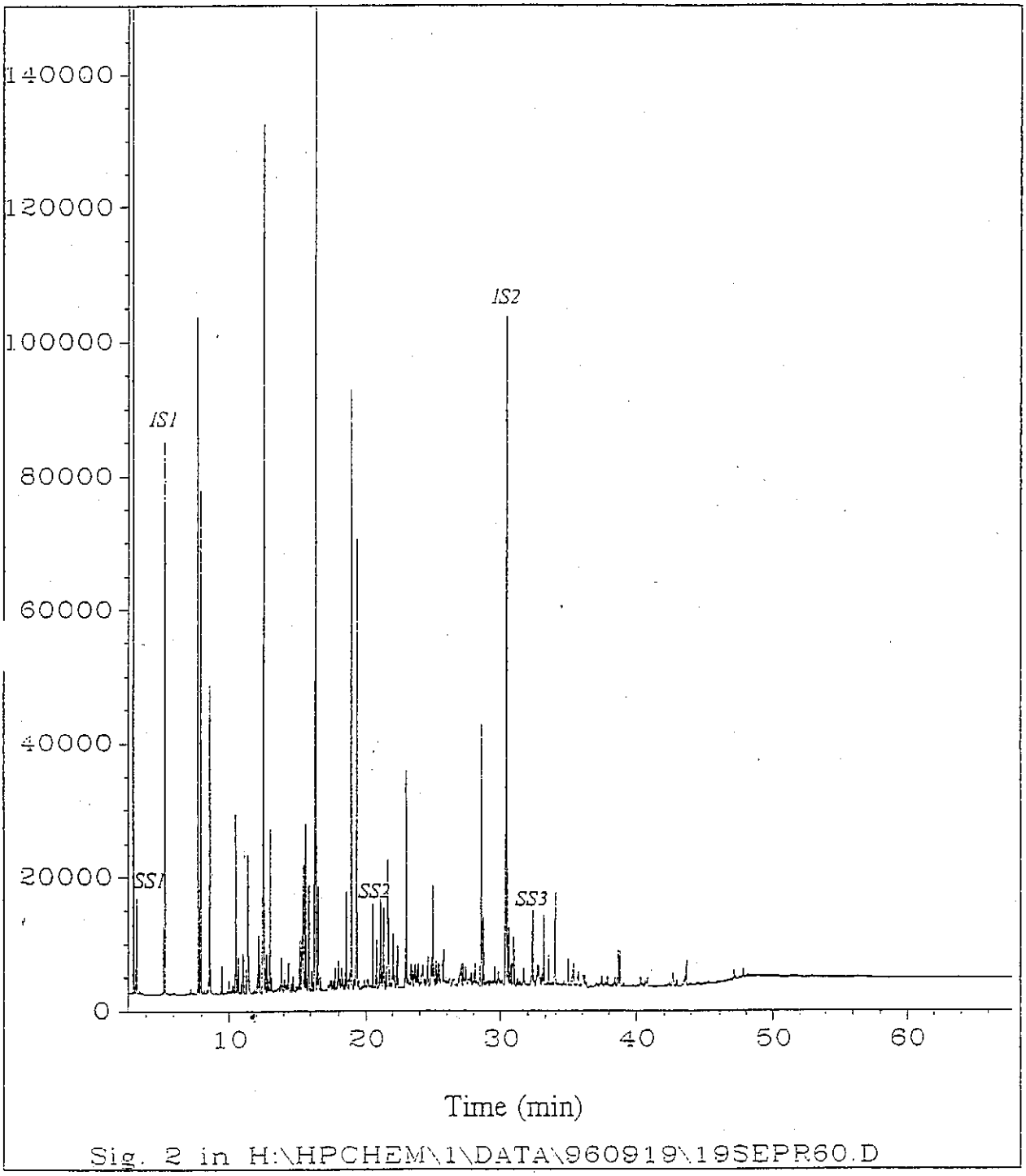
GC/FID Fingerprint



Field ID:	SB~~01~~12FP
Laboratory ID:	PA960918-01DUP
Method:	MET4007S

)1, DMM
)6

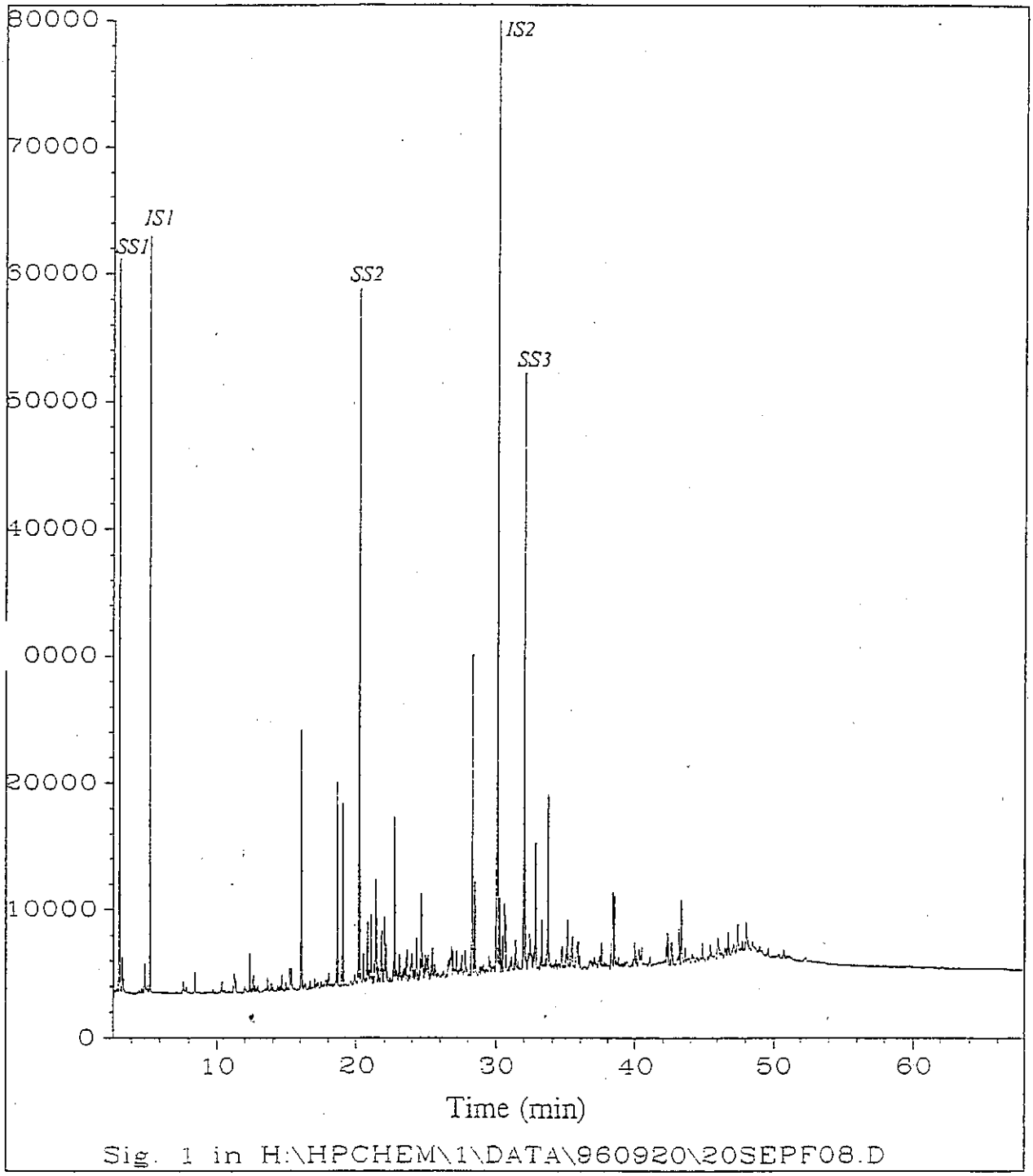
GC/FID Fingerprint



Field ID:	SW1
Laboratory ID:	PA960918-02
Method:	MET4007S

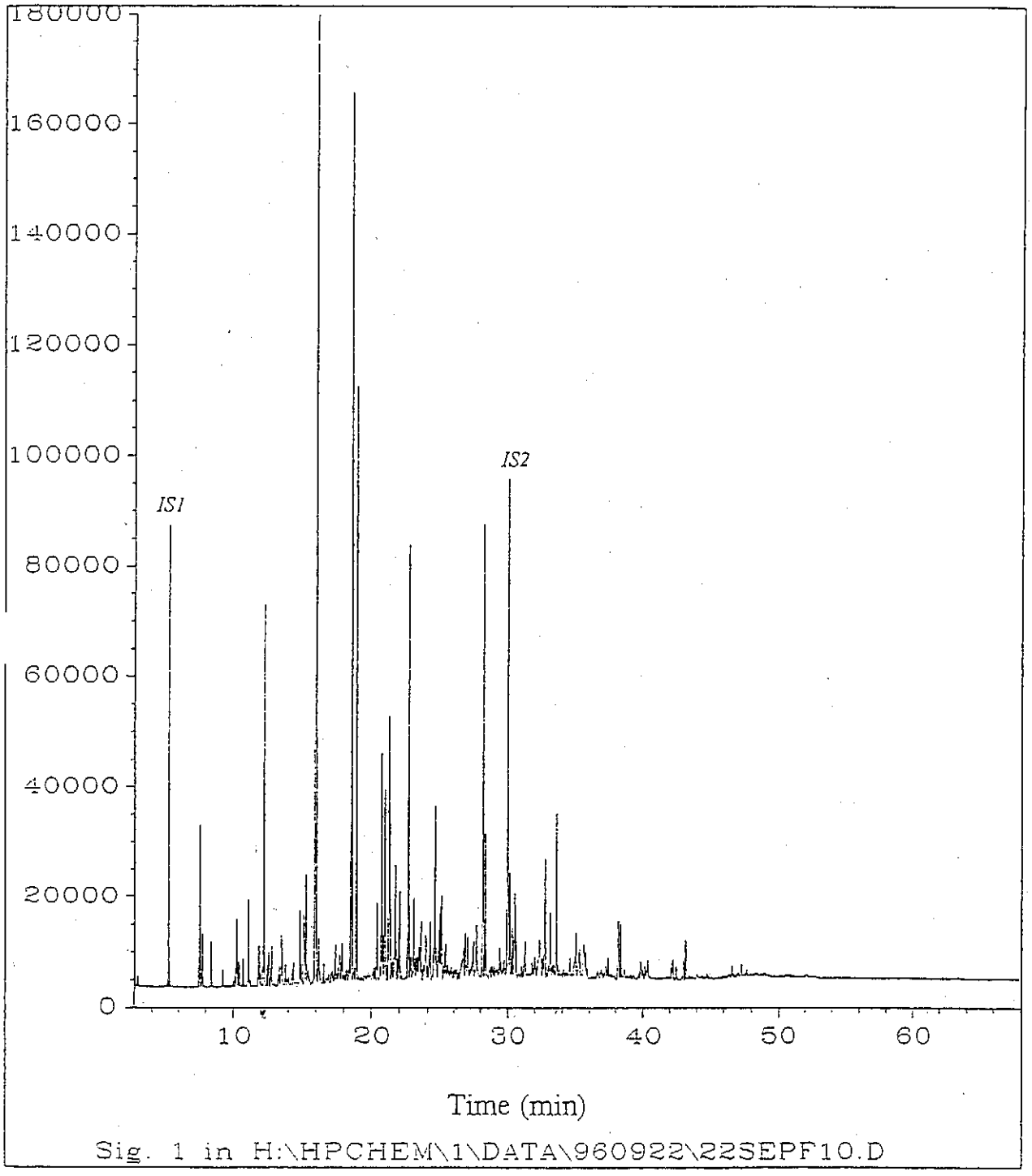
1, DMM
3

GC/FID Fingerprint



Field ID:	SED1
Laboratory ID:	PA960918-03
Method:	MET4007S

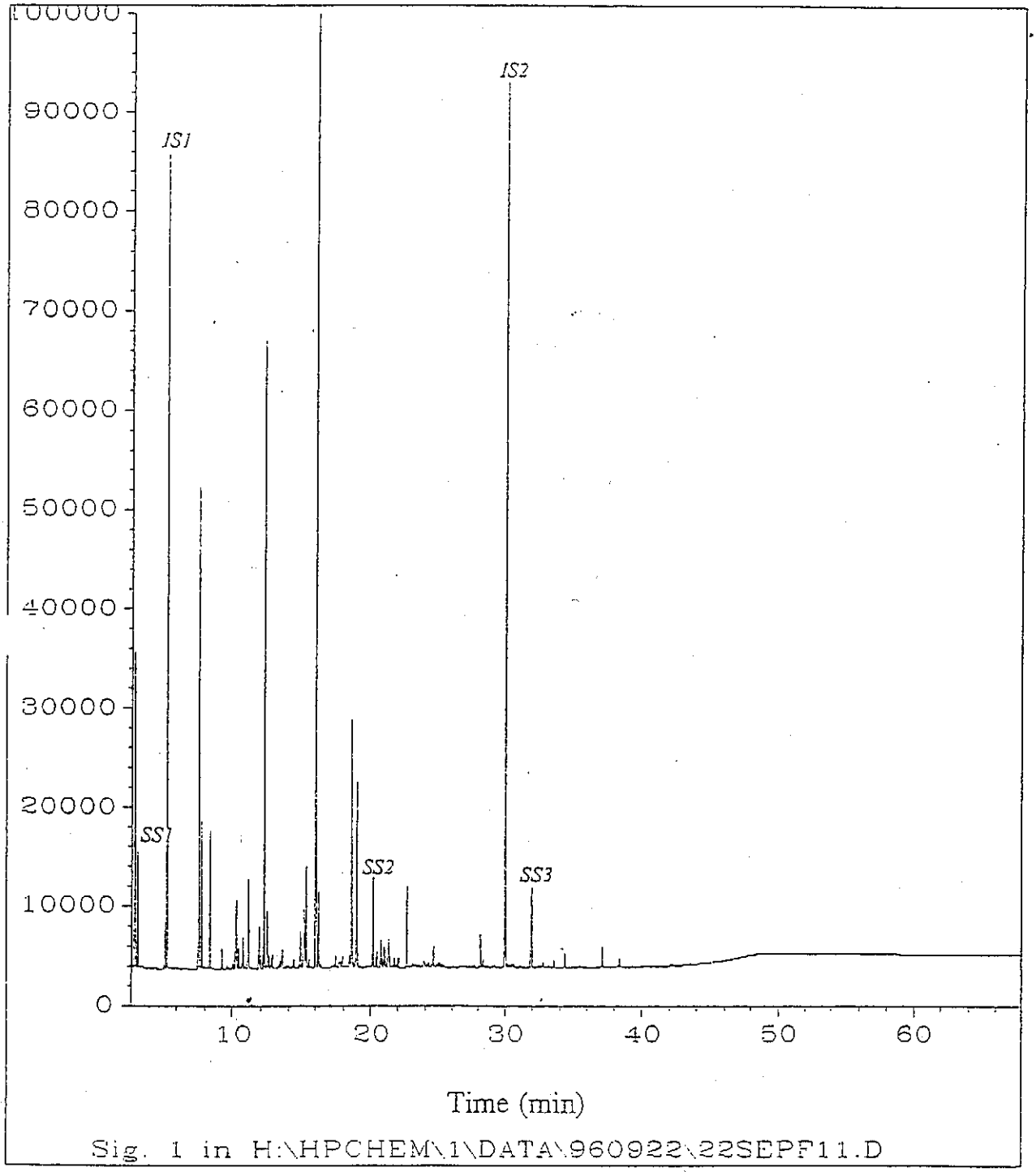
GC/FID Fingerprint



Field ID:	MW13 SED
Laboratory ID:	PA960921-01
Method:	MET4007S

DMM

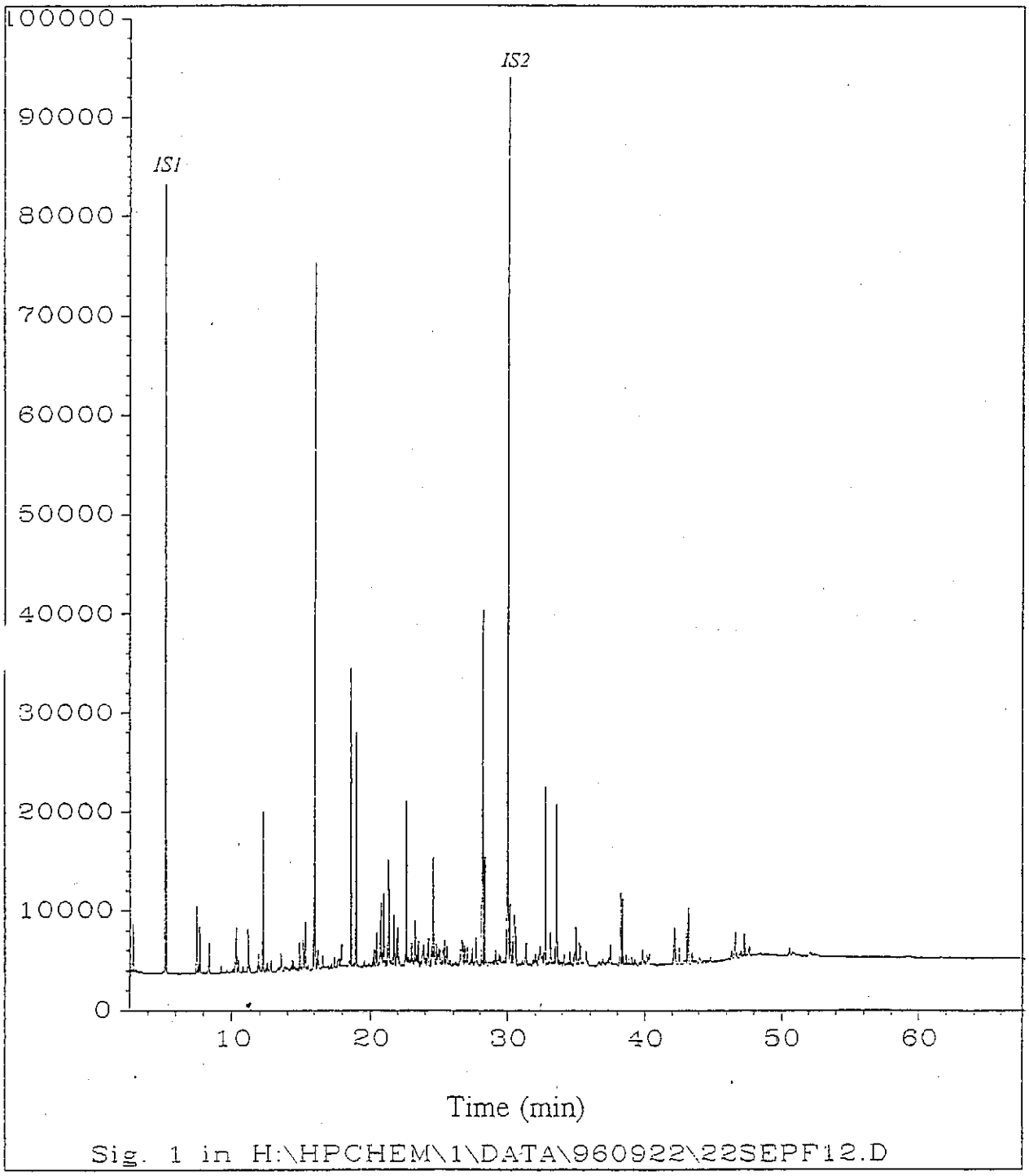
GC/FID Fingerprint



Field ID:	MW13 Sheen
Laboratory ID:	PA960921-02
Method:	MET4007S

01, DMM
06

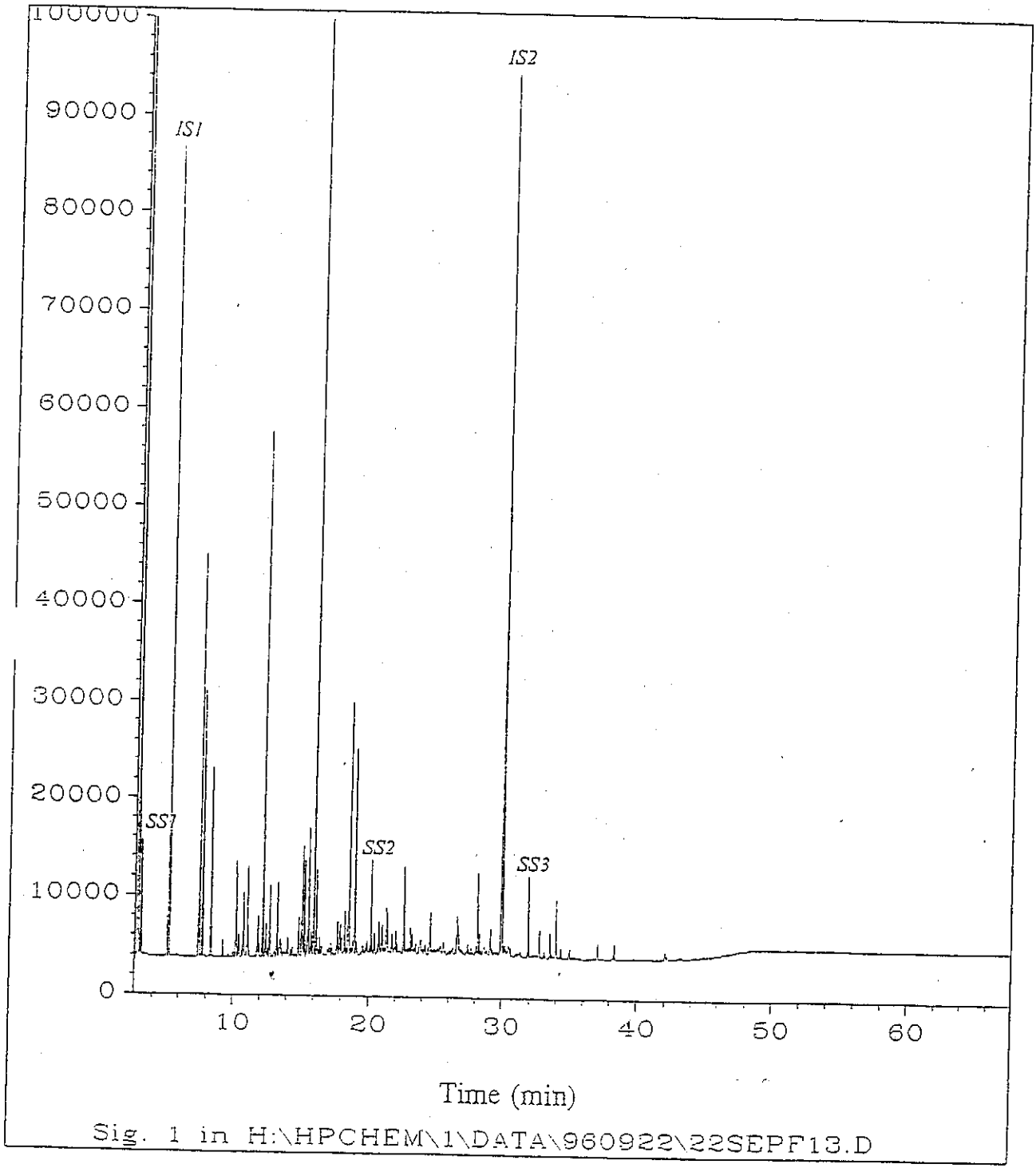
GC/FID Fingerprint



Field ID:	MW14 SED
Laboratory ID:	PA960921-03
Method:	MET4007S

01, DMM
96

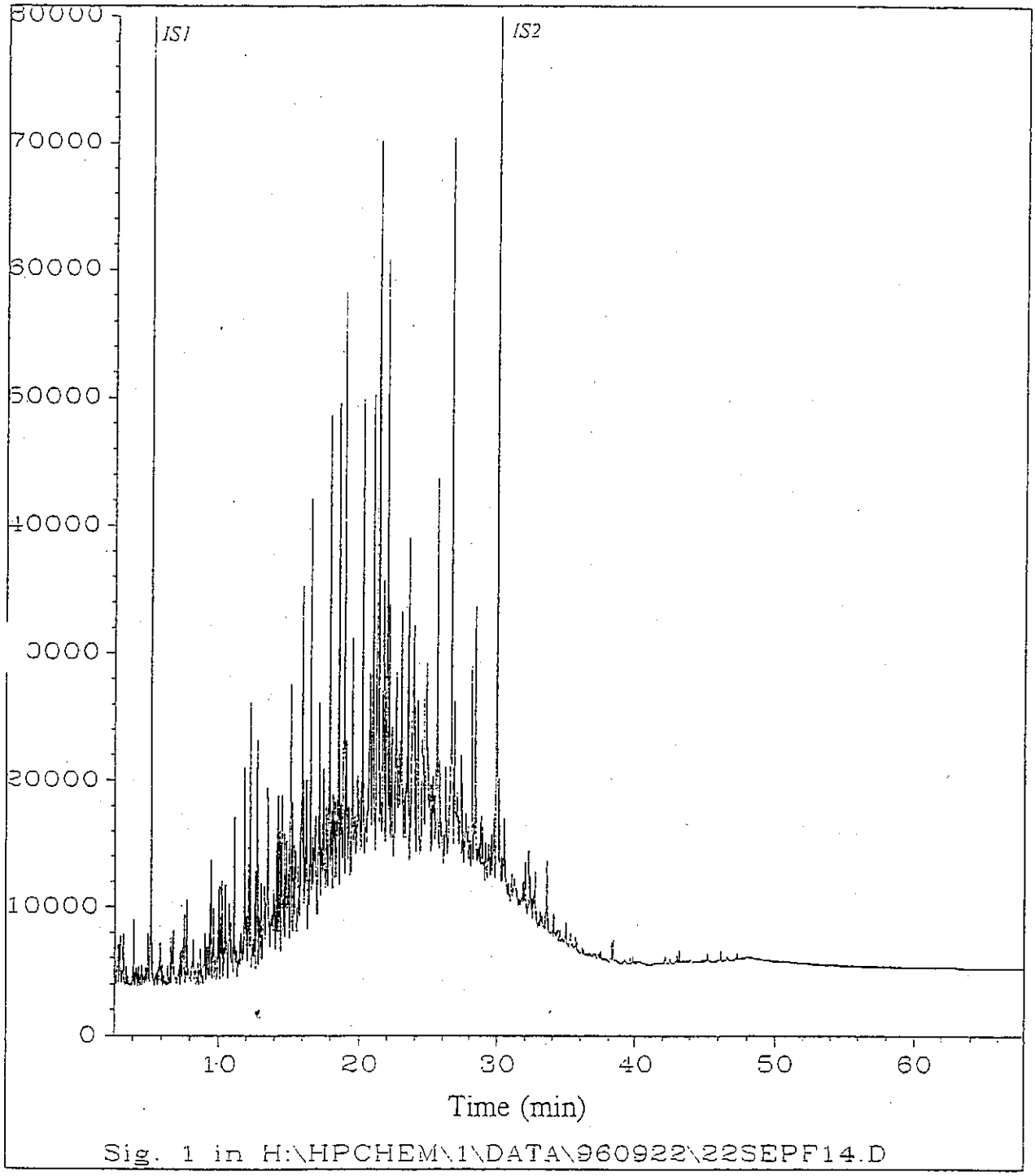
GC/FID Fingerprint



Field ID:	MW14 Sheen
Laboratory ID:	PA960921-04
Method:	MET4007S

, DMM

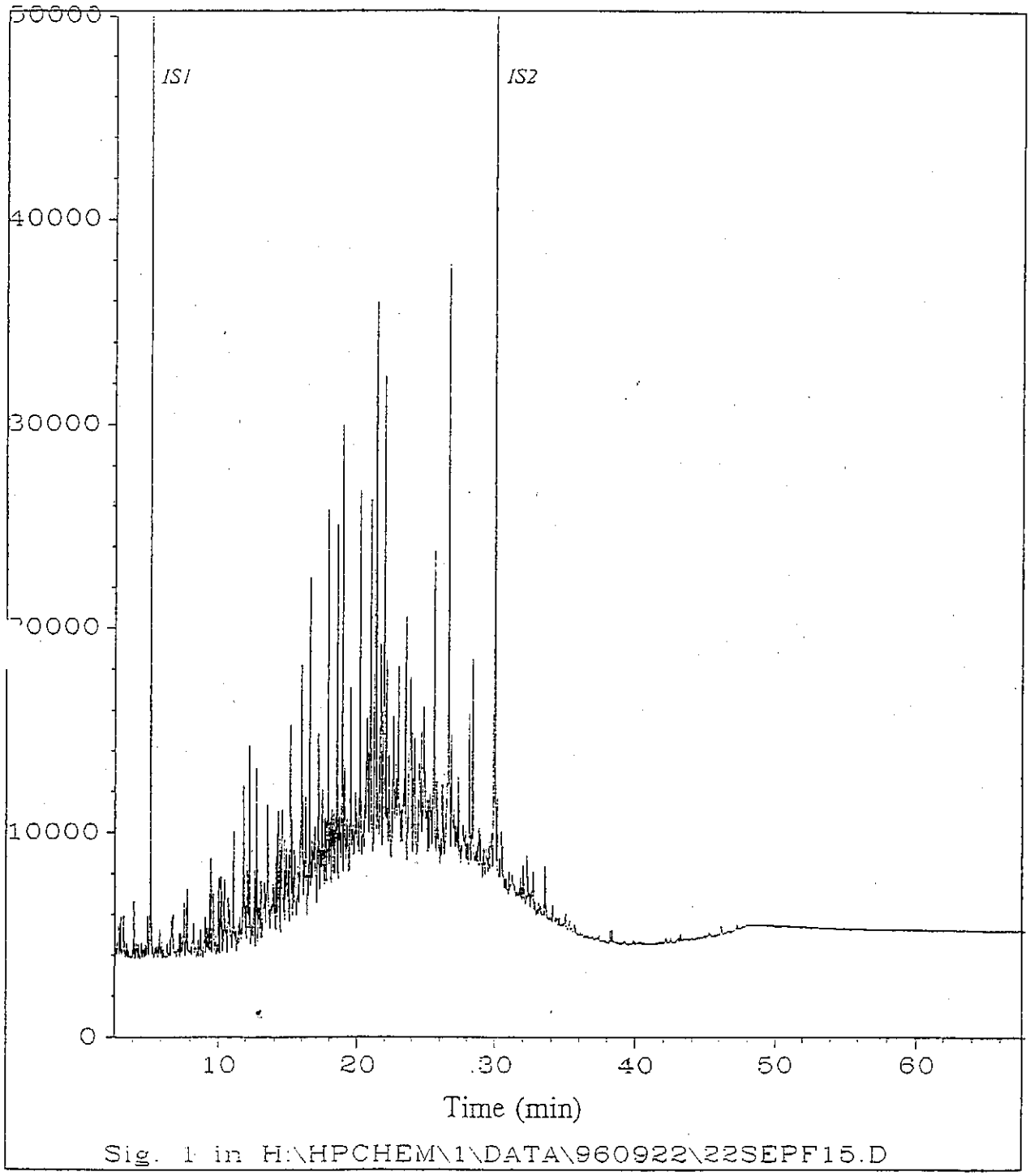
GC/FID Fingerprint



Field ID:	MW03 DNAPL
Laboratory ID:	PA960921-05D
Method:	MET4007S

I, DMM

GC/FID Fingerprint



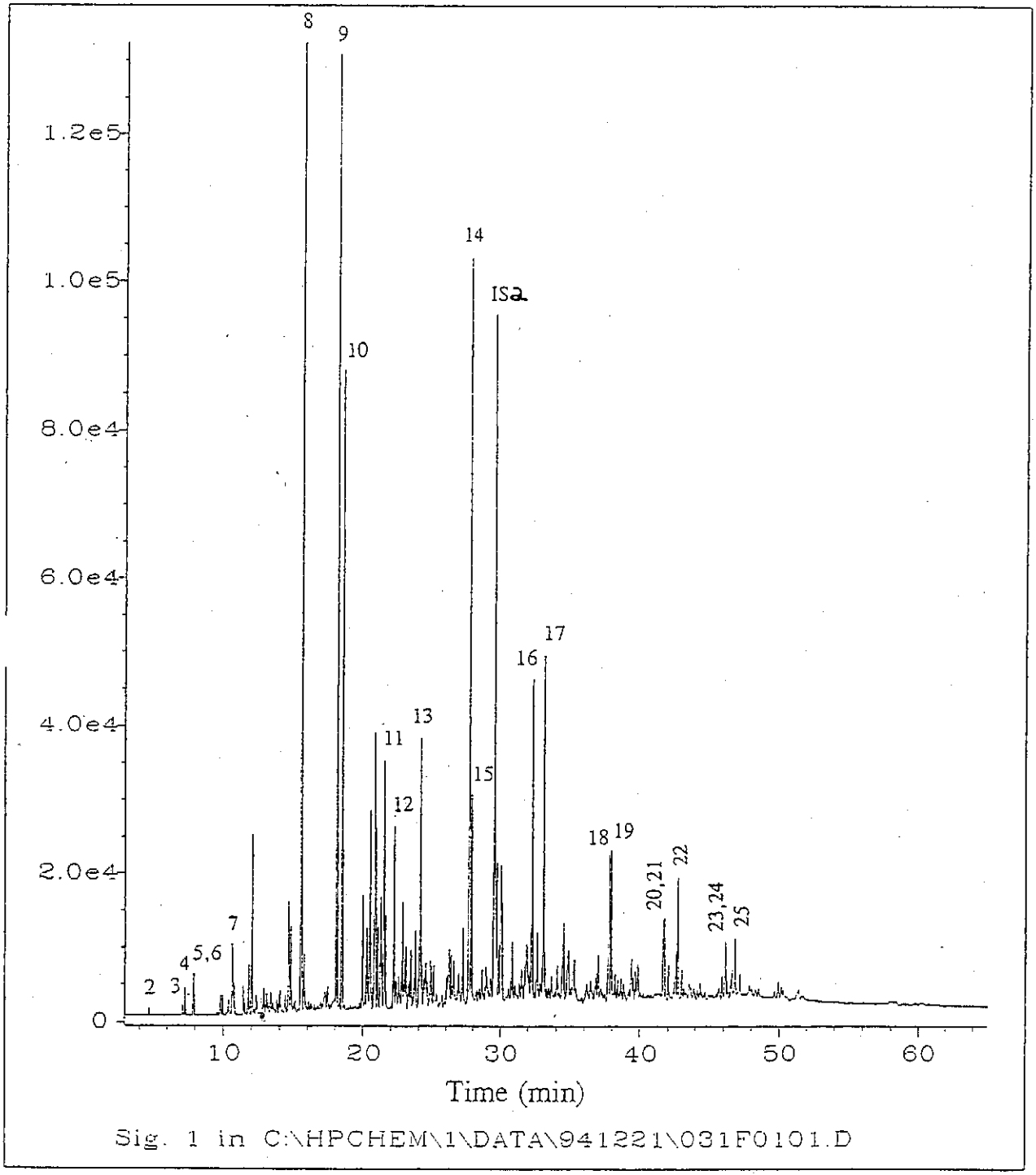
Field ID:	**MW03 LNAPL**
Laboratory ID:	PA960921-05L
Method:	MET4007S

, DMM

Target Compound List

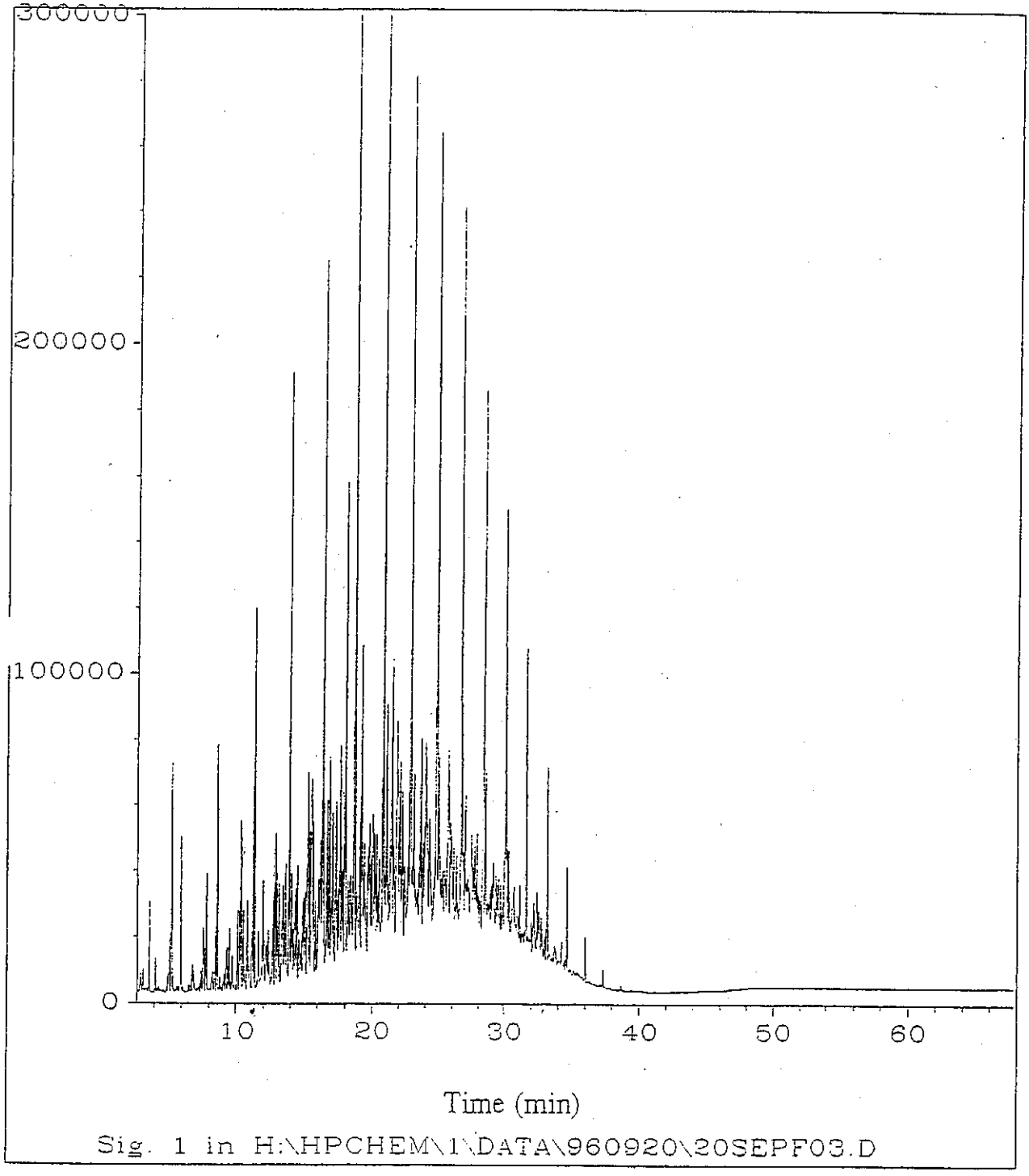
1	Benzene
2	Toluene
3	Ethylbenzene
4	m/p-Xylenes
5	Styrene
6	o-Xylene
7	1,2,4-Trimethylbenzene
8	Naphthalene
9	2-Methylnaphthalene
10	1-Methylnaphthalene
11	Acenaphthylene
12	Acenaphthene
13	Fluorene
14	Phenanthrene
15	Anthracene
16	Fluoranthene
17	Pyrene
18	Benz(a)anthracene
19	Chrysene
20	Benzo(b)fluoranthene
21	Benzo(k)fluoranthene
22	Benzo(a)pyrene
23	Indeno(1,2,3-cd)pyrene
24	Dibenz(a,h)anthracene
25	Benzo(g,h,i)perylene

GC/FID Fingerprint



Field ID:	MGP Tar (TOX Mix of 7, Lot 910111)
Laboratory ID:	CT941216-02
Method:	MET4007S

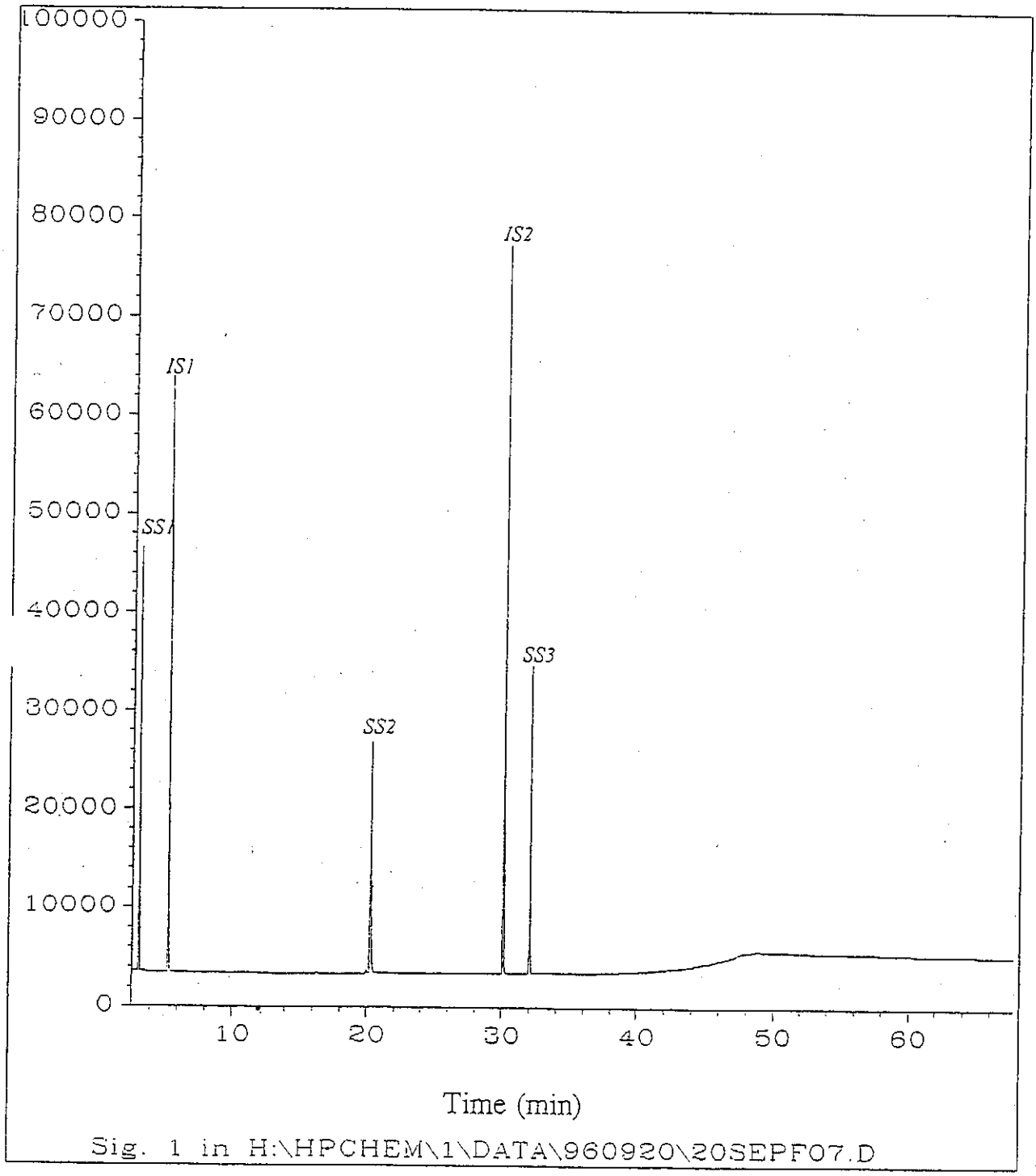
GC/FID Fingerprint



Field ID:	No. 2 Fuel Oil
Laboratory ID:	
Method:	MET4007S

1, DMM
6

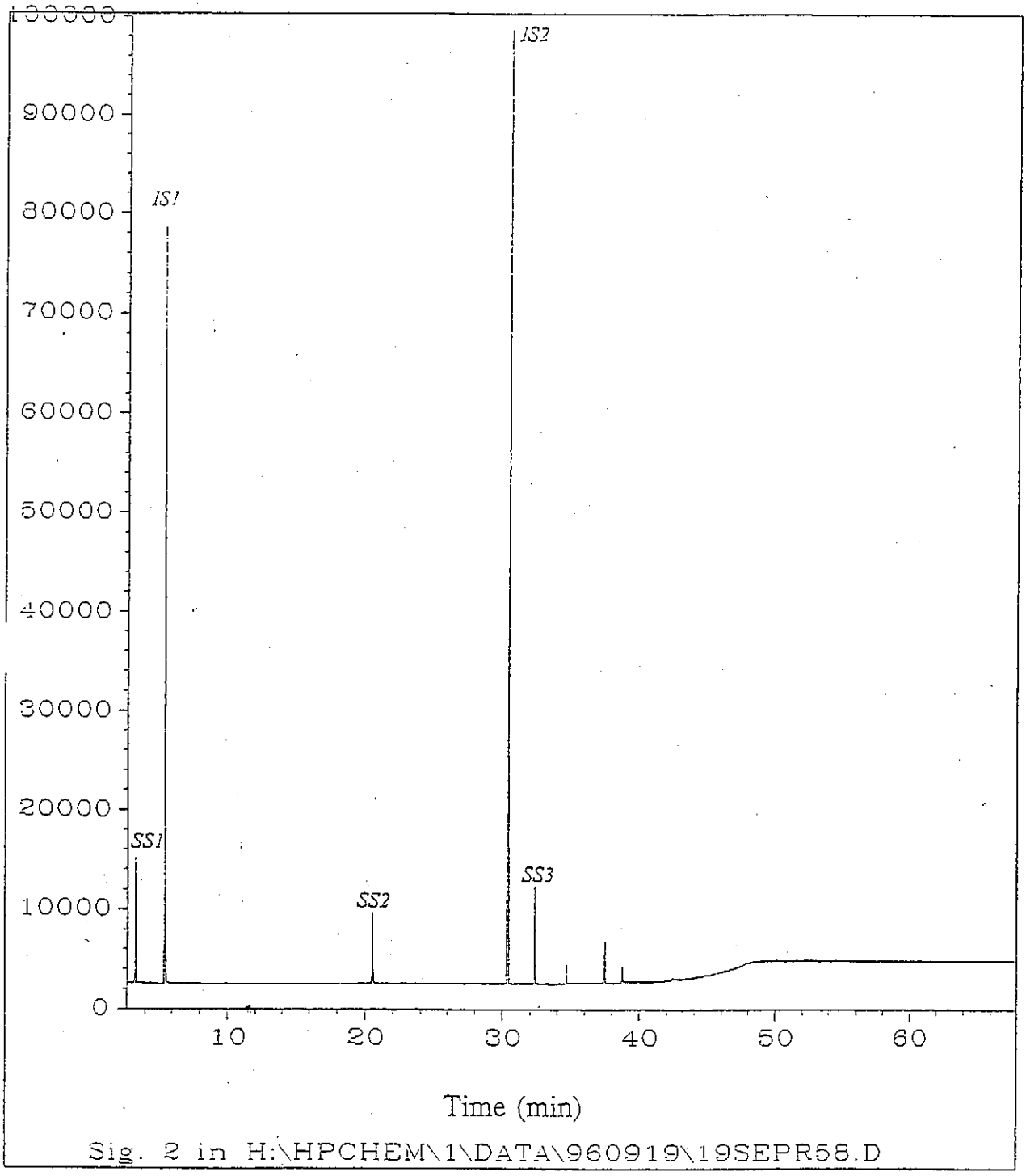
GC/FID Fingerprint



Field ID:	**Method Blank**
Laboratory ID:	PA960919-SB
Method:	MET4007S

DMM

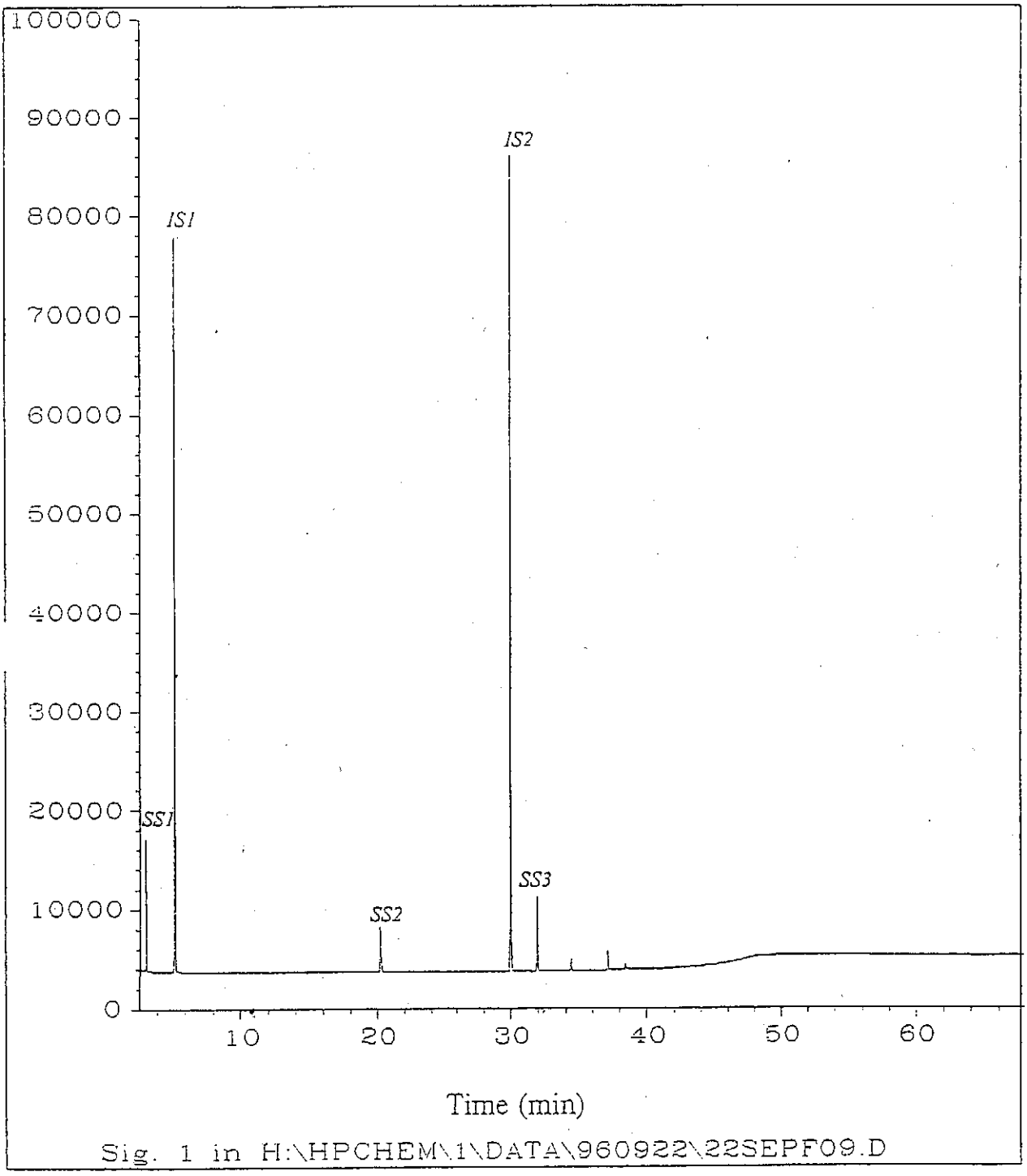
GC/FID Fingerprint



Field ID:	**Method Blank**
Laboratory ID:	PA960919-AB
Method:	MET4007S

1, DMM

GC/FID Fingerprint



Field ID:	**Method Blank**
Laboratory ID:	PA960921-AB
Method:	MET4007S

META ENVIRONMENTAL SAMPLE RECEIPT

Lab ID	Field ID	Matrix	Analysis	Date Sampled	Date Received	Client/ Project	Container/ Storage	Comments/Logger
PA960911-01	TP01H2	Water	Fingerprint	09/09/96	09/11/96	P06001-60	8 oz jar	Walk-IN
PA960911-02	TP03H2	Water	Fingerprint	09/09/96	09/11/96	P06001-60	8 oz jar	Walk-IN
PA960911-03	TP04SO	Soil	Fingerprint	09/09/96	09/11/96	P06001-60	8 oz jar	Walk-IN

1:50

Decant.

Sarah C Watts
9/13/96

COPY

Client: Parsons ES
Address: 290 Elwood Davis Rd
Liverpool NY 13088

Project Manager: Imants Lotts
Phone: 315 451 9560 FAX: 315 451 9570
Project Name: Tarrytown
Project Number: 730057-02000
P.O. #:
Analytical Protocol: EPA Deliverables:
Sampled By: Chris Torell

Analysis Requested

Lab ID (Lab Use Only)	Sample ID (Maximum of 6 Characters)	Date Sampled	Time Sampled	Sample Description	No. of Containers	mod. EPA 60/5 GC FID Fingerprint	Bin #'s In/Out (For Lab Use Only)
	TP01H2	9/9	1200	water	1	1	
	TP03H2	9/9	1345	water	1	1	
	TP04SO	9/9	1700	soil	1	1	Decanted 10 ml

Login #:
Ship to: Metra
Nytex Environmental Inc.
60 Seaview Blvd
Port Washington N.Y. 11050
Attn.: Sample Control
Date Shipped: 9/10
Carrier: Fedex
Air Bill #:
Cooler #:
C of C #:
SDG #:
NEI QT #:

Comments

PA960911-01
-02
-03

Relinquished by:	Date / Time	Received by:	Date / Time
Print Name: CRTorell	9/10 3p	Print Name: Fedex	
Relinquished by:	Date / Time	Received by:	Date / Time
Print Name:		Print Name:	
Relinquished by:	Date / Time	Received by Laboratory: Sarah C. Watts	Date / Time
Print Name:	9/11/96 4:00 PM	Print Name: SARAH C. WATTS	

Lab Use Only

Custody Seals: Intact Broken Absent
Sample Rec'd in Good Condition?: Y N
Sample Temperature: _____ Degrees Celsius
INSPECTED BY:
COMMENTS: 10.3°C UPON RECEIPT
ALL SAMPLES INTACT

Special Instructions: Samples are very contaminated

CLIENT RETAINS YELLOW COPY ONLY

META ENVIRONMENTAL SAMPLE RECEIPT

Lab ID	Field ID	Matrix	Analysis	Date Sampled	Date Received	Client/ Project	Container/ Storage	Comments/Logger
PA960918-01	SB10FP	Liquid	Fingerprint	09/16/96	09/18/96	P06001-60	4 oz. jar	Walk-In
PA960918-02	SED1	Sediment	Fingerprint	09/17/96	09/18/96	P06001-60	8 oz. jar	Walk-in – water?
PA960918-03	SW1	Water	Fingerprint	09/17/96	09/18/96	P06001-60	8 oz. jar	Walk-in – sed?

Reverse Client ID

See COC about sample labels 9/18 KMC

KMC 9/18/96

(516) 625-5500 FAX: (516) 625-4274

Chain of Custody Record

Client Name: Parsons ES
Address: 290 Elwood Davis Rd, Liverpool NY 13088
Project Manager: Imants Reks
Phone: 315 451 9560 FAX 315 451 8570
Project Name: Tarrytown
Project Number: 730057 02000
P.O. #: " "
Analytical Protocol: EPA Deliverables:
Sampled By: Chris Torell

Login #:
Ship to:
Nytest Environmental Inc.
60 Seaview Blvd
Port Washington N.Y. 11050
Attn.: Sample Control
Date Shipped: 9/17
Carrier: Fedex
Air Bill #: 228773414
Cooler #:
C of C #:
SDG #:
NEI QT #:

Analysis Requested: GCFID Fingerprint

Lab ID (Lab Use Only)	Sample ID (Maximum of 6 Characters)	Date Sampled	Time Sampled	Sample Description	No. of Containers	GCFID Fingerprint	Bin #'s In/Out (For Lab Use Only)	Comments
	SB10FP	9/16	1545	Free product	1	1	Temp = 8.0°C PA96098-01	liquid
	SED1	9/17	1245	River Sediment boomed area	1	1	Temp = 8.4°C -02	sediment
	SW1	9/17	1245	River water boomed area	1	1	Temp = 7.8°C -03	liquid

SED1 and SW1 labels appear to be switched on the sample jars. 9/18 KWC
Confirmed SM + Imants Reks 9/19/96

Relinquished by:	Date / Time	Received by:	Date / Time
CETorell	9/17 1515	Fedex	
Print Name: Chris Torell		Print Name:	
Relinquished by:		Received by:	
Print Name:		Print Name:	
Relinquished by:		Received by laboratory: Keir Craigie	9/18 11:00AM
Print Name:		Print Name: KEIR CRAIGIE	

Lab Use Only
Custody Seals: Intact Broken Absent
Sample Rec'd in Good Condition? Y N
Sample Temperature ____ Degrees Celsius
INSPECTED BY:
COMMENTS:

Special Instructions: limited product volume in SW1 + Sed 1

CLIENT RETAINS YELLOW COPY ONLY

META ENVIRONMENTAL SAMPLE RECEIPT

Lab ID	Field ID	Matrix	Analysis	Date Sampled	Date Received	Client/ Project	Container/ Storage	Comments/Logger
PA960921-01	MW13	Water	Fingerprint	09/19/96	09/21/96	P06001-60	1 Liter amber	Walk-in
PA960921-02	MW13	Water	Fingerprint	09/20/96	09/21/96	P06001-60	1 Liter amber	Walk-in
PA960921-03	MW14	Water	Fingerprint	09/19/96	09/21/96	P06001-60	1 Liter amber	Walk-in
PA960921-04	MW14	Water	Fingerprint	09/20/96	09/21/96	P06001-60	1 Liter amber	Walk-in
PA960921-05	MW03	Water	Fingerprint	09/20/96	09/21/96	P06001-60	1 Liter amber	Walk-in

9/21/96
Chris Delaney

Client N. Parsons ES
Address 290 Elwood Davis Rd
Liverpool NY 13088

Project Manager Imants Reks
Phone 315 451 9560 FAX 315 451 9570
Project Name Tarrytown
Project Number 730057 02000
P.O. # " "
Analytical Protocol EPA Deliverables
Sampled By Chris Torell Vern Burm

Analysis Requested

Lab ID (Lab Use Only)	Sample ID (Maximum of 6 Characters)	Date Sampled	Time Sampled	Sample Description	No. of Containers	6 CFD Fingerprint	Bin #'s In/Out (For Lab Use Only)	
	mw13	9/19	1345	mw13	1	1	PA 96 09 21	-01
	mw13	9/20	910	"	1	1		-02
	mw14	9/19	1400	mw14	1	1		-03
	mw14	9/20	915	"	1	1		-04
	mw03	9/20	930	mw03	1	1		-05

Comments
-01, -02: combine F.P. on LNAPL & DNAPL if present
-03, -04: combine F.P. on LNAPL & DNAPL if present
-05: F.P. LNAPL or DNAPL if present

Login #:
Ship to:
Nytest Environmental Inc.
60 Seaview Blvd
Port Washington N.Y. 11050
Attn.: Sample Control
Date Shipped: 9/20/96
Carrier: Fedex
Air Bill #: 228773420
Cooler #:
C of C #:
SDG #:
NEI QT #:

Relinquished by:	Date / Time	Received by:	Date / Time
CR Torell	9/20 1100	Fedup drop off	
Print Name: CR Torell		Print Name:	
Relinquished by:	Date / Time	Received by: Chris Delaney	Date / Time 9/21 11:45a
Print Name:		Print Name: CHRIS DELANEY	
Relinquished by:	Date / Time	Received by Laboratory:	Date / Time
Print Name:		Print Name:	

Lab Use Only
Custody Seals: (Intact) Broken Absent
Sample Rec'd in Good Condition?: (Y) N
Sample Temperature: 4°C Degrees Celsius:
INSPECTED BY: CPD Chris Delaney
COMMENTS:

Special Instructions:

CLIENT RETAINS YELLOW COPY ONLY RECEIVED AT 4°C

META Environmental, Inc.

49 Clarendon Street
Watertown, MA 02172
TEL: (617) 923-4662
FAX: (617) 923-4610

January 29, 1997

Mr. Imants Reks
Parsons Engineering Science, Inc.
290 Elwood Davis Road
Liverpool, New York 13088

RE: *Results of Analysis of Samples from the Tarrytown Site*

Dear Mr. Reks:

META Environmental, Inc. (META) has completed the analysis of one soil sample and two water samples from the Tarrytown site. The methods used and the results generated are described in the following paragraphs.

Methods

For the soil sample, approximately 2 grams of sample was extracted with methylene chloride by a microscale solvent extraction procedure developed by META for EPRI. Following extraction, the solvent was concentrated using the Kuderna-Danish technique, spiked with nternal standards, and analyzed by gas chromatography with flame ionization detection (GC/FID) for monocyclic aromatic hydrocarbons (MAHs), polycyclic aromatic hydrocarbons (PAHs), and GC/FID fingerprint.

Water samples were microextracted using a modification of ASTM Method D-5241-92. The extracts also were analyzed for MAHs, PAHs, and GC/FID fingerprint.

Because of subsampling difficulties, the actual matrix that was extracted for the water samples consisted of some proportion of NAPL or sheen, suspended sediment, and water. The results are reported in mg/L but should not be considered representative of the concentration of dissolved constituents solely.

Results

The GC/FID fingerprints and the tabulated concentrations of MAHs and PAHs for the samples are attached to this letter report. The discussion of the results which follows refers to those data.

The chromatogram for Sample **Testpit 05, diesel prod.** suggests a moderately weathered middle weight fuel oil. However there are two prominent peaks which elute at approximately 20 minutes and a late eluting unresolved complex mixture (UCM) centered around 44 minutes with two prominent peaks at approximately 45 minutes, which are not characteristic of refined petroleum fuels. The identity and source of these features could not be determined with the analytical methods

META Environmental, Inc.
49 Clarendon Street
Watertown, MA 02172
TEL: (617) 923-4662
FAX: (617) 923-4610

January 29, 1997

Mr. Imants Reks
Parsons Engineering Science, Inc.
290 Elwood Davis Road
Liverpool, New York 13088

RE: *Results of Analysis of Samples from the Tarrytown Site*

Dear Mr. Reks:

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Methods

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Water samples were microextracted using a modification of ASTM Method D-5241-92. The extracts also were analyzed for MAHs, PAHs, and GC/FID fingerprint.

Because of subsampling difficulties, the actual matrix that was extracted for the water samples consisted of some proportion of NAPL or sheen, suspended sediment, and water. The results are reported in mg/L but should not be considered representative of the concentration of dissolved constituents solely.

Results

The GC/FID fingerprints and the tabulated concentrations of MAHs and PAHs for the samples are attached to this letter report. The discussion of the results which follows refers to those data.

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ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID Field ID:	PA970117-01 Testpit 05, Diesel Prod.	PA970120-SB Soil Blank
MAHs:		
Benzene	I	0.21 U
Toluene	I	0.21 U
Ethylbenzene	I	0.21 U
m/p-Xylene	I	0.21 U
Styrene	I	0.21 U
o-Xylene	I	0.21 U
1,2,4-Trimethylbenzene	I	0.21 U
Total MAHs:	ND	ND
PAHs:		
Naphthalene	I	0.21 U
2-Methylnaphthalene	I	0.21 U
1-Methylnaphthalene	I	0.21 U
Acenaphthylene	I	0.21 U
Acenaphthene	I	0.21 U
Dibenzofuran	I	0.21 U
Fluorene	I	0.21 U
Phenanthrene	I	0.21 U
Anthracene	I	0.21 U
Fluoranthene	I	0.21 U
Pyrene	I	0.21 U
Benz(a)anthracene	I	0.21 U
Chrysene	I	0.21 U
Benzo(b)fluoranthene	I	0.21 U
Benzo(k)fluoranthene	I	0.21 U
Benzo(a)pyrene	I	0.21 U
Indeno(1,2,3-cd)pyrene	I	0.21 U
Dibenz(a,h)anthracene	I	0.21 U
Benzo(g,h,i)perylene	I	0.21 U
Total PAHs:	ND	ND
Quantitation Limit:	1.62	0.21
Detection Limit:	0.65	0.09
Fluorobenzene (SS1)	88%	76%
5a-Androstane (SS2)	109%	85%
Concentration Units:	mg/kg	mg/kg

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

META

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID Field ID:	PA970117-02 Testpit 07,4" pipe H2O	PA970117-03 Testpit 09, H2O in pit.	PA970120-AB Aqueous Blank
MAHs:			
Benzene	0.02	I	0.01 U
Toluene	0.01 U	I	0.01 U
Ethylbenzene	0.01 U	I	0.01 U
m/p-Xylene	0.01 U	I	0.01 U
Styrene	0.01 U	I	0.01 U
o-Xylene	0.01 U	I	0.01 U
1,2,4-Trimethylbenzene	0.01 U	I	0.01 U
Total MAHs:	0.02	ND	ND
PAHs:			
Naphthalene	0.01 U	I	0.01 U
2-Methylnaphthalene	0.01 U	I	0.01 U
1-Methylnaphthalene	0.01 U	I	0.01 U
Acenaphthylene	0.01 U	I	0.01 U
Acenaphthene	0.01 U	I	0.01 U
Dibenzofuran	0.01 U	I	0.01 U
Fluorene	0.01 U	I	0.01 U
Phenanthrene	0.01 U	I	0.01 U
Anthracene	0.01 U	I	0.01 U
Fluoranthene	0.01 U	I	0.01 U
Pyrene	0.01 U	I	0.01 U
Benz(a)anthracene	0.01 U	I	0.01 U
Chrysene	0.01 U	I	0.01 U
Benzo(b)fluoranthene	0.01 U	I	0.01 U
Benzo(k)fluoranthene	0.01 U	I	0.01 U
Benzo(a)pyrene	0.01 U	I	0.01 U
Indeno(1,2,3-cd)pyrene	0.01 U	I	0.01 U
Dibenz(a,h)anthracene	0.01 U	I	0.01 U
Benzo(g,h,i)perylene	0.01 U	I	0.01 U
Total PAHs:	ND	ND	ND
Quantitation Limit:	0.01	0.01	0.01
Detection Limit:	0.01	0.01	0.01
Fluorobenzene (SS1)	97%	104%	105%
5a-Androstane (SS2)	99%	109%	106%
Concentration Units:	mg/L	mg/L	mg/L

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

META

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

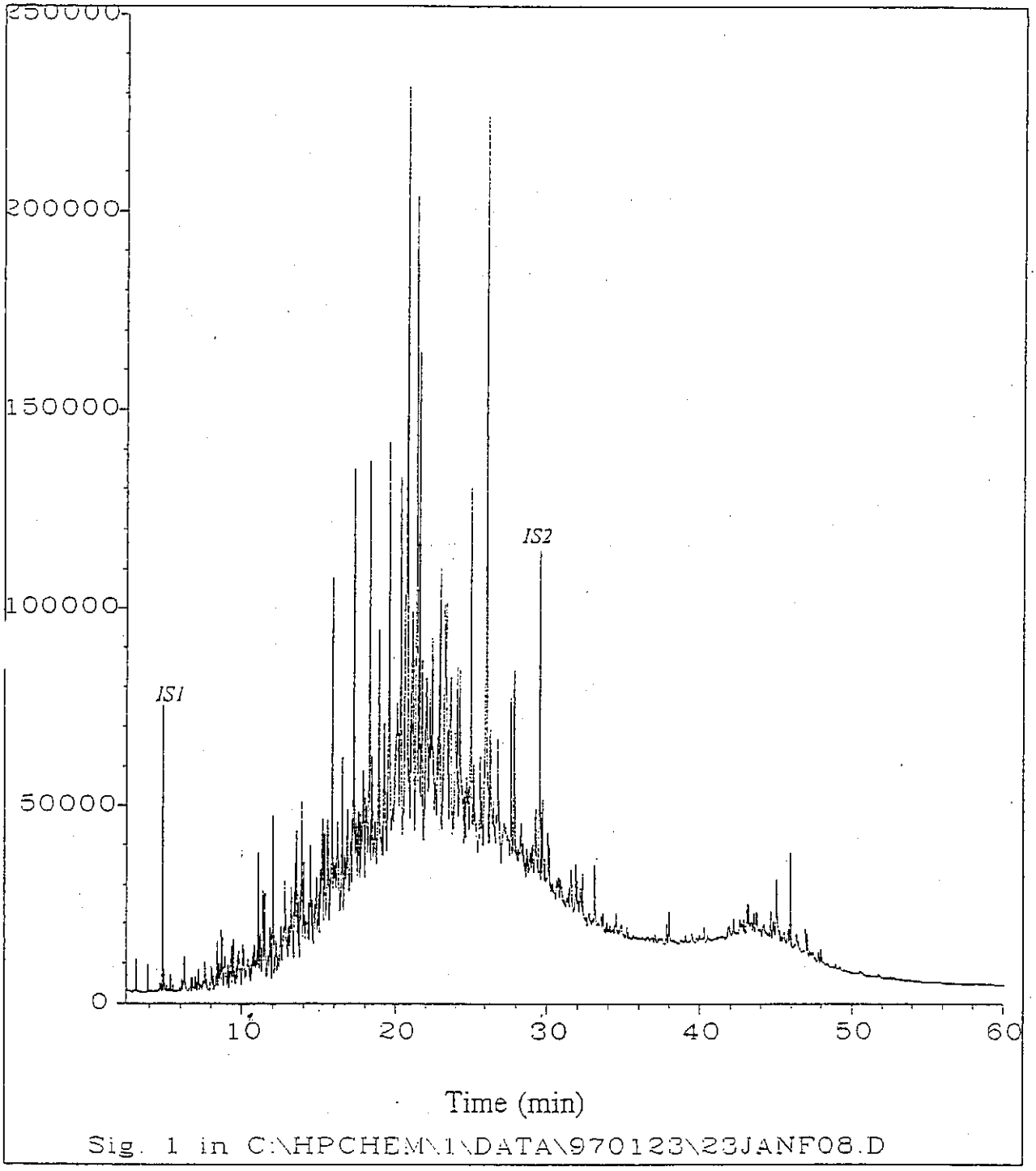
Lab ID Field ID:	PA970117-ABS8 Aqueous Blank Spike	PA970117-2DUP Testpit 07,4" pipe H2O
MAHs:		
Benzene	94%	0.02
Toluene	93%	0.01 U
Ethylbenzene	93%	0.01 U
m/p-Xylene	93%	0.01 U
Styrene	60%	0.01 U
o-Xylene	121%	0.01 U
1,2,4-Trimethylbenzene	91%	0.01 U
Total MAHs:		0.02
PAHs:		
Naphthalene	85%	0.01 U
2-Methylnaphthalene	77%	0.01 U
1-Methylnaphthalene	90%	0.01 U
Acenaphthylene	86%	0.01 U
Acenaphthene	90%	0.01 U
Dibenzofuran	79%	0.01 U
Fluorene	86%	0.01 U
Phenanthrene	77%	0.01 U
Anthracene	69%	0.01 U
Fluoranthene	88%	0.01 U
Pyrene	92%	0.01 U
Benz(a)anthracene	81%	0.01 U
Chrysene	90%	0.01 U
Benzo(b)fluoranthene	80%	0.01 U
Benzo(k)fluoranthene	95%	0.01 U
Benzo(a)pyrene	82%	0.01 U
Indeno(1,2,3-cd)pyrene	66%	0.01 U
Dibenz(a,h)anthracene	83%	0.01 U
Benzo(g,h,i)perylene	79%	0.01 U
Total PAHs:		ND
Quantitation Limit:		0.01
Detection Limit:		0.01
Fluorobenzene (SS1)	93%	89%
5a-Androstane (SS2)	94%	98%
Concentration Units:	mg/L	mg/L

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

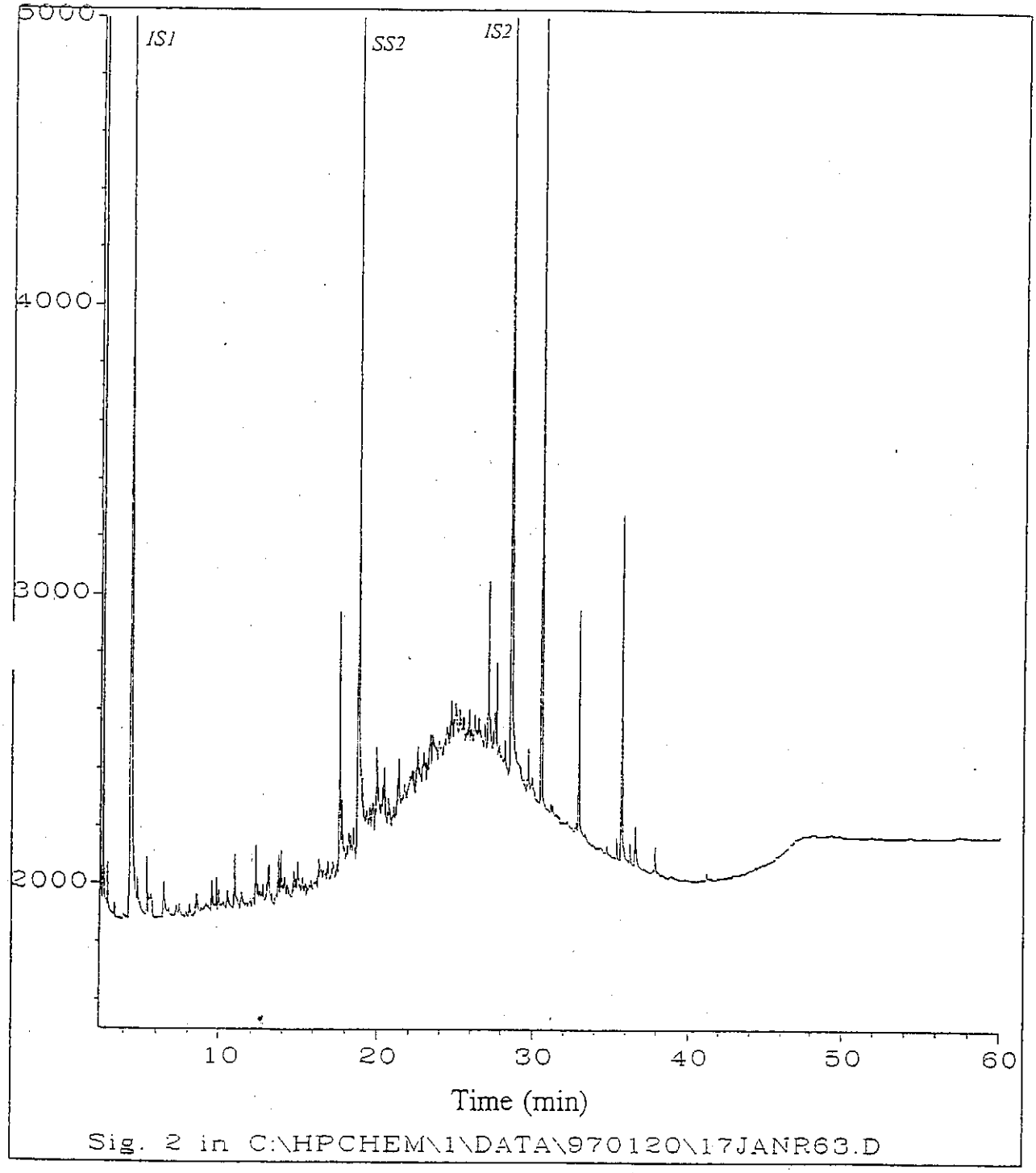
META

GC/FID Fingerprint



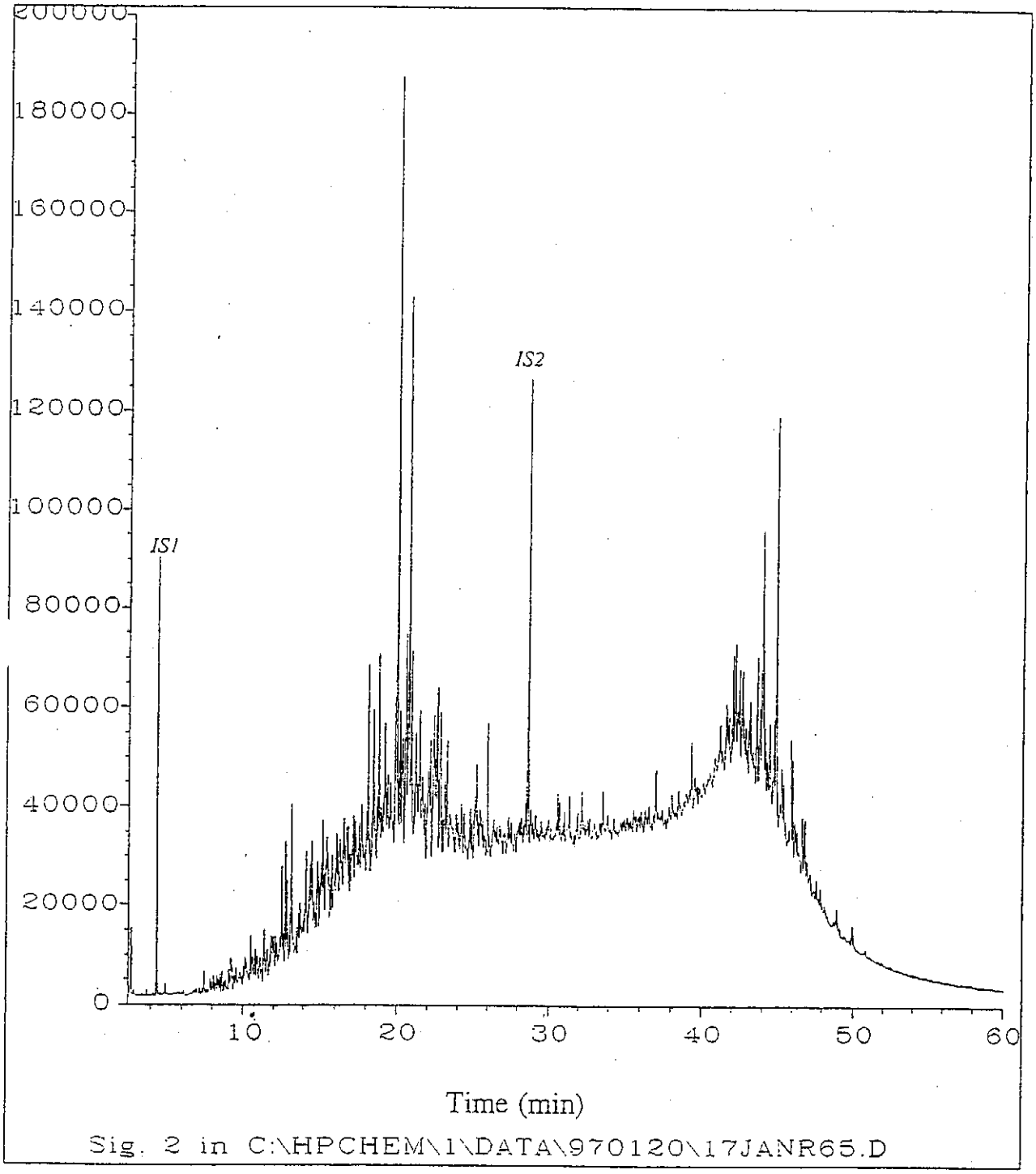
Field ID:	**Testpit 05, diesel prod.**
Laboratory ID:	PA970117-01
Method:	MET4007S

GC/FID Fingerprint



Field ID:	**Testpit 07, 4" pipe H2O**
Laboratory ID:	PA970117-02
Method:	MET4007S

GC/FID Fingerprint



Field ID:	**Testpit 09, H2O in pit**
Laboratory ID:	PA970117-03
Method:	MET4007S

META ENVIRONMENTAL SAMPLE RECEIPT

Lab ID	Field ID	Matrix	Analysis	Date Sampled	Date Received	Client/ Project	Container/ Storage	Comments/Logger
PA970117-01	Testpit 05, diesel prod	Soil	Fingerprint	01/15/97	01/17/97	P06001-60	4oz jar	Walkin
PA970117-02	Testpit 07, 4" pipe H2O	Water	Fingerprint	01/16/97	01/17/97	P06001-60	4oz jar	Walkin
PA970117-03	Testpit 09, H2O in pit	Water	Fingerprint	01/16/97	01/17/97	P06001-60	4oz jar	Walkin

COPY

Chris Delaney
1/20/97

ADDRESS 290 Elwood Davis Rd

PHONE (14519560 Liverpool NY 13088

SAMPLED BY

(Print Name) CRTorell Signature CRTorell

(Print Name) Signature

(Print Name) Signature

META Environmental, Inc.

TEL: (617) 923-4662
FAX: (617) 923-4610

SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	CONTAINER SIZE	CONTAINER Q/P	GRAB	COMP	NO. OF CONTAINERS	SAMPLE MATRIX	PRESERVATIVE	ANALYSES: X = Fingerprint	COMMENTS
TP05	1/15	1430	Test pit 05, dredged pool	4		X		1	H_2O	—	X	PA970117-01
TP07	1/16	900	Test pit 07, 4" pipe H_2O	4		X		1	H_2O	—	X	02
TP09	1/16	1030	test pit 09, H_2O in pit	4		X		1	H_2O	—	X	03

Relinquished by	Date/Time	Received by	Relinquished by	Date/Time	Received by
CRTorell	1/16 1500	Masters Inc (Fedex)			
Relinquished by	Date/Time	Received by	Relinquished by	Date/Time	Received for Laboratory by
				1/17/97 10:30am	Sarah C. Watts

Method of Shipment

Results to Imants Rics above

Remarks:

0.6 °C UPON RECEIPT

COPY

Rev. 7/92

PT 1 - ORIGINAL PT 2 META Project Manager - Yellow

META Environmental, Inc.

49 Clarendon Street
Watertown, MA 02172
TEL: (617) 923-4662
FAX: (617) 923-4610

February 10, 1997

Mr. Imants Reks
Parsons Engineering Science, Inc.
290 Elwood Davis Road
Liverpool, New York 13088

RE: *Results of Analysis of Samples from the Tarrytown Site*

Dear Mr. Reks:

META Environmental, Inc. (META) has completed the analysis of ten soil samples from the Tarrytown site. The methods used and the results generated are described in the following paragraphs.

Methods

Approximately 2 grams of each soil sample was extracted with methylene chloride by a microscale solvent extraction procedure developed by META for EPRI. Following extraction, the solvent was concentrated using the Kuderna-Danish technique, spiked with internal standards, and analyzed by gas chromatography with flame ionization detection (GC/FID) for monocyclic aromatic hydrocarbons (MAHs), polycyclic aromatic hydrocarbons (PAHs), and GC/FID fingerprint.

Results

The GC/FID fingerprints and the tabulated concentrations of MAHs and PAHs for the samples are attached to this letter report. The discussion of the results which follows refers to those data.

The chromatograms for Samples SB218C, SB213E, SB220C, SB27C, and SB27H indicate a moderately weathered middle weight fuel oil. The similarities among Samples SB218C, SB213E, and SB220C strongly indicates that the contamination present was from the same source. The material in Samples SB27C and SB27H appears to have come from the same source as the other samples, however the match is not identical. In addition, all the samples also contain moderate levels of PAHs not associated with refined petroleum products. This is indicative of co-contamination with PAH sources such as tars or contaminated fill.

The chromatograms for Samples SB24J, SB24E, and SB19E also indicate a moderately weathered middle weight fuel oil, however the boiling point range is somewhat less than that of the other samples. This suggests one or more additional sources of refined petroleum products. Samples SB24E and SB19E

also contain high molecular weight PAHs which are not associated with refined petroleum products.

Sample SB217D contains significant levels of volatile hydrocarbons indicative of gasoline or naphtha. However. the presence of gasoline could not be confirmed by GC/FID fingerprint alone. In addition to volatile hydrocarbons, the sample contains substantial levels of PAHs, dominated by 3-, 4-, 5-, and 6-ring PAHs indicative of a weathered tar.

Finally, **Sample SB220G** contains PAHs at the concentrations and relative proportions indicative of a weathered tar.

Please note that because of the relatively high levels of petroleum hydrocarbons in most of the samples, many of the target MAHs and PAHs could not be identified and quantified with certainty. Additional analyses, possibly using Mass Spectrometry, would be necessary to quantify some of the individual compounds in some of the samples.

If you have any questions, or would like META to do additional analyses, please do not hesitate to call me.

Sincerely,

David M. Mauro
V. President

Attachments

1ETA Environmental, Inc.

49 Clarendon Street
Watertown, MA 02172
TEL: (617) 923-4662
FAX: (617) 923-4610

February 13, 1997

Mr. Imants Reks
Parsons Engineering Science, Inc.
290 Elwood Davis Road
Liverpool, New York 13088

RE: *Results of Analysis of Samples from the Tarrytown Site*

Dear Mr. Reks:

We recently discovered an error in the computer program that generates our laboratory reports. The "Total MAHs" were incorrectly calculated, but all other data was correct. Enclosed are corrected data tables for the Tarrytown samples which were reported to you originally on February 10, 1997.

I apologize for any inconvenience this error may have caused. If you have any questions, or would like META to do additional analyses, please do not hesitate to call me.

Sincerely,

David M. Mauro

David M. Mauro
President

Attachments

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID	PA970124-01		PA970124-02		PA970124-03	
Field ID:	SB217D		SB218C		SB213E	
MAHs:						
Benzene	5.10			I	6.08	
Toluene	0.24	U		I	0.94	
Ethylbenzene	28.6			I	20.7	
m/p-Xylene	32.3			I	18.8	
Styrene	0.24	U		I	1.85	
o-Xylene	0.24	U		I		I
1,2,4-Trimethylbenzene	7.36			I		I
Total MAHs:	66.0		ND		48.4	
PAHs:						
Naphthalene	4.87			I		I
2-Methylnaphthalene	10.9			I		I
1-Methylnaphthalene	9.11			I		I
Acenaphthylene		I		I		I
Acenaphthene	17.6			I		I
Dibenzofuran	8.33			I		I
Fluorene	10.7			I	9.12	
Phenanthrene	54.8			I	15.4	
Anthracene	12.2			I	5.00	
Fluoranthene	40.7		4.22		17.7	
Pyrene	34.0		8.32		15.0	
Benz(a)anthracene	15.7		2.99		10.0	
Chrysene	16.5		3.73		8.38	
Benzo(b)fluoranthene	10.7		2.05		6.56	
Benzo(k)fluoranthene	10.8		2.46		7.69	
Benzo(a)pyrene	15.0		3.45		10.5	
Indeno(1,2,3-cd)pyrene	8.95		1.82		5.39	
Dibenz(a,h)anthracene	2.07		0.24		1.47	
Benzo(g,h,i)perylene	8.80		2.14		5.02	
Total PAHs:	283		31.4		117	
Quantitation Limit:	0.24		0.19		0.17	
Detection Limit:	0.10		0.07		0.07	
Fluorobenzene (SS1)	71%		75%		65%	
5a-Androstane (SS2)	79%		60%		85%	
Concentration Units:	mg/kg		mg/kg		mg/kg	

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

META

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID	PA970124-04	PA970124-05	PA970124-06
Field ID:	SB220G	SB220C	SB24E
MAHs:			
Benzene	2.06	I	I
Toluene	0.45	I	I
Ethylbenzene	0.83	I	I
m/p-Xylene	1.16	I	I
Styrene	I	I	I
o-Xylene	I	I	I
1,2,4-Trimethylbenzene	I	I	I
Total MAHs:	4.49	ND	ND
PAHs:			
Naphthalene	12.5	I	I
2-Methylnaphthalene	18.5	I	I
1-Methylnaphthalene	64.2	I	I
Acenaphthylene	7.80	I	I
Acenaphthene	59.8	I	I
Dibenzofuran	16.0	I	I
Fluorene	25.9	I	I
Phenanthrene	110	I	114
Anthracene	35.0	I	46.8
Fluoranthene	42.5	9.54	1.55
Pyrene	50.1	12.6	55.4
Benz(a)anthracene	24.6	3.78	25.3
Chrysene	23.1	5.06	22.0
Benzo(b)fluoranthene	9.31	2.08	6.82
Benzo(k)fluoranthene	10.2	2.39	8.79
Benzo(a)pyrene	16.4	3.33	14.3
Indeno(1,2,3-cd)pyrene	7.04	1.56	4.76
Dibenz(a,h)anthracene	1.98	0.38	1.28
Benzo(g,h,i)perylene	6.89	1.89	6.00
Total PAHs:	526	42.7	307
Quantitation Limit:	0.19	0.27	0.27
Detection Limit:	0.07	0.11	0.11
Fluorobenzene (SS1)	79%	75%	60%
5a-Androstane (SS2)	96%	105%	113%
Concentration Units:	mg/kg	mg/kg	mg/kg

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

META

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID	PA970124-07		PA970124-08		PA970124-09	
Field ID:	SB24J		SB27C		SB27H	
MAHs:						
Benzene	0.37	U	1.78		12.0	
Toluene	0.37	U	2.12		3.51	
Ethylbenzene	0.37	U	1.92		15.5	
m/p-Xylene	0.37	U	3.79		20.0	
Styrene	0.37	U	1.40		2.33	
o-Xylene	0.37	U	0.79			I
1,2,4-Trimethylbenzene	0.37	U	1.54			I
Total MAHs:	ND		11.8		53.4	
PAHs:						
Naphthalene		I		I		I
2-Methylnaphthalene		I		I		I
1-Methylnaphthalene		I		I		I
Acenaphthylene		I		I		I
Acenaphthene	4.80			I		I
Dibenzofuran	0.37	U		I	6.53	
Fluorene	1.46		9.76		22.8	
Phenanthrene	4.15		7.75		62.6	
Anthracene	2.58			I	19.9	
Fluoranthene	0.91		2.00		34.0	
Pyrene	1.53		2.52		34.1	
Benz(a)anthracene	0.57		1.23		18.2	
Chrysene	0.69		1.52		15.4	
Benzo(b)fluoranthene	0.37	U	1.70		8.57	
Benzo(k)fluoranthene	0.37	U	0.75		10.4	
Benzo(a)pyrene	0.56		1.02		15.5	
Indeno(1,2,3-cd)pyrene	0.37	U	0.89		6.65	
Dibenz(a,h)anthracene	0.37	U	0.43		1.46	
Benzo(g,h,i)perylene	0.31	J	0.91		6.53	
Total PAHs:	17.6		30.5		256	
Quantitation Limit:	0.37		0.20		0.20	
Detection Limit:	0.15		0.08		0.08	
Fluorobenzene (SS1)	57%		74%		64%	
5a-Androstane (SS2)	67%		99%		91%	
Concentration Units:	mg/kg		mg/kg		mg/kg	

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

META

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID	PA970128-SB		PA970128-SBS	PA970124-06MS
Field ID:	Soil Blank		Soil Blank Spike	SB24E
MAHs:				
Benzene	0.19	U	69%	43%
Toluene	0.19	U	78%	42%
Ethylbenzene	0.19	U	79%	31%
m/p-Xylene	0.19	U	80%	78%
Styrene	0.19	U	73%	-29%
o-Xylene	0.19	U	85%	31%
1,2,4-Trimethylbenzene	0.19	U	79%	-20%
Total MAHs:	ND			
PAHs:				
Naphthalene	0.19	U	77%	-281%
2-Methylnaphthalene	0.19	U	77%	16%
1-Methylnaphthalene	0.19	U	78%	-151%
Acenaphthylene	0.19	U	77%	-137%
Acenaphthene	0.19	U	79%	124%
Dibenzofuran	0.19	U	77%	13%
Fluorene	0.19	U	78%	6%
Phenanthrene	0.19	U	78%	-26%
Anthracene	0.19	U	67%	26%
Fluoranthene	0.19	U	78%	126%
Pyrene	0.19	U	79%	19%
Benz(a)anthracene	0.19	U	77%	47%
Chrysene	0.19	U	79%	50%
Benzo(b)fluoranthene	0.19	U	78%	64%
Benzo(k)fluoranthene	0.19	U	79%	56%
Benzo(a)pyrene	0.19	U	76%	56%
Indeno(1,2,3-cd)pyrene	0.19	U	78%	64%
Dibenz(a,h)anthracene	0.19	U	80%	66%
Benzo(g,h,i)perylene	0.19	U	80%	62%
Total PAHs:	ND			
Quantitation Limit:	0.19			
Detection Limit:	0.08			
Fluorobenzene (SS1)	61%		65%	74%
5a-Androstane (SS2)	64%		74%	46%
Concentration Units:	mg/kg			

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

META

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID Field ID:	PA970124-05DUP SB220C
MAHs:	
Benzene	I
Toluene	I
Ethylbenzene	I
m/p-Xylene	I
Styrene	I
o-Xylene	I
1,2,4-Trimethylbenzene	I
Total MAHs:	ND
PAHs:	
Naphthalene	I
2-Methylnaphthalene	I
1-Methylnaphthalene	I
Acenaphthylene	I
Acenaphthene	I
Dibenzofuran	I
Fluorene	I
Phenanthrene	I
Anthracene	I
Fluoranthene	6.72
Pyrene	11.1
Benz(a)anthracene	4.28
Chrysene	5.08
Benzo(b)fluoranthene	3.69
Benzo(k)fluoranthene	3.93
Benzo(a)pyrene	5.18
Indeno(1,2,3-cd)pyrene	3.16
Dibenz(a,h)anthracene	0.84
Benzo(g,h,i)perylene	3.48
Total PAHs:	47.5
Quantitation Limit:	0.25
Detection Limit:	0.10
Fluorobenzene (SS1)	74%
5a-Androstane (SS2)	46%
Concentration Units:	mg/kg

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

META

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

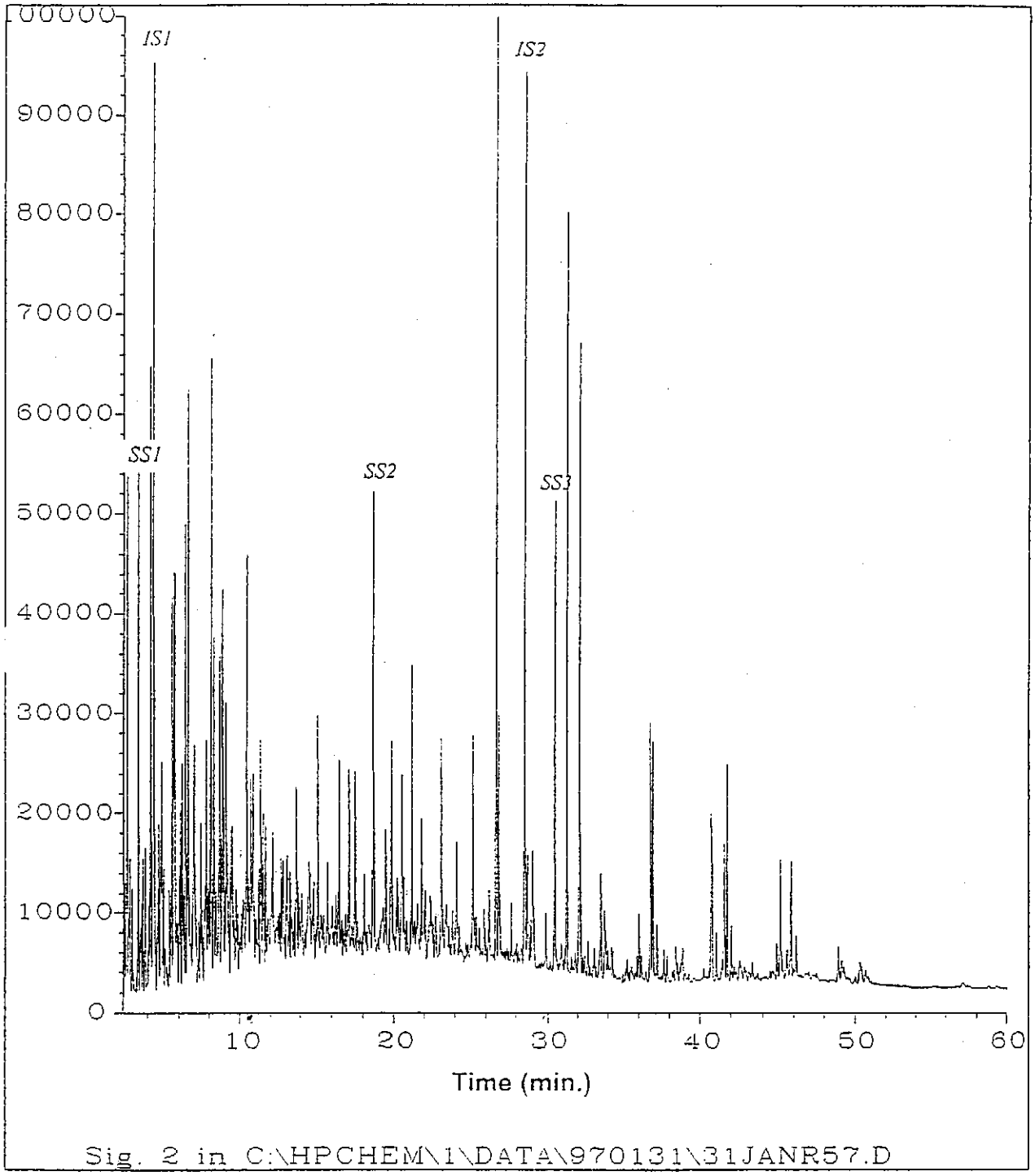
Lab ID	PA970129-01		PA970207-SB	
Field ID:	SB19G		Soil Blank	
MAHs:				
Benzene	0.24		0.19	U
Toluene	0.70		0.19	U
Ethylbenzene	1.42		0.19	U
m/p-Xylene	0.24		0.19	U
Styrene	0.21	U	0.19	U
o-Xylene	0.21	U	0.19	U
1,2,4-Trimethylbenzene	21.5		0.19	U
Total MAHs:	2.60		ND	
PAHs:				
Naphthalene	1.96		0.19	U
2-Methylnaphthalene	8.72		0.19	U
1-Methylnaphthalene	27.0		0.19	U
Acenaphthylene	40.1		0.19	U
Acenaphthene	14.5		0.19	U
Dibenzofuran	0.21	U	0.19	U
Fluorene	6.95		0.19	U
Phenanthrene	35.8		0.19	U
Anthracene	16.1		0.19	U
Fluoranthene	3.74		0.19	U
Pyrene	3.12		0.19	U
Benz(a)anthracene	9.63		0.19	U
Chrysene	10.0		0.19	U
Benzo(b)fluoranthene	3.52		0.19	U
Benzo(k)fluoranthene	4.71		0.19	U
Benzo(a)pyrene	7.43		0.19	U
Indeno(1,2,3-cd)pyrene	1.73		0.19	U
Dibenz(a,h)anthracene	0.50		0.19	U
Benzo(g,h,i)perylene	2.58		0.19	U
Total PAHs:	198		ND	
Quantitation Limit:	0.21		0.19	
Detection Limit:	0.08		0.08	
Fluorobenzene (SS1)	76%		67%	
5a-Androstane (SS2)	101%		75%	
Concentration Units:	mg/kg		mg/kg	

D = Values from a diluted sample extract
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
U = Not detected at quantitation limit shown

Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.

META

GC/FID Fingerprint

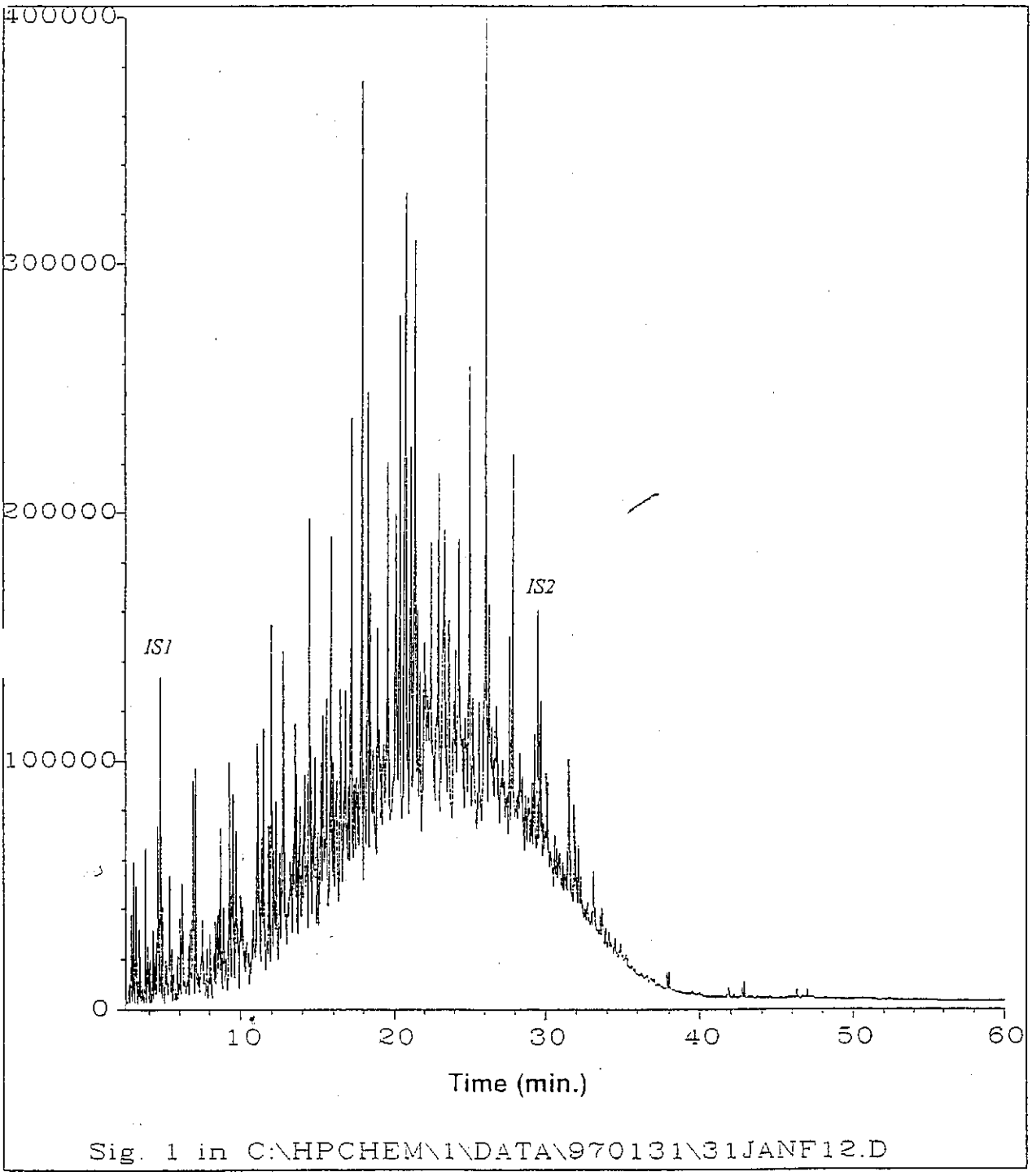


Field ID:	**SB217D**
Laboratory ID:	PA970124-01
Method:	MET4007S

)1C, KAD

META

GC/FID Fingerprint

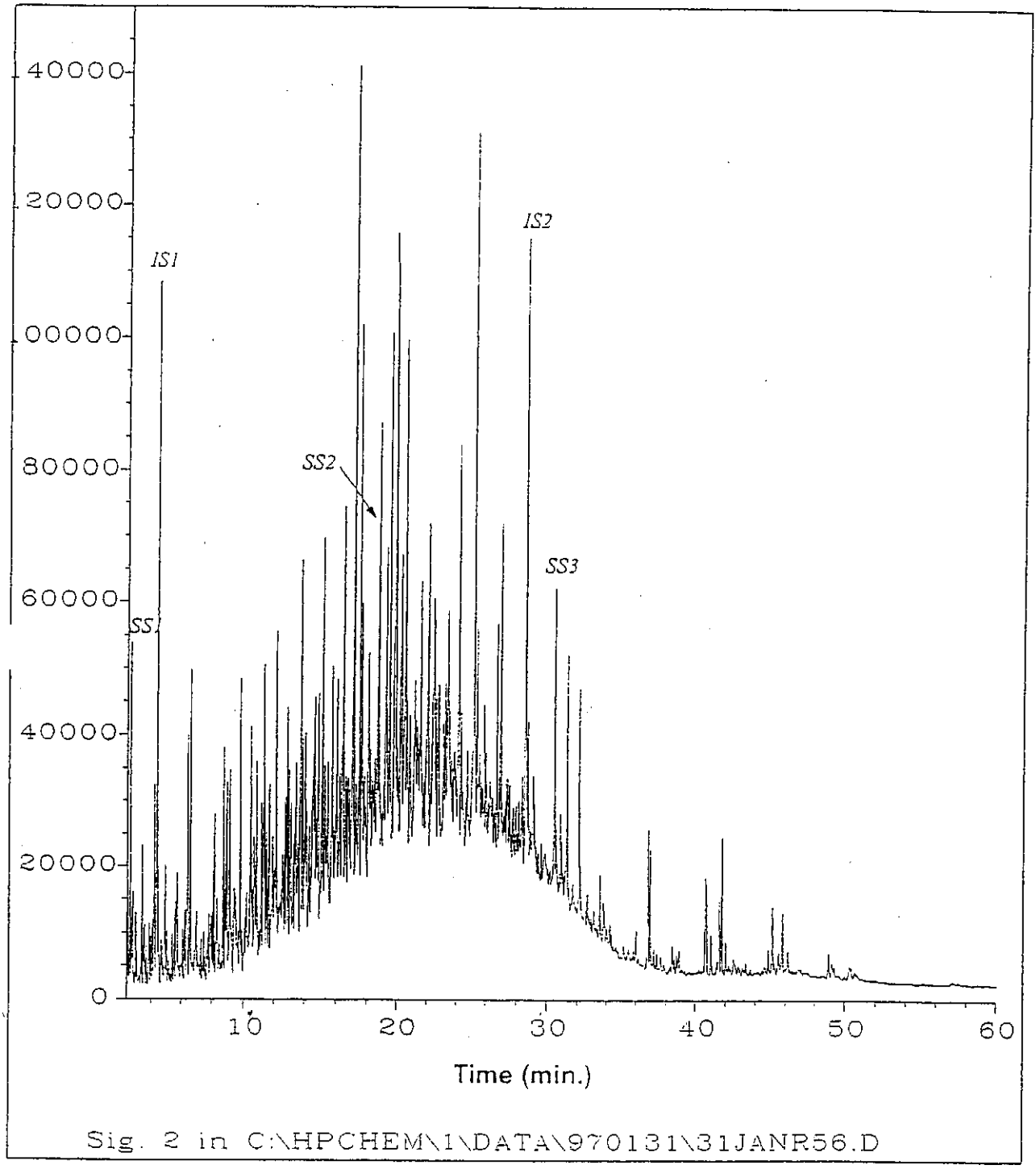


Field ID:	SB218C
Laboratory ID:	PA970124-02
Method:	MET4007S

1C, KAD

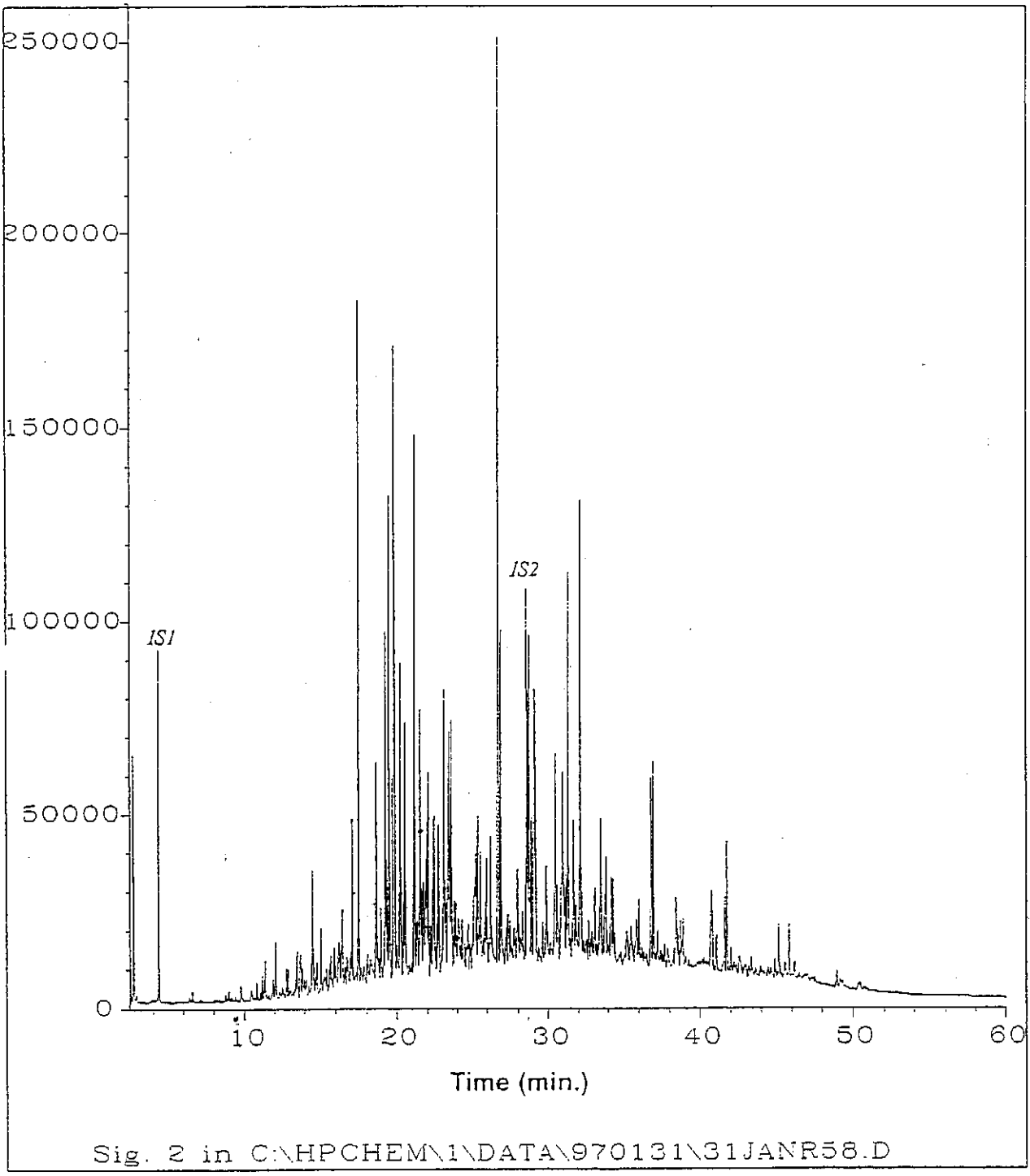
META

GC/FID Fingerprint



Field ID:	SB213E
Laboratory ID:	PA970124-03
Method:	MET4007S

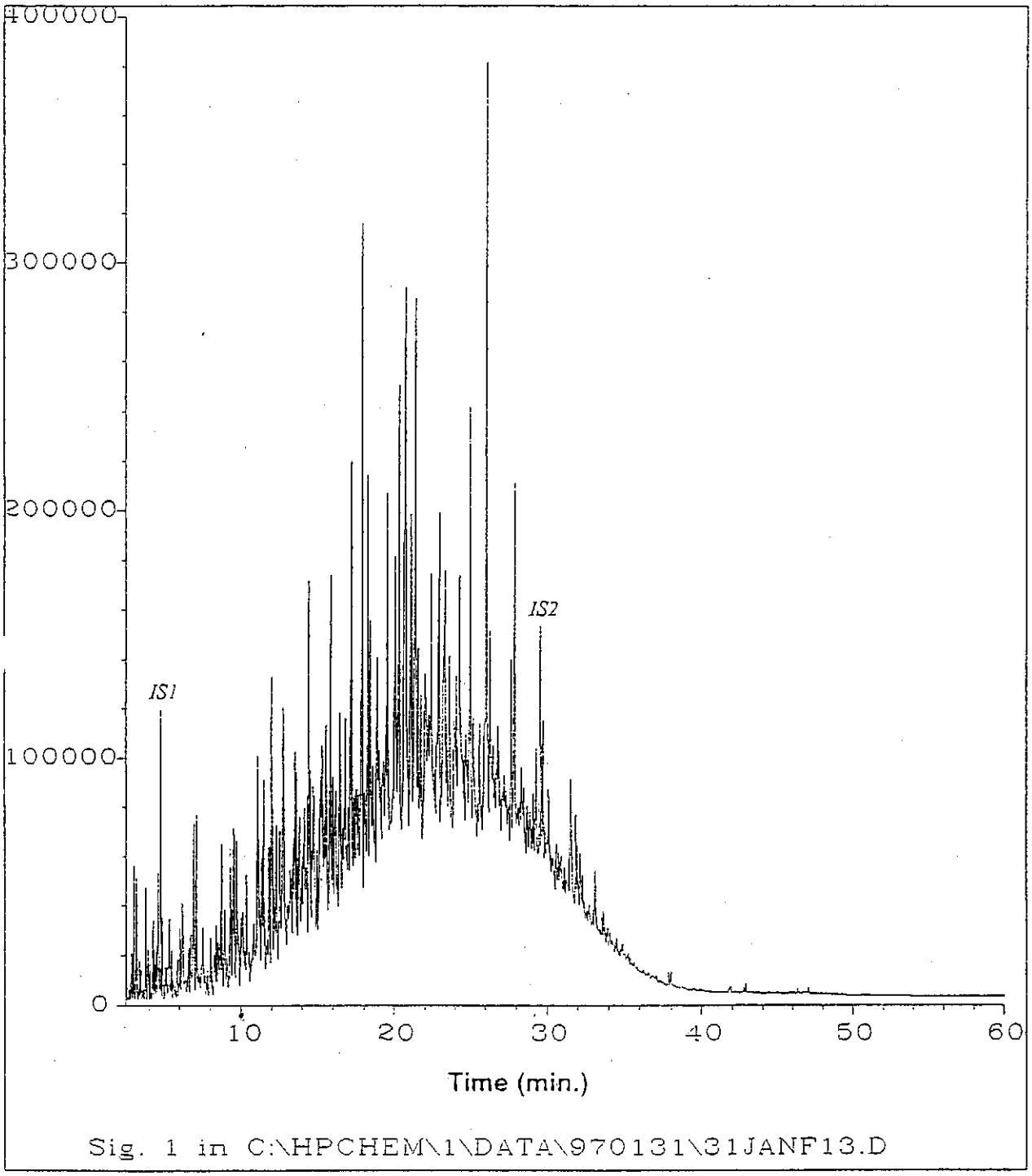
GC/FID Fingerprint



Field ID:	**SB220G**
Laboratory ID:	PA970124-04
Method:	MET4007S

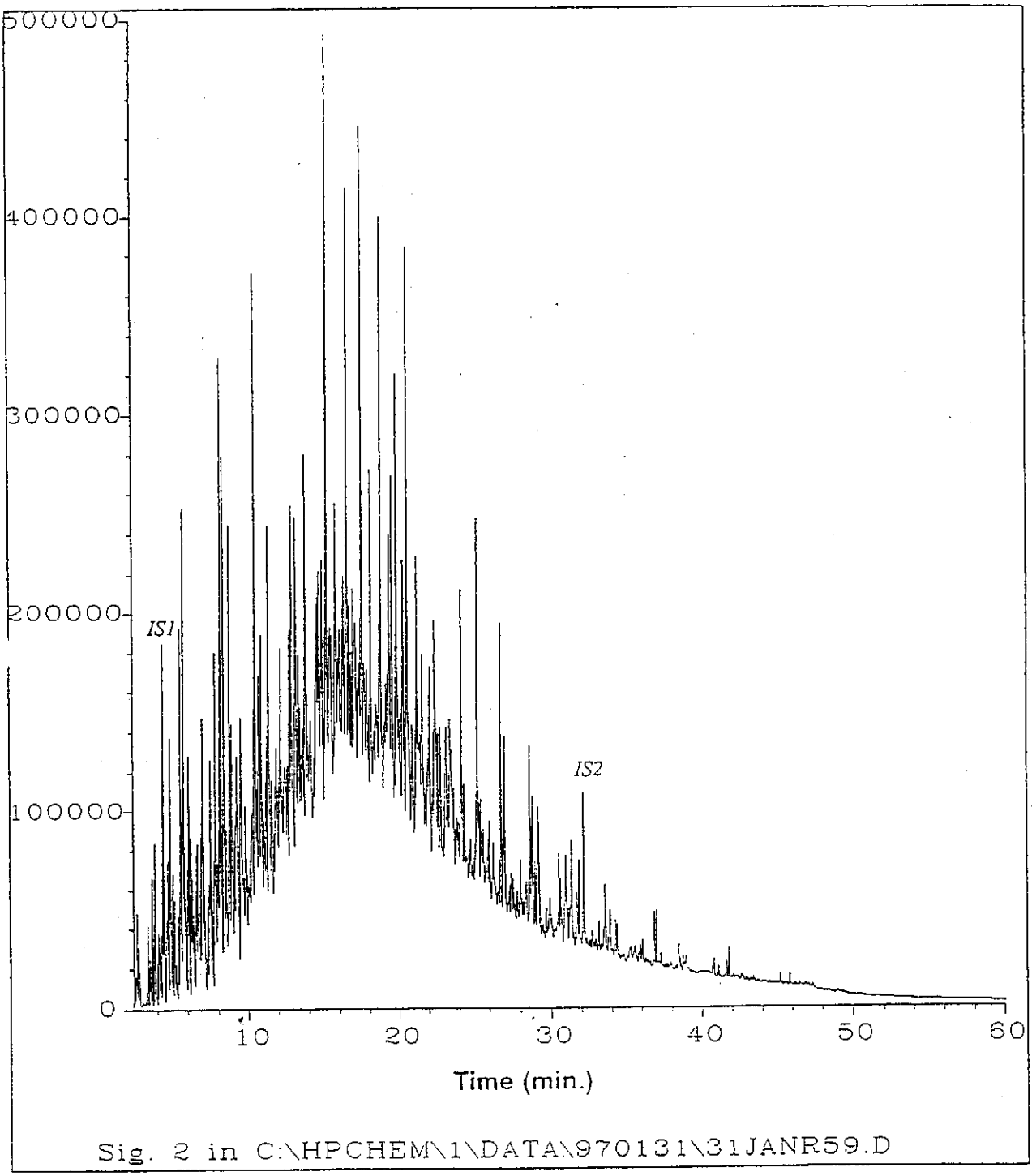
META

GC/FID Fingerprint



Field ID:	SB220C
Laboratory ID:	PA970124-05
Method:	MET4007S

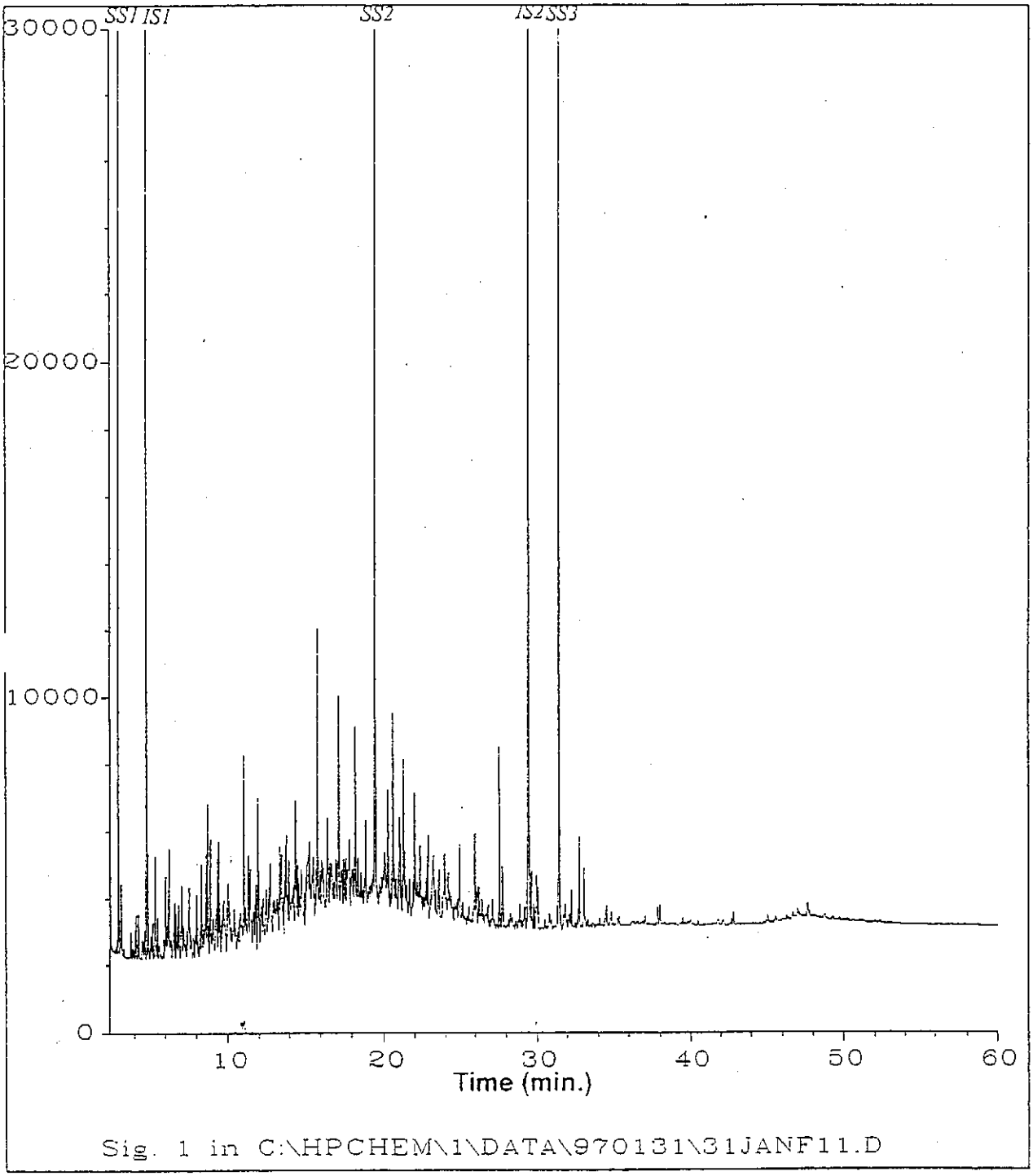
GC/FID Fingerprint



Field ID:	**SB24E**
Laboratory ID:	PA970124-06
Method:	MET4007S

META

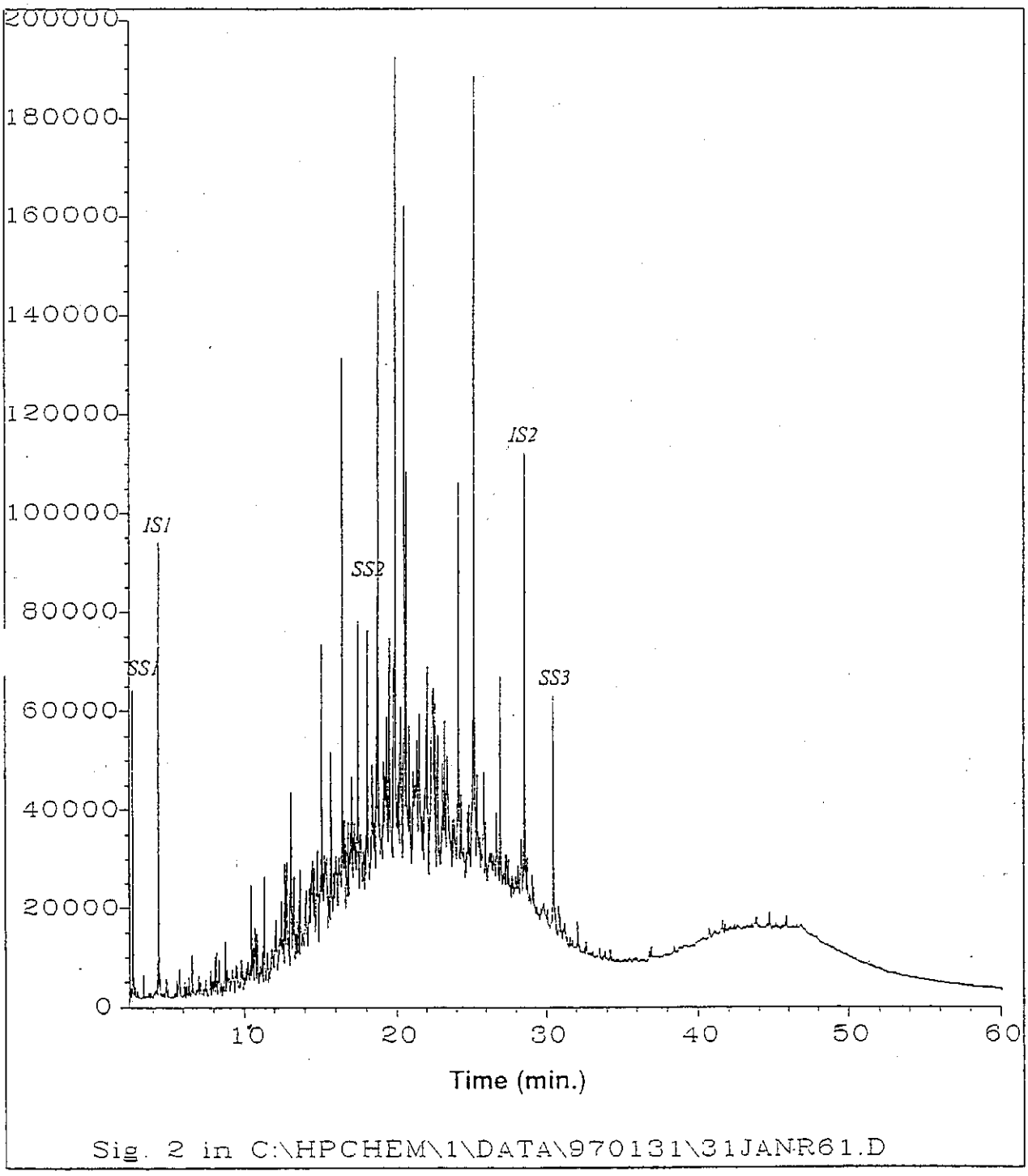
GC/FID Fingerprint



Field ID:	SB24J
Laboratory ID:	PA970124-07
Method:	MET4007S

META

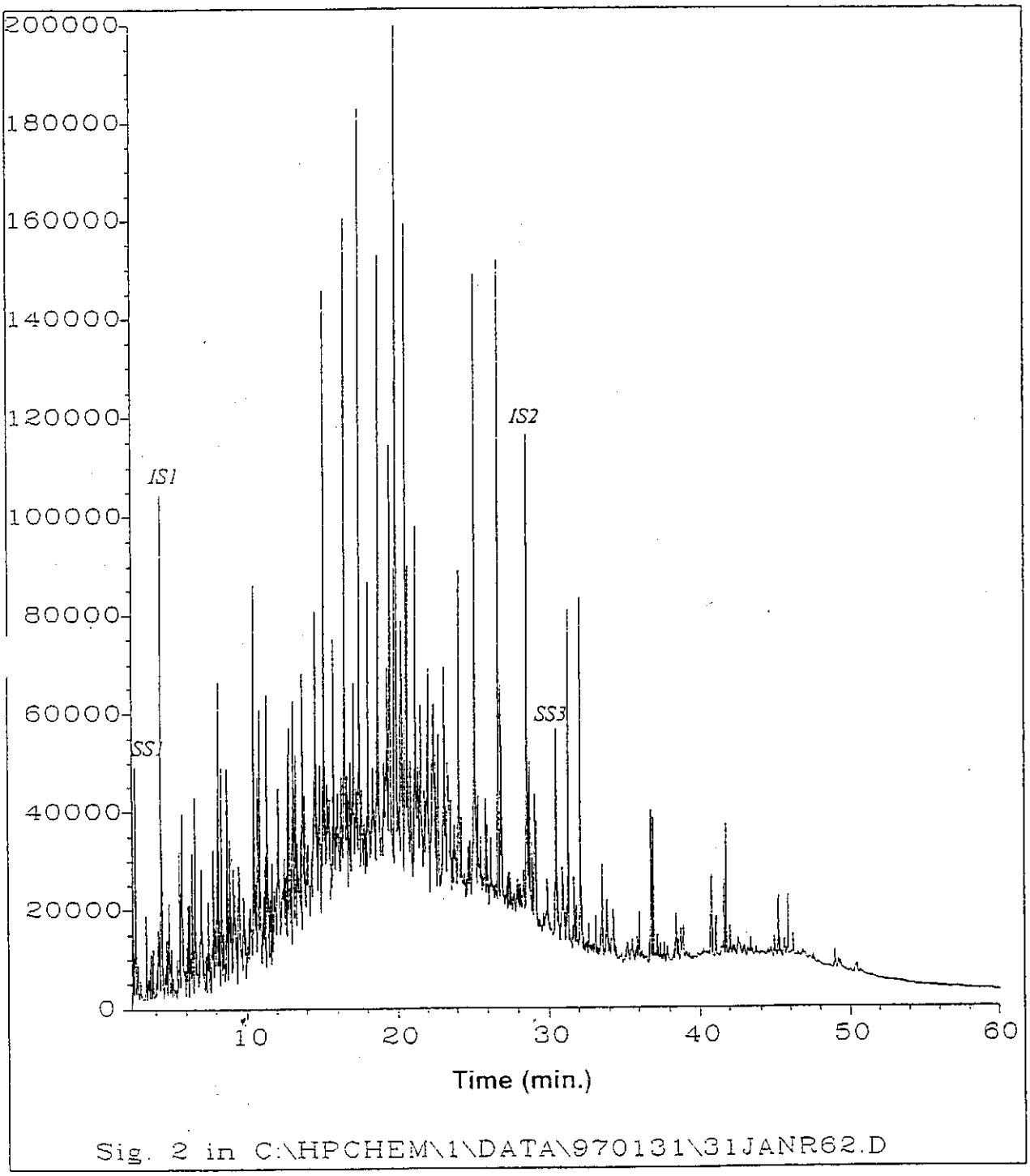
GC/FID Fingerprint



Field ID:	SB27C
Laboratory ID:	PA970124-08
Method:	MET4007S

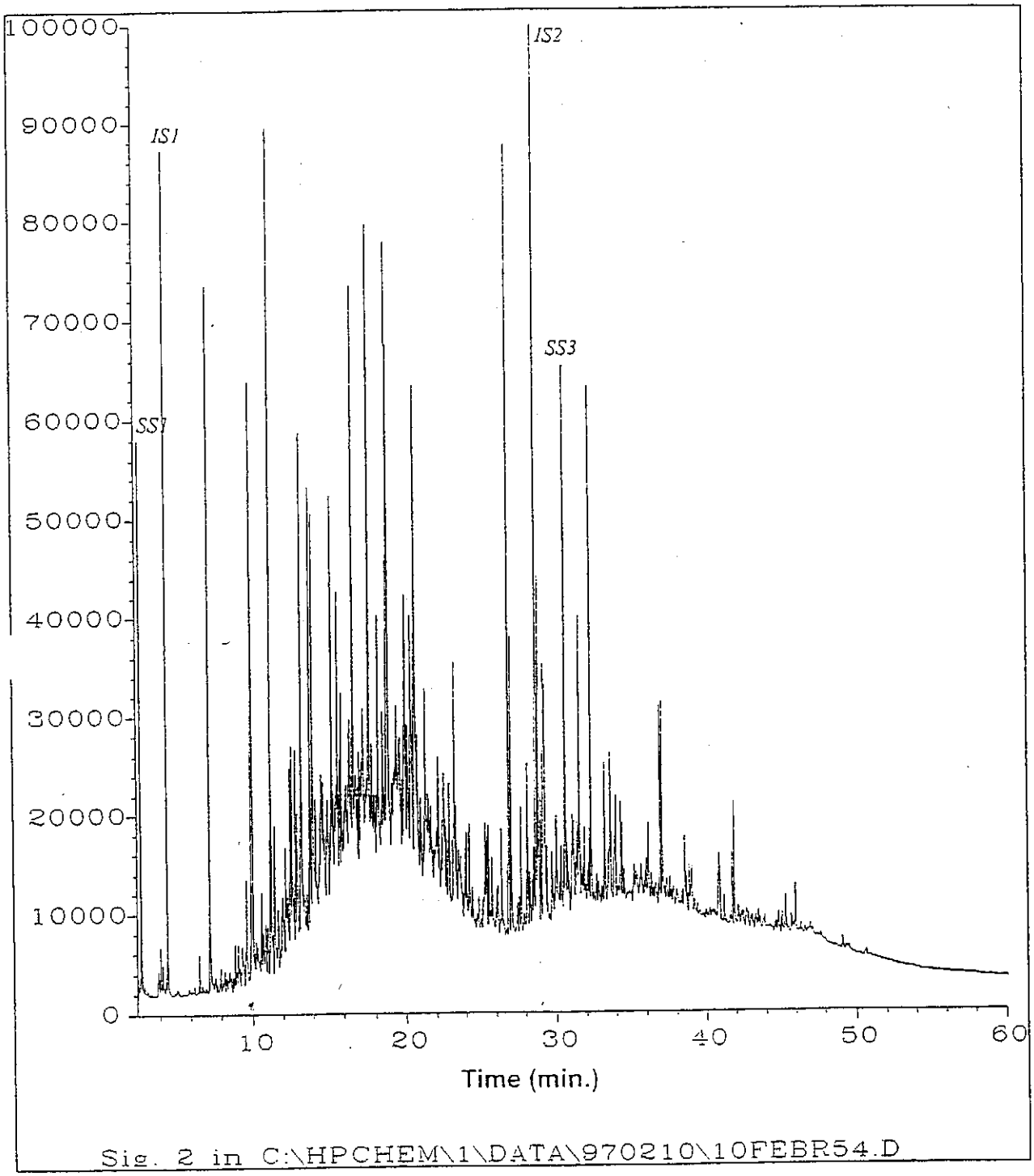
META

GC/FID Fingerprint



Field ID:	SB27H
Laboratory ID:	PA970124-09
Method:	MET4007S

GC/FID Fingerprint



Field ID:	**SB19G**
Laboratory ID:	PA970129-01
Method:	MET4007S

META ENVIRONMENTAL SAMPLE RECEIPT

Lab ID	Field ID	Matilx	Analysis	Date Sampled	Date Received	Client/ Project	Container/ Storage	Comments/Logger
PA970124-01	SB217D	Soil	Fingerprint /mpahs	01/22/97	01/24/97	P06001-60	4oz jar	Walkin
PA970124-02	SB218C	Soil	Fingerprint	01/22/97	01/24/97	P06001-60	4oz jar	Walkin
PA970124-03	SB213E	Soil	Fingerprint	01/22/97	01/24/97	P06001-60	4oz jar	Walkin
PA970124-04	SB220G	Soil	Fingerprint	01/22/97	01/24/97	P06001-60	4oz jar	Walkin
PA970124-05	SB220C	Soil	Fingerprint	01/22/97	01/24/97	P06001-60	4oz jar	Walkin
PA970124-06	SB24E	Soil	Fingerprint	01/22/97	01/24/97	P06001-60	4oz jar	Walkin
PA970124-07	SB24J	Soil	Fingerprint	01/22/97	01/24/97	P06001-60	4oz jar	Walkin
PA970124-08	SB27C	Soil	Fingerprint	01/23/97	01/24/97	P06001-60	8oz jar	Walkin
PA970124-09	SB27H	Soil	Fingerprint	01/23/97	01/24/97	P06001-60	8oz jar	Walkin

Sarah C. Watts
1/24/97

COPY

Client Na: Parsons ES
Address: 290 Elwood Davis Rd
Liverpool NY 13088

Project Manager: I Watts Reks
Phone: 315 451 9560 FAX: 315 451 9570
Project Name: Tarrytown
Project Number: 730057 04000 " .11
P.O. #:
Analytical Protocol: ____ Deliverables: ____
Sampled By: CRT

Analysis Requested

No. of Containers: Fingerprint

Bin #'s In/Out (For Lab Use Only)

Lab ID (Lab Use Only)	Sample ID (Maximum of 6 Characters)	Date Sampled	Time Sampled	Sample Description	No. of Containers	Fingerprint	Comments
	SB2170	1/22	940	Soil 7-9	1	1	PA971024-01
	SB2180	1/22	1120	4-6	1	1	-02
	SB2130	1/22	1230	4-10	1	1	-03
	SB2220G	1/22	1500	12-14	1	1	-04
	SB2240C	1/22	1440	4-6	1	1	-05
	SB24E	1/22	1610	8-10	1	1	-06
	SB24J	1/22	1650	18-20	1	1	-07
	SB27G	1/23	1115	5.5-7.5	1	1	-08
	SB27H	1/23	1145	14-16	1	1	-09

Login #:
Ship to:
Nytest Environmental Inc.
60 Seaview Blvd
Port Washington N.Y. 11050
Attn.: Sample Control
Date Shipped: 1/23/97
Carrier: Fedex
Air Bill #: TBD
Cooler #:
C of C #:
SDG #:
NEI QT #:

Relinquished by:	Date / Time	Received by:	Date / Time
Print Name:	1/23 1400	Print Name: Fedex shippoint	
Relinquished by:	Date / Time	Received by:	Date / Time
Print Name:		Print Name:	
Relinquished by:	Date / Time	Received by Laboratory: Sarah C. Watts	Date / Time 1/24/97 10:00
Print Name:		Print Name: SARAH C. WATTS	

Special Instructions:

COPY

CLIENT RETAINS YELLOW COPY ONLY

Lab Use Only

Custody Seals: Intact / Broken / Absent
Sample Rec'd In Good Condition? Y / N
Sample Temperature: ____ Degrees Celsius
INSPECTED BY:
COMMENTS: 4.0°C UPON RECEIPT
VOA Samples intact upon receipt

(516) 625-5500 FAX: (516) 625-1274

Chain of Custody Record

Client Name: Parson Eng Science
Address: Suite 312
290 Elwood Davis Rd
Liverpool, NY 13088
Project Manager: AMANTS REKS
Phone: (315) 351-9560 FAX:
Project Name: Tarrytown
Project Number: #730057 - 04000
P.O. #:
Analytical Protocol: Deliverables: ASP CAT B
Sampled By:

Analysis Requested

Lab ID (Lab Use Only)	Sample ID (Maximum of 6 Characters)	Date Sampled	Time Sampled	Sample Location	No. of Containers	MGP SCAN
	SB19G	1/21	1345	SOIL 12-14	1	✓

Bin #'s In / Out (For Lab Use Only)

Login #:
Ship to:
Nytest Environmental Inc.
60 Seaview Blvd
Port Washington N.Y. 11050
Attn.: Sample Control
Date Shipped:
Carrier:
Air Bill #:
Cooler #:
C of C #:
SDG #:
NEI QT #:

Comments

	Date / Time		Date / Time
Relinquished by: NEI	1/21/600	Received by: AIRBORNE	
Print Name:		Print Name:	
Relinquished by:	Date / Time	Received by:	Date / Time
Print Name:		Print Name:	
Relinquished by:	Date / Time	Received by Laboratory: Sarah C. Watts	Date / Time 1/29 10:30
Print Name:		Print Name: SARAH C. WATTS	

Special Instructions: %0 MOISTURE

COPY

CLIENT RETAINS YELLOW COPY ONLY

Lab Use Only

Custody Seals: Intact Broken Absent
Sample Rec'd In Good Condition?: Y N
Sample Temperature: Degrees Celcius
INSPECTED BY:
COMMENTS: 2.0°C upon receipt
Samples intact

IETA Environmental, Inc.

49 Clarendon Street
Watertown, MA 02172
TEL: (617) 923-4662
FAX: (617) 923-4610

March 6, 1997

Mr. Imants Reks
Parsons Engineering Science, Inc.
290 Elwood Davis Road
Liverpool, New York 13088

RE: *Results of Review of GC/MS Chromatograms from the Tarrytown Site*

Dear Mr. Reks:

I have completed the review of the GC/MS chromatograms and tentatively identified compounds lists for 19 soil samples from the Tarrytown site. In addition, I reviewed META's earlier reports and compared the data generated in our laboratory with the GC/MS chromatograms. Finally, I examined the site map and related the observed sample results with their locations on the site. The results are described in the following paragraphs.

Results

A summary of the findings from the GC/MS data review is included in Table 1. The ata can be summarized as follows:

- Samples SB03E, SB07G, SB08G, SB09F, SB10E, SB14I, SB15J, SB16G, SB19G, SB20I, SB21H, SB22G, SB29H, and SB217D contain tar, weathered tar, or pitch as indicated by the presence of PAHs in the amounts and relative abundances consistent with those materials. Those samples, considered along with samples analyzed by META for GC/FID fingerprint, indicate a tar contaminated area of the site from approximately the former MGP generator house north to SB07, west to SB20, and south to SB29 (see sketch attached). This area includes a smaller area of tarry soil at approximately 10 to 20 feet below ground surface which shows little to no indication of weathering, and includes borings SB03E, SB07G, SB08G, SB09F, SB10E, SB14I, SB15J, SB16G, MW-14, and test pits TP01, TP03, and TP04.

  The remaining areas, which include samples SB19G, SB20I, SB21H, SB22G, SB24E, SB24J, SB27H, SB29H, SB30I, and SB217D, contain weathered tar or pitch at approximately 8 to 20 feet below ground surface. Except for sample SB217D, these locations are relatively far from the former MGP, are relatively deep, and are in areas where the site was filled, possibly with contaminted materials. Also, the concentrations of PAHs in these samples are relatively low when compared to tarry samples, also a common characteristic of contaminated fill.

- A second area of the site which includes samples SB220C, SB213E, SB218C, MW03, SB27C, TP05, and SB24E (and possibly SB217D) contains weathered fuel oils at 6 to 10 feet below ground surface. The C17/pristane ratio for the samples was much less than 1, indicating fuel oil which was at least 20 years old, and potentially older. This area corresponds to the area near and downgradient of the former underground storage tanks, the former pump islands, and the former MGP oil storage tanks. The depth also corresponds approximately to the water table depth, indicating the release and transport (as an LNAPL) of fuel oil from one or more of those potential sources.

- Finally, samples SB07G, SB23B, SB20I, and SB19G contain late eluting, high molecular weight unresolved complex mixtures (UCMs) from unknown sources. The boiling point ranges of those substances corresponds roughly with some lubrication oils and some asphalts, among other materials.

If you have any questions regarding this review of the data, please do not hesitate to call me.

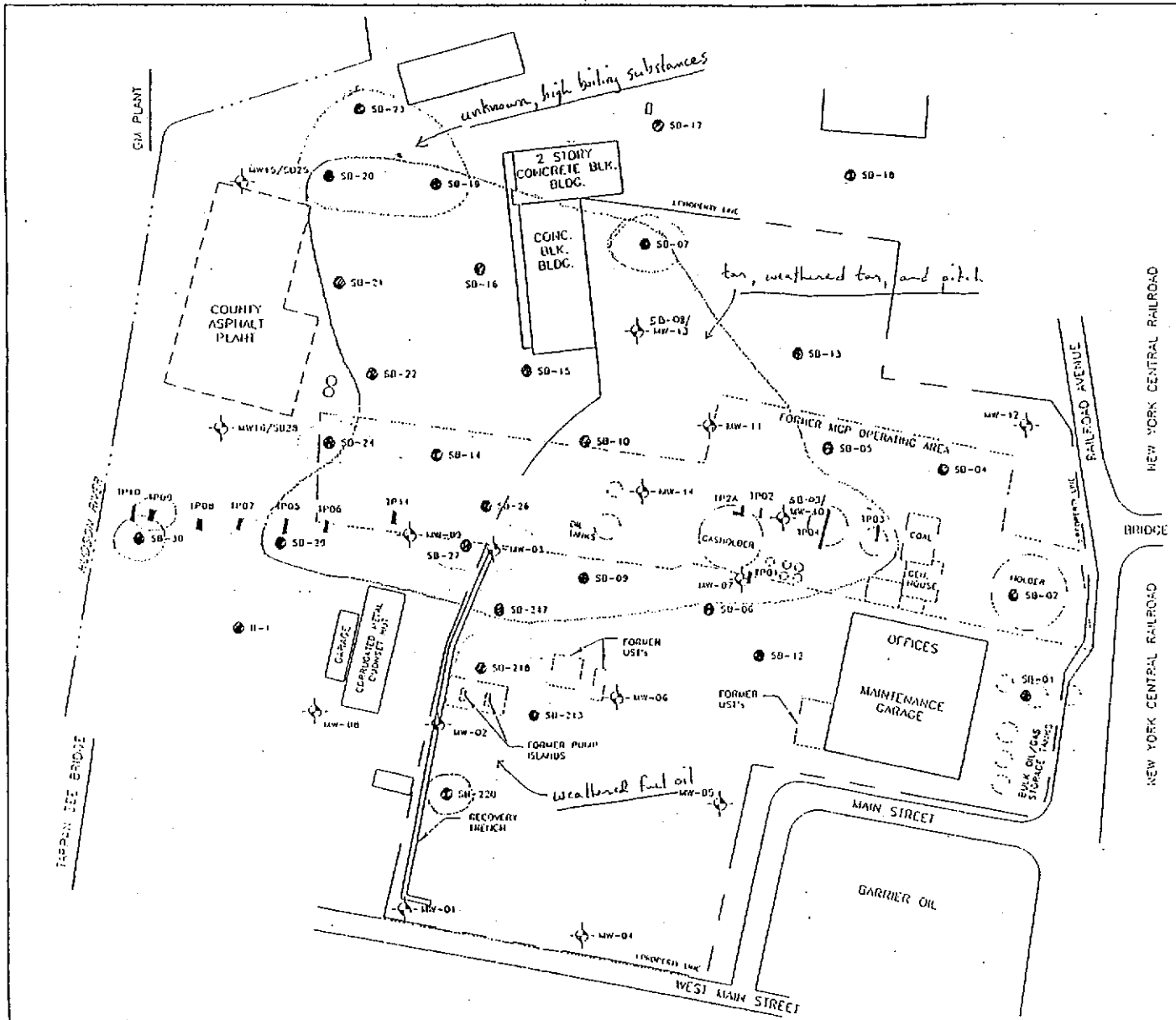
Sincerely,

David M. Mauro
V. President

attachments

Table 1
Review of GC/MS Chromatograms of Soil Samples from the Tarrytown Site

Sample ID	Description	Tentative Identification
SB03E	abundant MAHs and PAHs; small UCM; tar pattern	tar
SB07G	abundant MAHs and PAHs; large late eluting UCM; tar pattern	tar plus unknown oil
SB08G	abundant MAHs and PAHs; small UCM; tar pattern	tar
SB09F	abundant MAHs and PAHs; small UCM; tar pattern	tar
SB10E	abundant MAHs and PAHs; small UCM; tar pattern	tar
SB14I	abundant MAHs and PAHs; small UCM; tar pattern	tar
SB15J	abundant MAHs and PAHs; small UCM; tar pattern	tar
SB16G	abundant MAHs and PAHs; small UCM; tar pattern	tar
SB19G	3-, 4-, and 5-ring PAHs; two UCMs (diesel range and lube oil range)	weathered tar plus unknown oils
SB20I	3-, 4-, and 5-ring PAHs; two UCMs (diesel range and lube oil range)	weathered tar plus unknown oils
SB21H	3-, 4-, and 5-ring PAHs	weathered tar
SB22G	abundant MAHs and PAHs; small UCM; tar pattern	weathered tar
SB23B	low level PAHs; late eluting UCM	unknown (possible asphalt)
SB24E	PAHs; diesel range UCM	weathered fuel oil
SB24J	PAHs; diesel range UCM	weathered fuel oil
SB29H	abundant PAHs	weathered tar
SB30I	low level PAHs; diesel range UCM	weathered tar plus unknown
SB213E	diesel range UCM	weathered fuel oil
SB217D	abundant 3-, 4-, and 5-ring PAHs	weathered tar



MAP SOURCE: METCALF & EDDY DRAWING G11781-L AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED 2/12/97

FIGURE 3

CONSOLIDATED EDISON COMPANY OF NEW YORK

SAMPLE LOCATION MAP
TARRYTOWN SITE

PARSONS ENGINEERING SCIENCE, INC.
ENGINEERING • RESEARCH • PLANNING

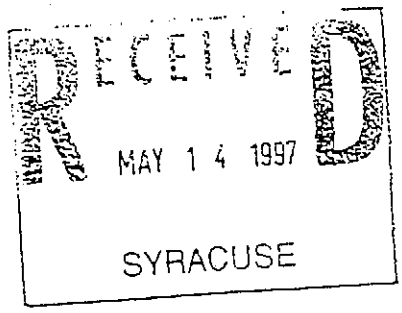
DATE: 02/24/97 (ERC)
H:\CAD\1005\FIGURES\DWG (DIGNET/PAPER SPACE)

META Environmental, Inc.

49 Clarendon Street
Watertown, MA 02172
TEL: (617) 923-4662
FAX: (617) 923-4610

May 9, 1997

Mr. Imants Reks
Parsons Engineering Science, Inc.
290 Elwood Davis Road
Liverpool, New York 13088



RE: *Results of Analysis of Samples from the Tarrytown Site*

Dear Mr. Reks:

META Environmental, Inc. (META) has completed the analysis of four sediment samples from the Tarrytown site. The methods used and the results generated are described in the following paragraphs.

Methods

Approximately 2 grams of each sediment sample was extracted with methylene chloride by a microscale solvent extraction procedure developed by META for EPRI. Following extraction, the solvent was concentrated using the Kuderna-Danish technique, spiked with internal standards, and analyzed by gas chromatography with flame ionization detection (GC/FID) for monocyclic aromatic hydrocarbons (MAHs), polycyclic aromatic hydrocarbons (PAHs), and GC/FID fingerprint.

Results

The GC/FID fingerprints and the tabulated concentrations of MAHs and PAHs for the samples are attached to this letter report. The discussion of the results which follows refers to those data.

The chromatograms for Samples RB9 2-4', RB10 6-8', and RB11 0-6' show low levels of MAHs and PAHs in the pattern and relative abundances typical of a pyrogenic source, such as tar. In addition, Samples RB09 2-4' and RB11 0-6' contain a small baseline rise, centered around 46 minutes, that may indicate severely weathered petroleum hydrocarbons.

The chromatogram for Sample RB12 0-4' contains MAHs and PAHs at the

concentrations and relative proportions indicative of a tar.

If you have any questions, or would like META to do additional analyses, please do not hesitate to call me.

Sincerely,

David M. Mauro
V. President

Attachments

ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID	PA970426-01		PA970426-02		PA970426-03	
Field ID:	RB09 2-4'		RB10 6-8'		RB11 0-6'	
MAHs:						
Benzene	0.34	JB	0.15	JB	0.33	JB
Toluene	0.47		0.10	J	0.52	
Ethylbenzene	0.17	J	0.15	J	0.54	
m/p-Xylene	0.33	J	0.13	J	0.60	
Styrene	0.59		0.23	U	0.45	U
o-Xylene	0.35	U	0.23	U	0.46	
1,2,4-Trimethylbenzene	0.59		0.17	J	1.05	
Total MAHs:	1.89		0.54		2.45	
PAHs:						
Naphthalene	3.12	B	1.63	B	8.37	B
2-Methylnaphthalene	2.61		1.12		3.80	
1-Methylnaphthalene	4.29		0.91		7.42	
Acenaphthylene	2.10		0.38		1.43	
Acenaphthene	4.82		0.35		5.55	
Dibenzofuran	0.49		0.23	U	0.56	
Fluorene	3.43		0.21	J	3.15	
Phenanthrene	12.2	B	0.45	B	9.82	B
Anthracene	4.36		0.23		3.21	
Fluoranthene	5.88		0.63		4.07	
Pyrene	8.56		0.80		5.86	
Benz(a)anthracene	5.15		0.57		3.68	
Chrysene	4.22		0.42		2.92	
Benzo(b)fluoranthene	1.58		0.12	J	1.02	
Benzo(k)fluoranthene	1.97		0.18	J	1.30	
Benzo(a)pyrene	3.13		0.30		6.12	
Indeno(1,2,3-cd)pyrene	1.28		0.23	U	1.05	
Dibenz(a,h)anthracene	0.76		0.23	U	0.90	
Benzo(g,h,i)perylene	3.16		0.23	U	3.47	
Total PAHs:	72.6		8.31		73.1	
Quantitation Limit:	0.35		0.23		0.45	
Detection Limit:	0.14		0.09		0.18	
Fluorobenzene (SS1)	72%		79%		70%	
2-Fluorobiphenyl (SS2)	83%		90%		86%	
Concentration Units:	mg/kg		mg/kg		mg/kg	

B = Analyte detected in the blank
D = Values from a diluted sample extract
DL = QC compounds diluted out
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
NM = Not measured
U = Not detected at quantitation limit shown
Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.
All soil results reported on a dry weight basis.

META

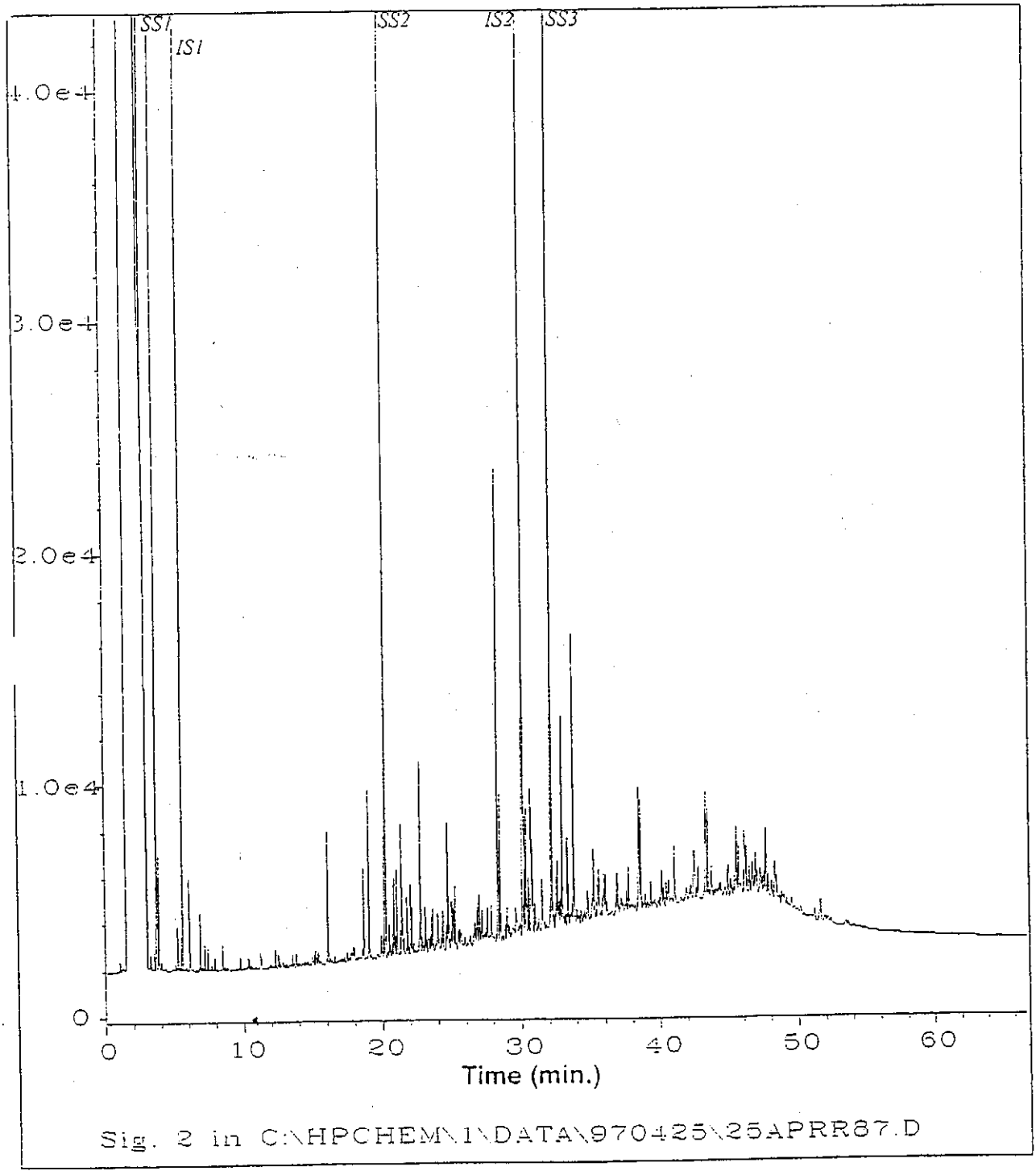
ANALYTICAL RESULTS
MAHs and PAHs
Client: Parsons Project: Tarrytown

Lab ID	PA970426-04		BZ970429-SB	
Field ID:	RB12 0-4'		Soil Blank	
MAHs:				
Benzene	0.29	B	0.11	J
Toluene	0.57		0.19	U
Ethylbenzene	2.04		0.19	U
m/p-Xylene	1.62		0.19	U
Styrene	2.13		0.19	U
o-Xylene	0.88		0.19	U
1,2,4-Trimethylbenzene	4.35		0.19	U
Total MAHs:	7.52		0.11	
PAHs:				
Naphthalene	53.0	B	0.15	J
2-Methylnaphthalene	37.8		0.19	U
1-Methylnaphthalene	29.9		0.19	U
Acenaphthylene	5.74		0.19	U
Acenaphthene	23.8		0.19	U
Dibenzofuran	2.27		0.19	U
Fluorene	15.5		0.19	U
Phenanthrene	47.0	B	0.15	J
Anthracene	14.8		0.19	U
Fluoranthene	15.6		0.19	U
Pyrene	22.4		0.19	U
Benz(a)anthracene	10.5		0.19	U
Chrysene	8.94		0.19	U
Benzo(b)fluoranthene	2.85		0.19	U
Benzo(k)fluoranthene	4.26		0.19	U
Benzo(a)pyrene	6.69		0.19	U
Indeno(1,2,3-cd)pyrene	2.26		0.19	U
Dibenz(a,h)anthracene	0.88		0.19	U
Benzo(g,h,i)perylene	3.72		0.19	U
Total PAHs:	306		0.30	
Quantitation Limit:	0.27		0.19	
Detection Limit:	0.11		0.08	
Fluorobenzene (SS1)	71%		71%	
2-Fluorobiphenyl (SS2)	93%		87%	
Concentration Units:	mg/kg		mg/kg	

B = Analyte detected in the blank
D = Values from a diluted sample extract
DL = QC compounds diluted out
E = Estimated value, above calibration range
I = Interference
J = Estimated value
L = Coeluted with compound listed above
NM = Not measured
U = Not detected at quantitation limit shown
Total MAHs does not include 1,2,4-Trimethylbenzene.
Total PAHs does not include Dibenzofuran.
All soil results reported on a dry weight basis.

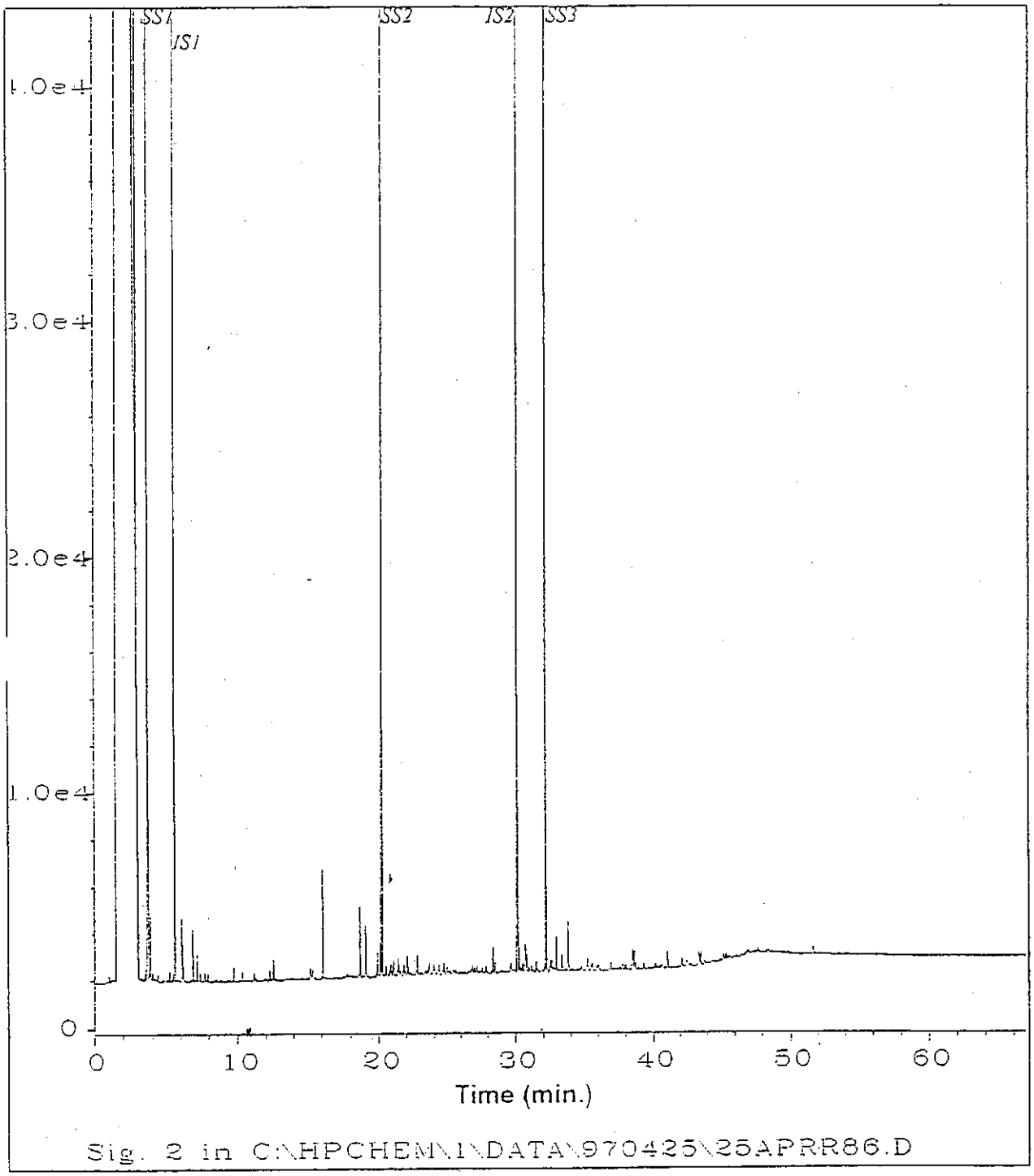
META

GC/FID Fingerprint



Field ID:	RB09 2-4'
Laboratory ID:	PA970426-01
Method:	MET4007S

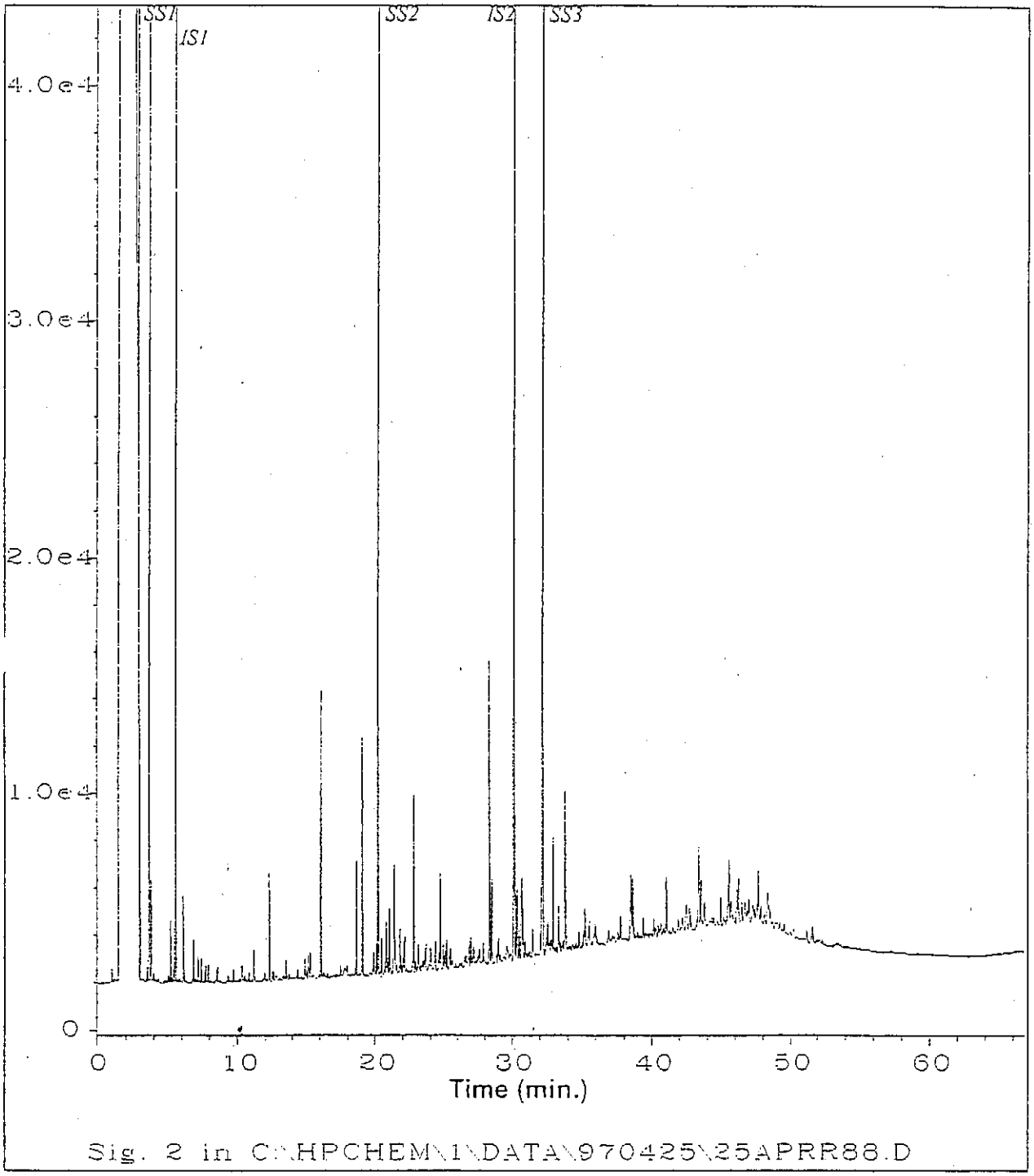
GC/FID Fingerprint



Field ID:	**RB10 6-8'**
Laboratory ID:	PA970426-02
Method:	MET4007S

META

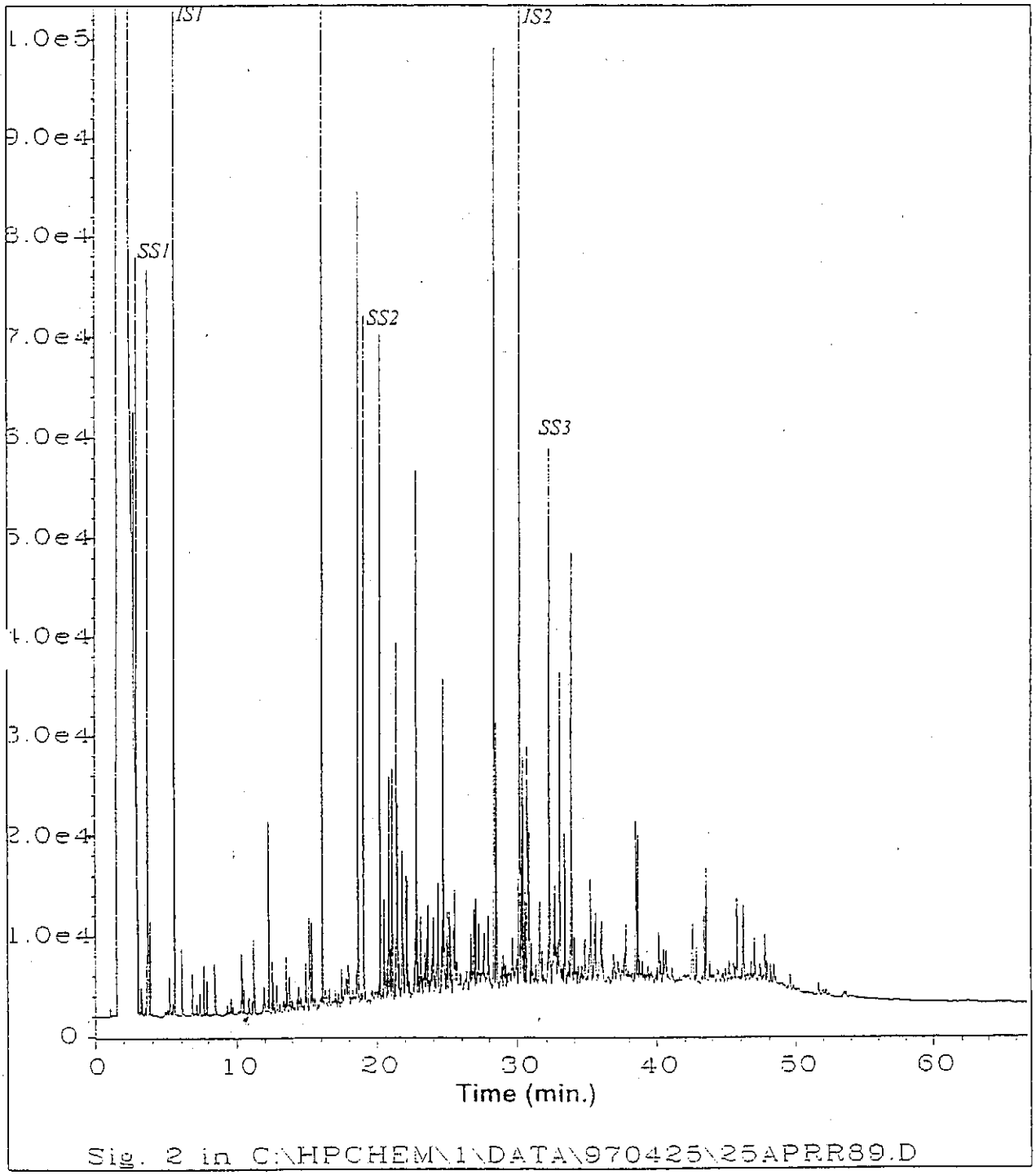
GC/FID Fingerprint



Field ID:	RB11 0-6'
Laboratory ID:	PA970426-03
Method:	MET4007S

META

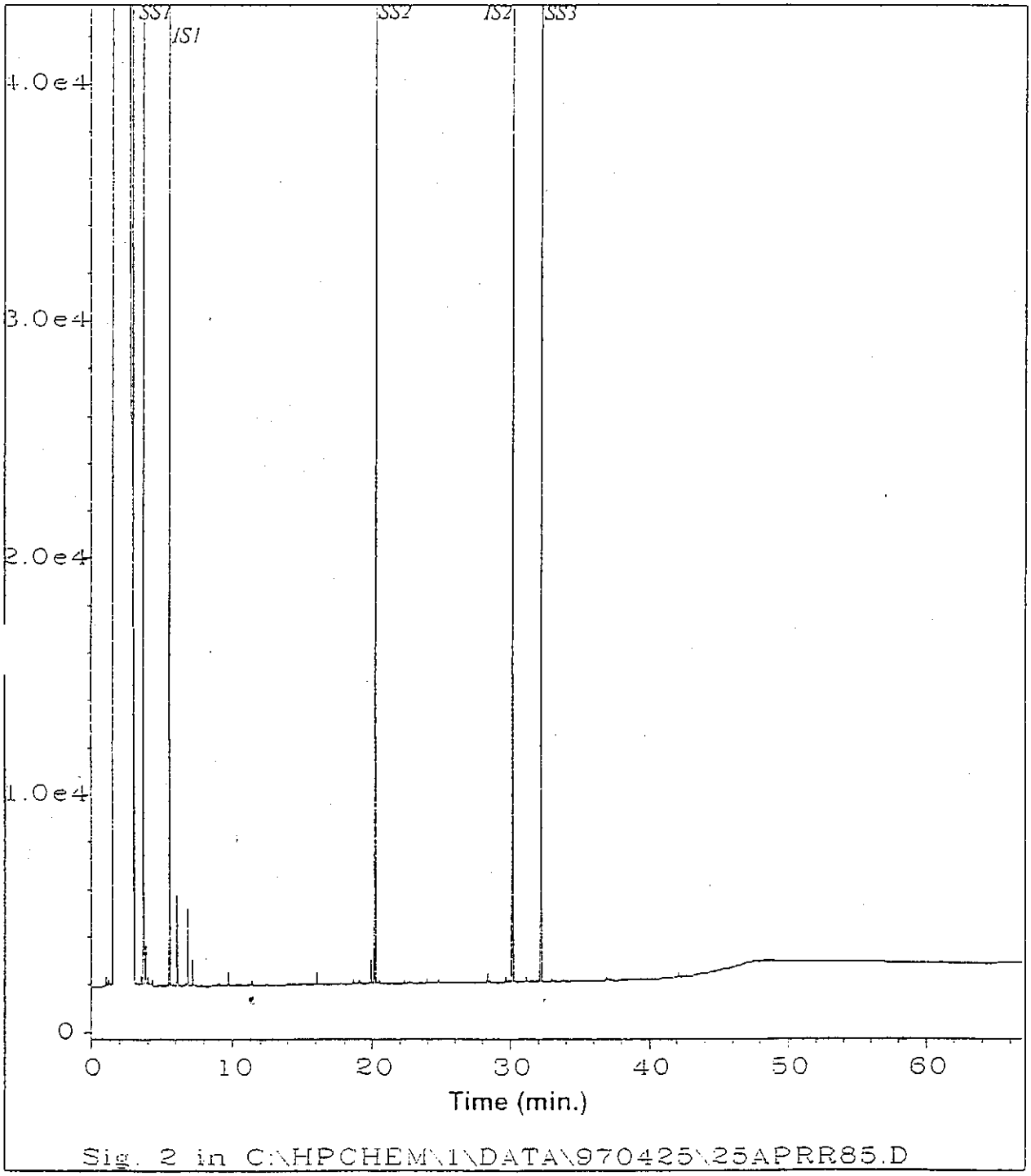
GC/FID Fingerprint



Field ID:	RB12 0-4'
Laboratory ID:	PA970426-04
Method:	MET4007S

META

GC/FID Fingerprint



Field ID:	**Method Blank**
Laboratory ID:	BZ970429-SB
Method:	MET4007S

META

META ENVIRONMENTAL SAMPLE RECEIPT

Lab ID	Field ID	Matrix	Analysis	Date Sampled	Date Received	Client/ Project	Container/ Storage	Comments/Logger
PA970426-01ab	RB09 2-4'	Sediment	2508/4007	04/24/97	04/26/97	P06001-60	2 oz. jar & 125 ml am	Walkin
PA970426-02ab	RB10 6-8'	Sediment	2508/4007	04/24/97	04/26/97	P06001-60	2 oz. jar & 125 ml am	Walkin
PA970426-03ab	RB11 0-6'	Sediment	2508/4007	04/24/97	04/26/97	P06001-60	2 oz. jar & 125 ml am	Walkin
PA970426-04ab	RB12 0-4'	Sediment	2508/4007	04/24/97	04/26/97	P06001-60	2 oz. jar & 125 ml am	Walkin
PA970426-05ab	Trip Blank	Water	2508/4007	04/24/97	04/26/97	P06001-60	2 x 40 ml VOA	Walkin

4/26/97

DDRESS 290 Elwood Davis Rd Liverpool NY 13088
HONE (3) 451 9560

META Environmental, Inc. TEL: (617) 923-4002 FAX: (617) 923-4610

AMPLED BY

CRTorell (Print Name) CRTorell Signature

(Print Name) Signature

(Print Name) Signature

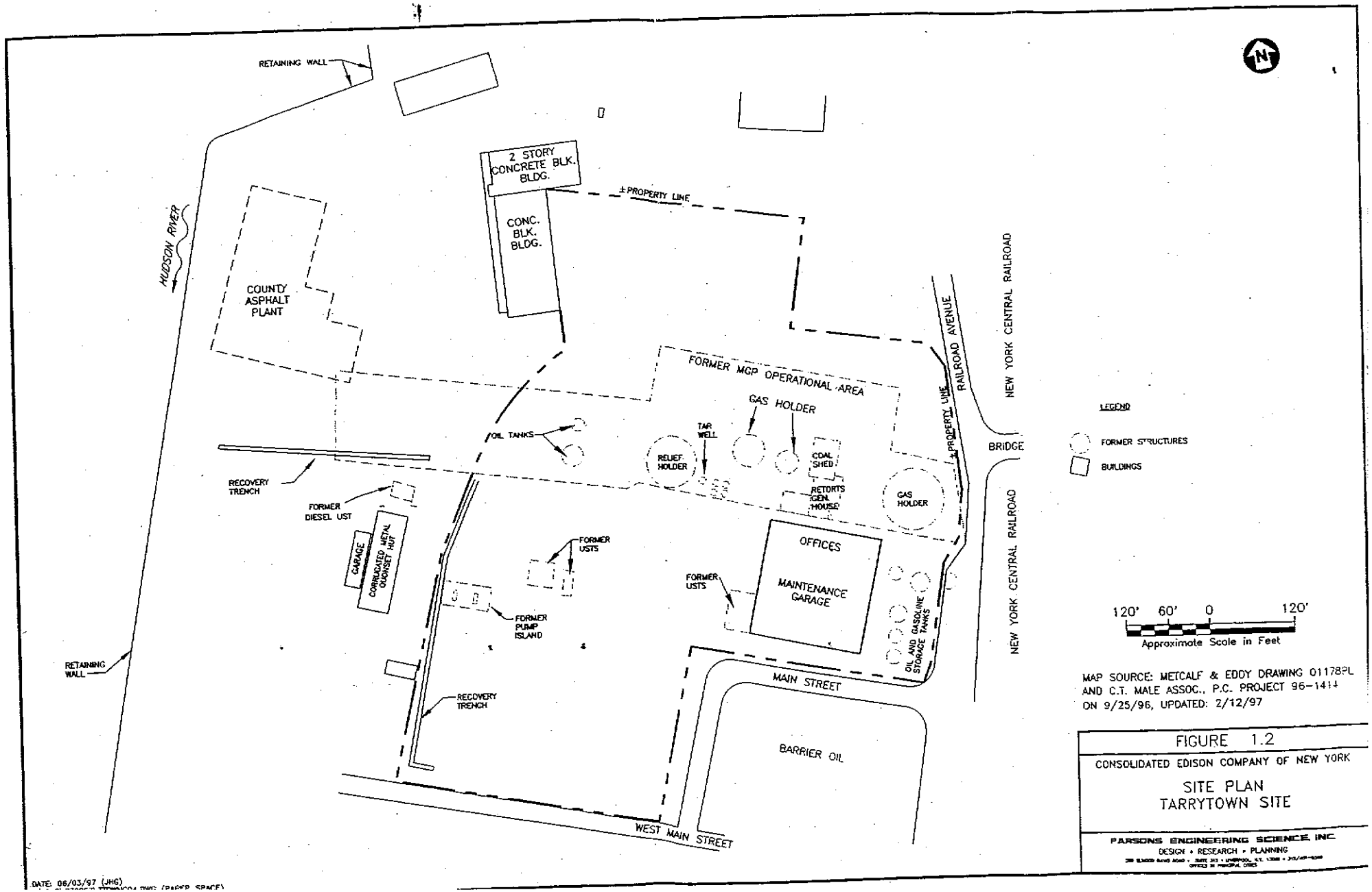
SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	CONTAINER SIZE	CONTAINER Q/P	GRAB	COMP	NO. OF CONTAINERS	SAMPLE MATRIX	PRESERVATIVE	ANALYSES: microsolv. BTEX	ANALYSES: microsolv. SVOC	ANALYSES: BTEX	COMMENTS
RB09 2-4	4/24	930	RB09 2-4'			X		2	sed	—	1	1		PAS70426-01 035
RB10 6-8	4/24	1520	RB10 6-8'			X		2	sed	—	1	1		-02 036
RB11 0-6	4/24	1620	RB11 0-6'			X		2	sed	—	1	1		Heavy contamination 037
RB12 0-4	4/24	1910	RB12 0-4'			X		2	sed	—	1	1		↓ (RB12 only) 038
TRIP	—	—	TRIP			X		2	H_2O				2	039

Relinquished by	Date/Time	Received by	Relinquished by	Date/Time	Received by
CRTorell	4/25 1000	Mailboxes (Fedex)			
				4/26/93 1100AM	Received for Laboratory by: Julia Corrazini

Method of Shipment: Fedex

Remarks:

7/92 PT 1 - ORIGINAL PT 2 META Project Manager - Yellow



MAP SOURCE: METCALF & EDDY DRAWING 01178PL AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED: 2/12/97

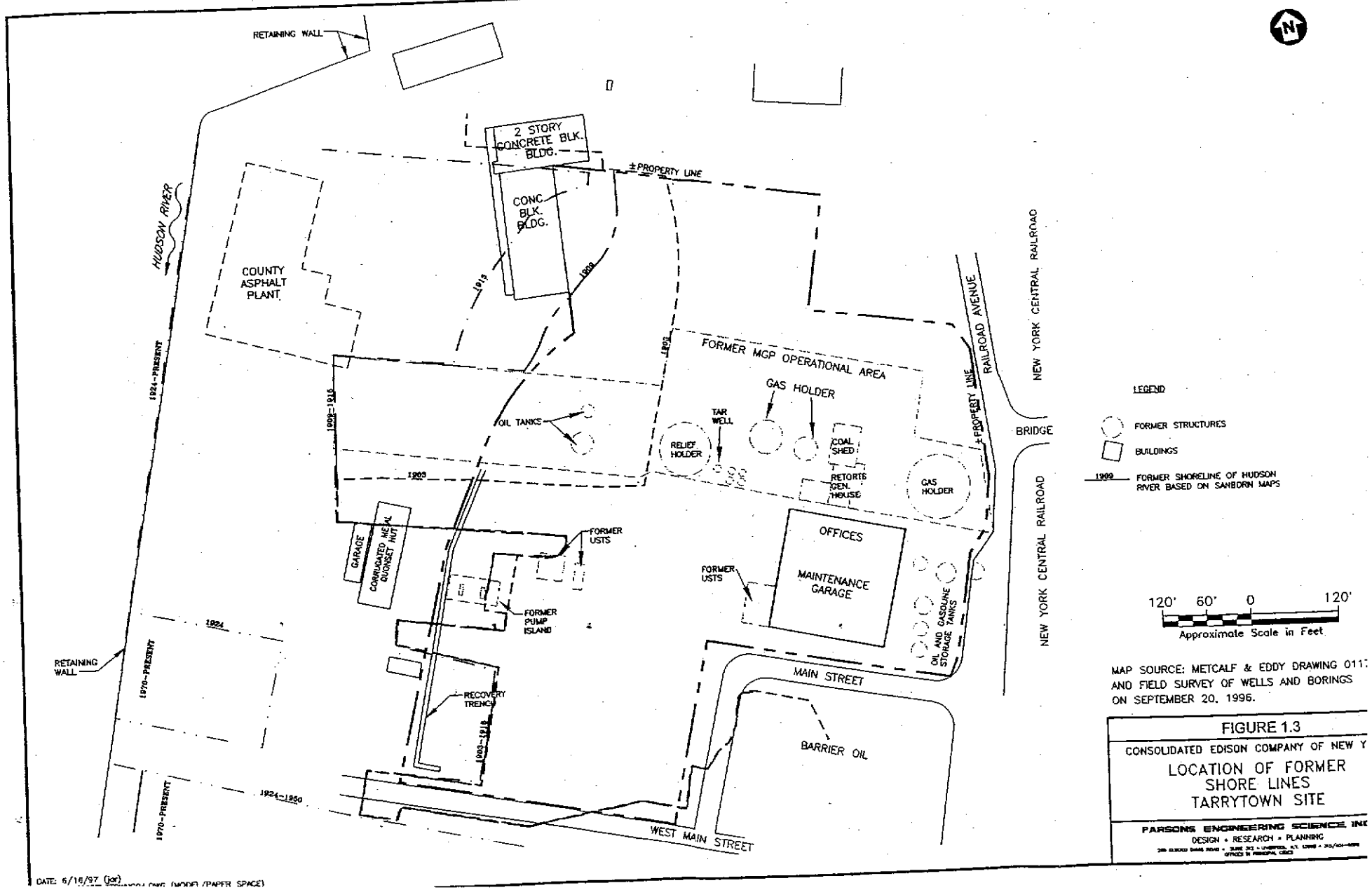
FIGURE 1.2

CONSOLIDATED EDISON COMPANY OF NEW YORK

SITE PLAN
TARRYTOWN SITE

PARSONS ENGINEERING SCIENCE, INC.
DESIGN • RESEARCH • PLANNING

DATE: 06/03/97 (JHG)



MAP SOURCE: METCALF & EDDY DRAWING 011
AND FIELD SURVEY OF WELLS AND BORINGS
ON SEPTEMBER 20, 1996.

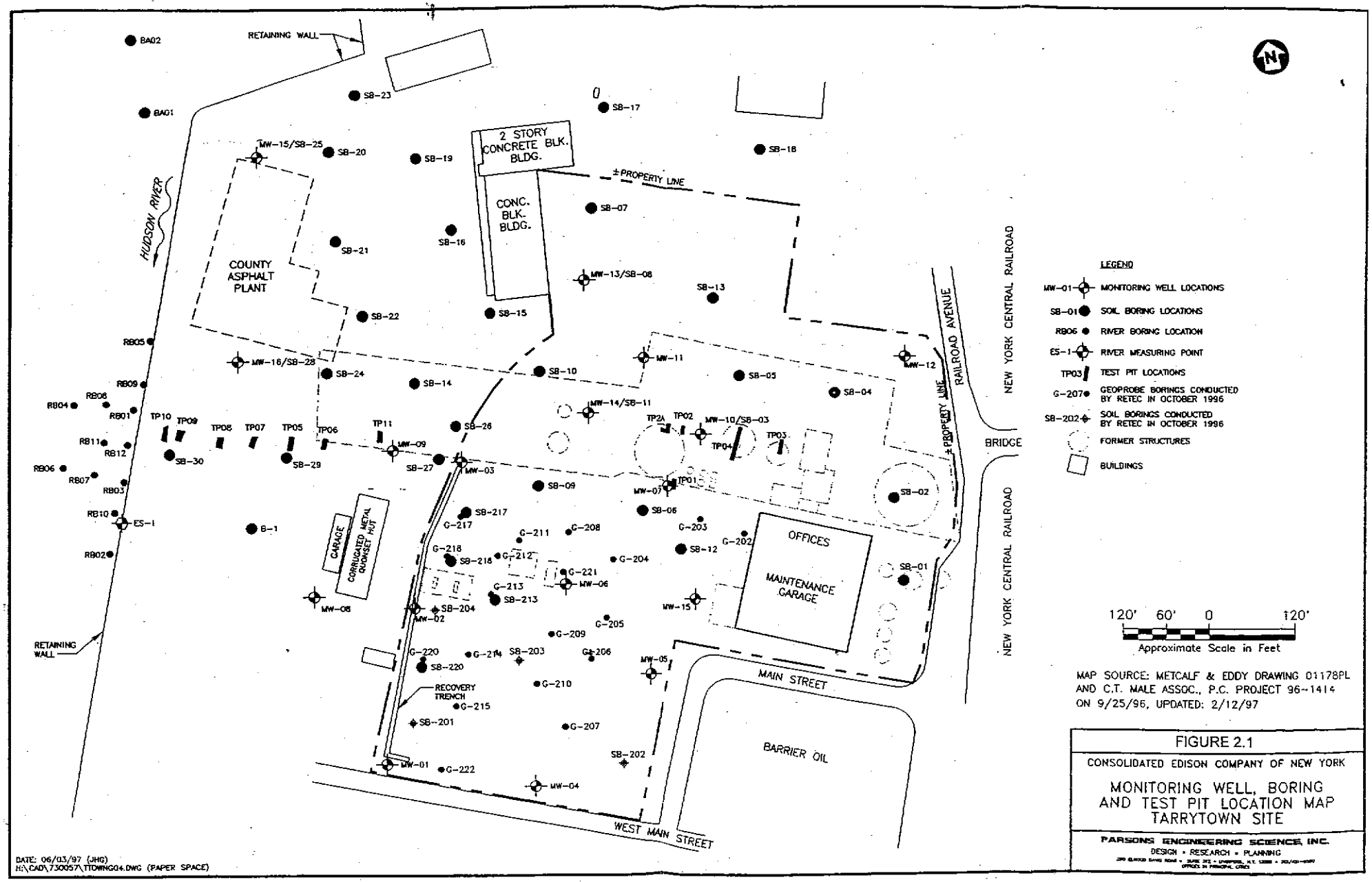
FIGURE 1.3

CONSOLIDATED EDISON COMPANY OF NEW Y

LOCATION OF FORMER SHORE LINES TARRYTOWN SITE

PARSONS ENGINEERING SCIENCE INC
DESIGN • RESEARCH • PLANNING

DATE: 6/16/97 (jar)



MAP SOURCE: METCALF & EDDY DRAWING 01178PL AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED: 2/12/97

DATE: 06/03/97 (JHG)
H:\CAD\730057\TTDWNG04.DWG (PAPER SPACE)

FIGURE 2.1

CONSOLIDATED EDISON COMPANY OF NEW YORK

MONITORING WELL, BORING AND TEST PIT LOCATION MAP TARRYTOWN SITE

PARSONS ENGINEERING SCIENCE, INC.
DESIGN • RESEARCH • PLANNING

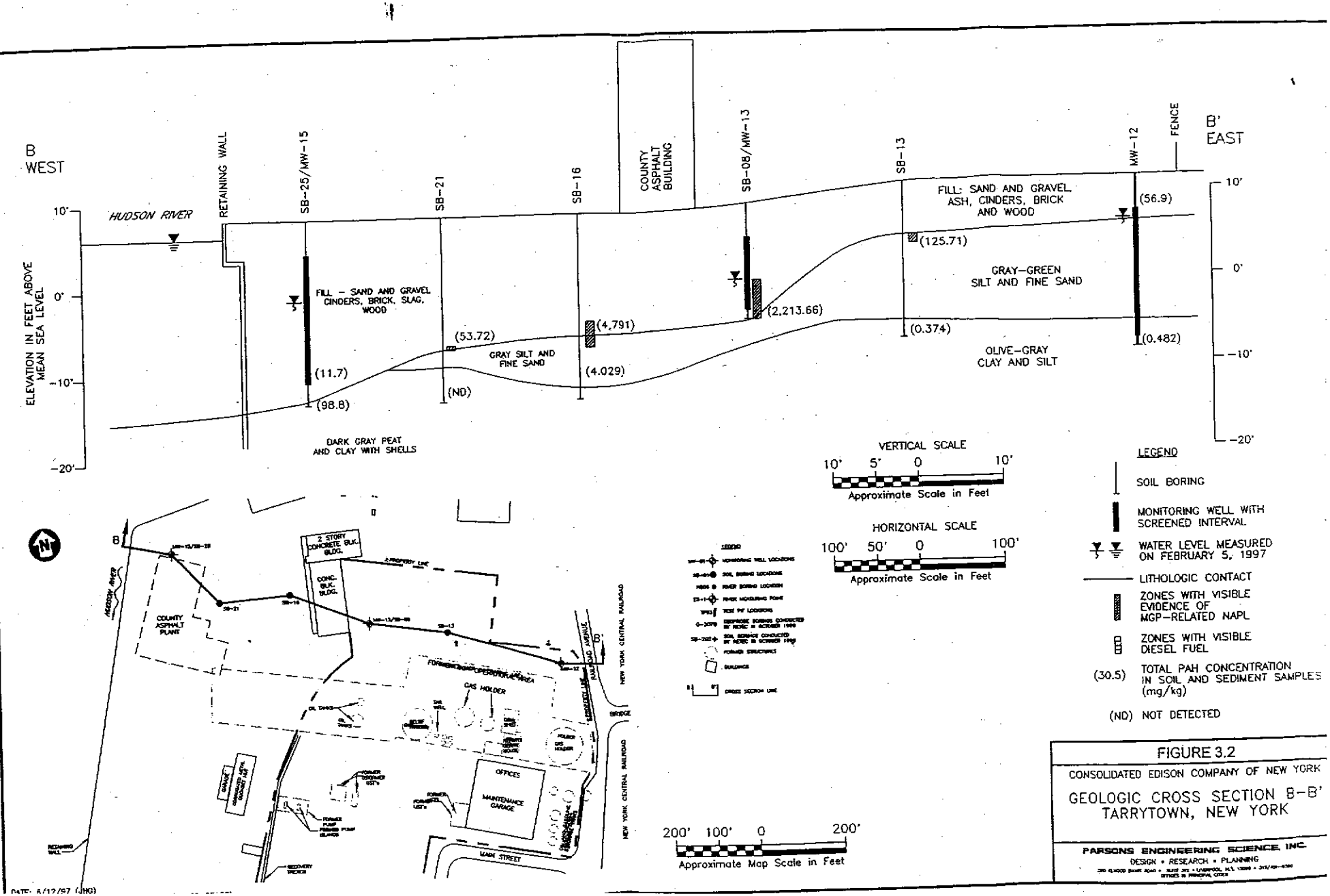


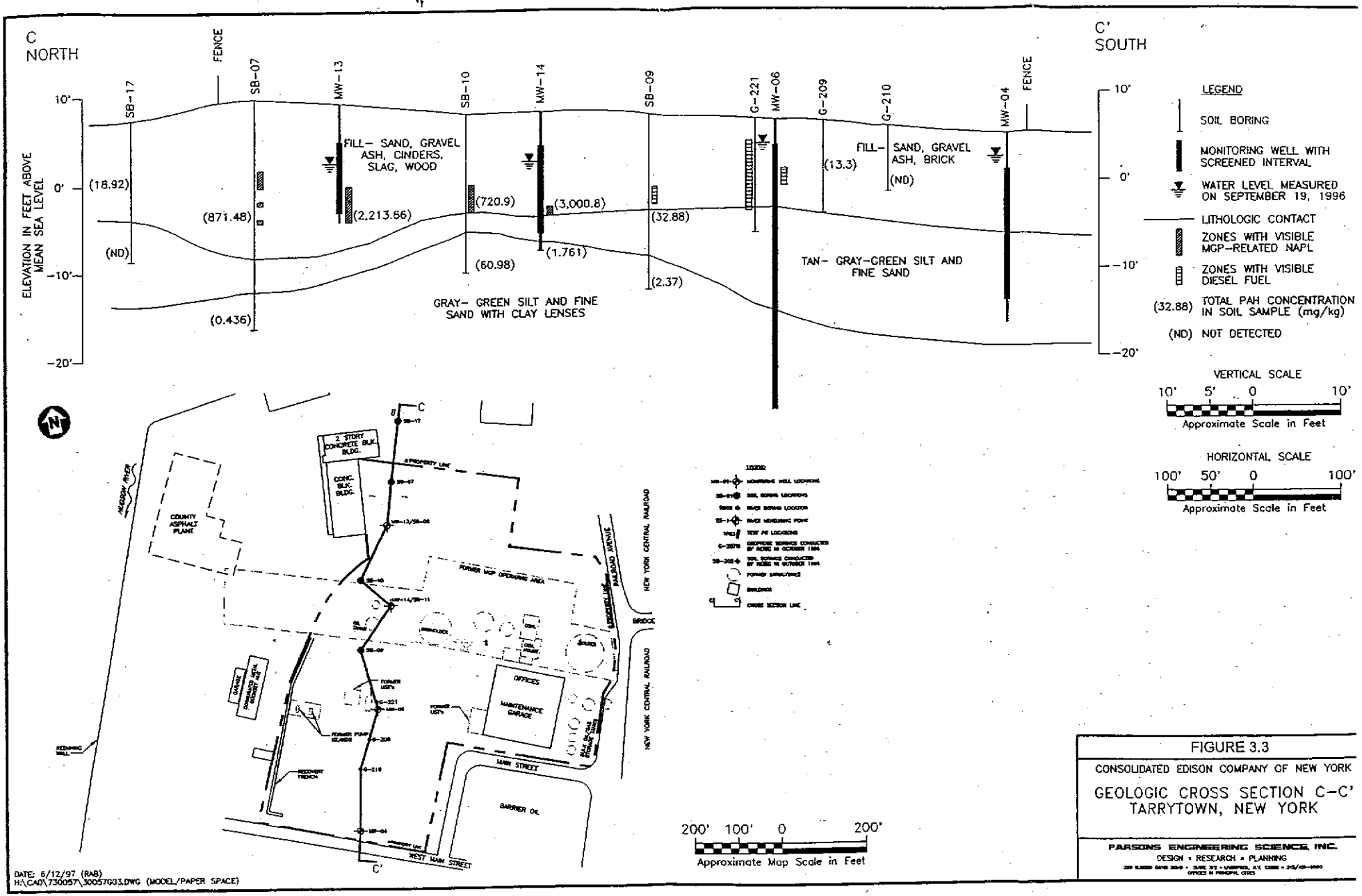
FIGURE 3.2

CONSOLIDATED EDISON COMPANY OF NEW YORK

GEOLOGIC CROSS SECTION B-B'
TARRYTOWN, NEW YORK

PARSONS ENGINEERING SCIENCE, INC.
DESIGN • RESEARCH • PLANNING

DATE: 5/12/97 (JHG)



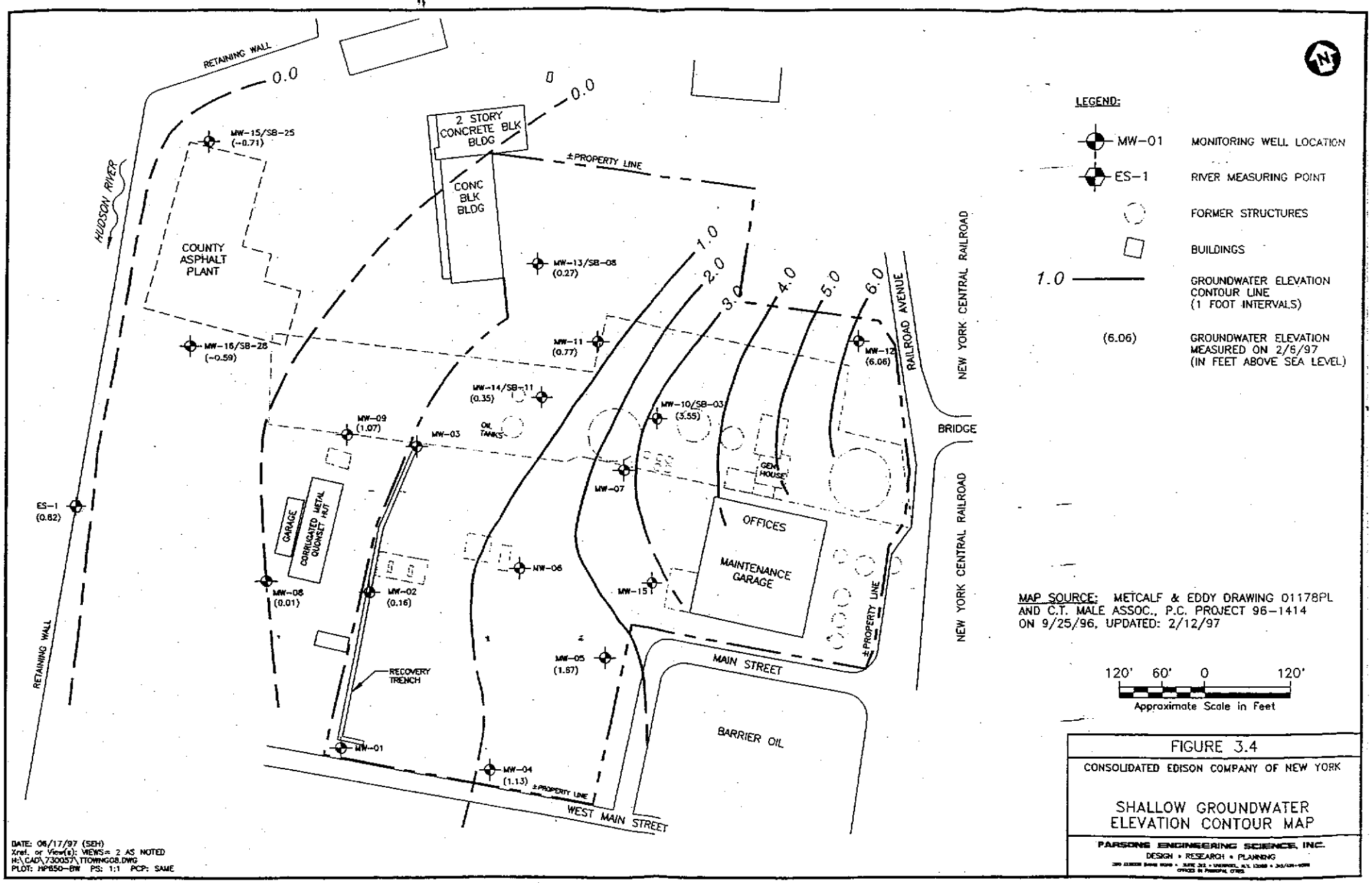
DATE: 6/12/97 (RAB)
H:\CAD\730057\30057G03.DWG (MODEL/PAPER SPACE)

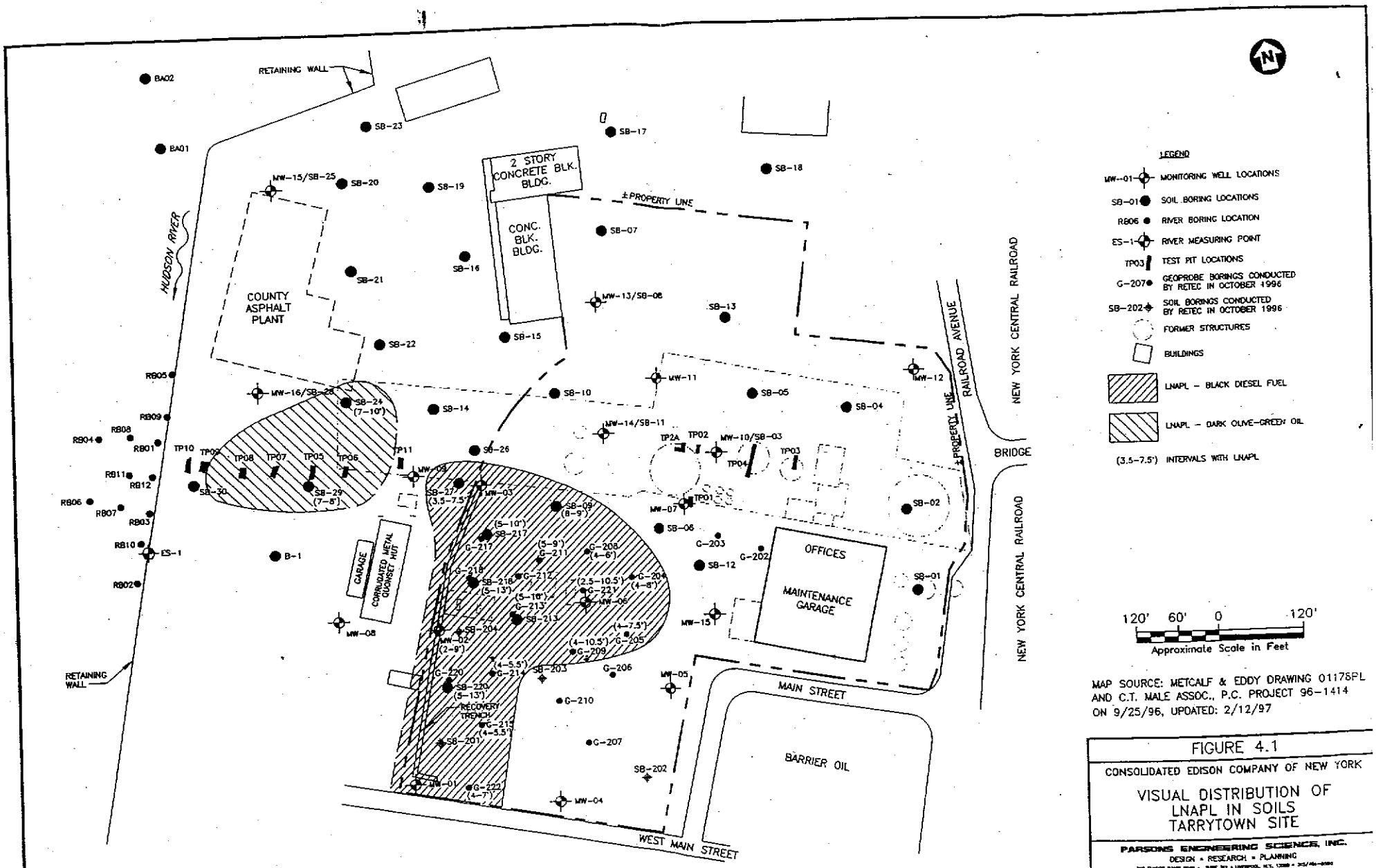
FIGURE 3.3

CONSOLIDATED EDISON COMPANY OF NEW YORK

GEOLOGIC CROSS SECTION C-C'
TARRYTOWN, NEW YORK

PARSONS ENGINEERING SCIENCE, INC.
DESIGN • RESEARCH • PLANNING


RETAINING WALL
HUDSON RIVER
0.0
MW-15/SB-25 (-0.71)
COUNTY ASPHALT PLANT
2 STORY CONCRETE BLK BLDG
CONC BLK BLDG
±PROPERTY LINE
MW-13/SB-08 (0.27)
MW-16/SB-26 (-0.59)
MW-11 (0.77)
MW-12 (6.06)
MW-14/SB-11 (0.35)
MW-10/SB-03 (3.55)
MW-09 (1.07)
MW-03
OIL TANKS
GEN HOUSE
MW-07
ES-1 (0.82)
GARAGE
CORRUGATED METAL QUONSET HUT
OFFICES
MAINTENANCE GARAGE
MW-06
MW-08 (0.01)
MW-02 (0.16)
MW-15
RECOVERY TRENCH
MW-05 (1.67)
MW-01
MW-04 (1.13)
±PROPERTY LINE
WEST MAIN STREET
MAIN STREET
BARRIER OIL
1.0
2.0
3.0
4.0
5.0
6.0
RAILROAD AVENUE
NEW YORK CENTRAL RAILROAD
BRIDGE
NEW YORK CENTRAL RAILROAD
±PROPERTY LINE
RETAINING WALL
LEGEND:
MW-01 MONITORING WELL LOCATION
ES-1 RIVER MEASURING POINT
FORMER STRUCTURES
BUILDINGS
1.0 GROUNDWATER ELEVATION CONTOUR LINE (1 FOOT INTERVALS)
(6.06) GROUNDWATER ELEVATION MEASURED ON 2/6/97 (IN FEET ABOVE SEA LEVEL)
MAP SOURCE: METCALF & EDDY DRAWING 01178PL AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED: 2/12/97
120' 60' 0 120'
Approximate Scale in Feet
FIGURE 3.4
CONSOLIDATED EDISON COMPANY OF NEW YORK
SHALLOW GROUNDWATER ELEVATION CONTOUR MAP
PARSONS ENGINEERING SCIENCE, INC.
DESIGN • RESEARCH • PLANNING
DATE: 06/17/97 (SEH)
Xref, or View(s): VIEWS= 2 AS NOTED
H:\CAD\730057\TTOWNG08.DWG
PLOT: HP650-BW PS: 1:1 PCP: SAME



MAP SOURCE: METCALF & EDDY DRAWING 01178PL AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED: 2/12/97

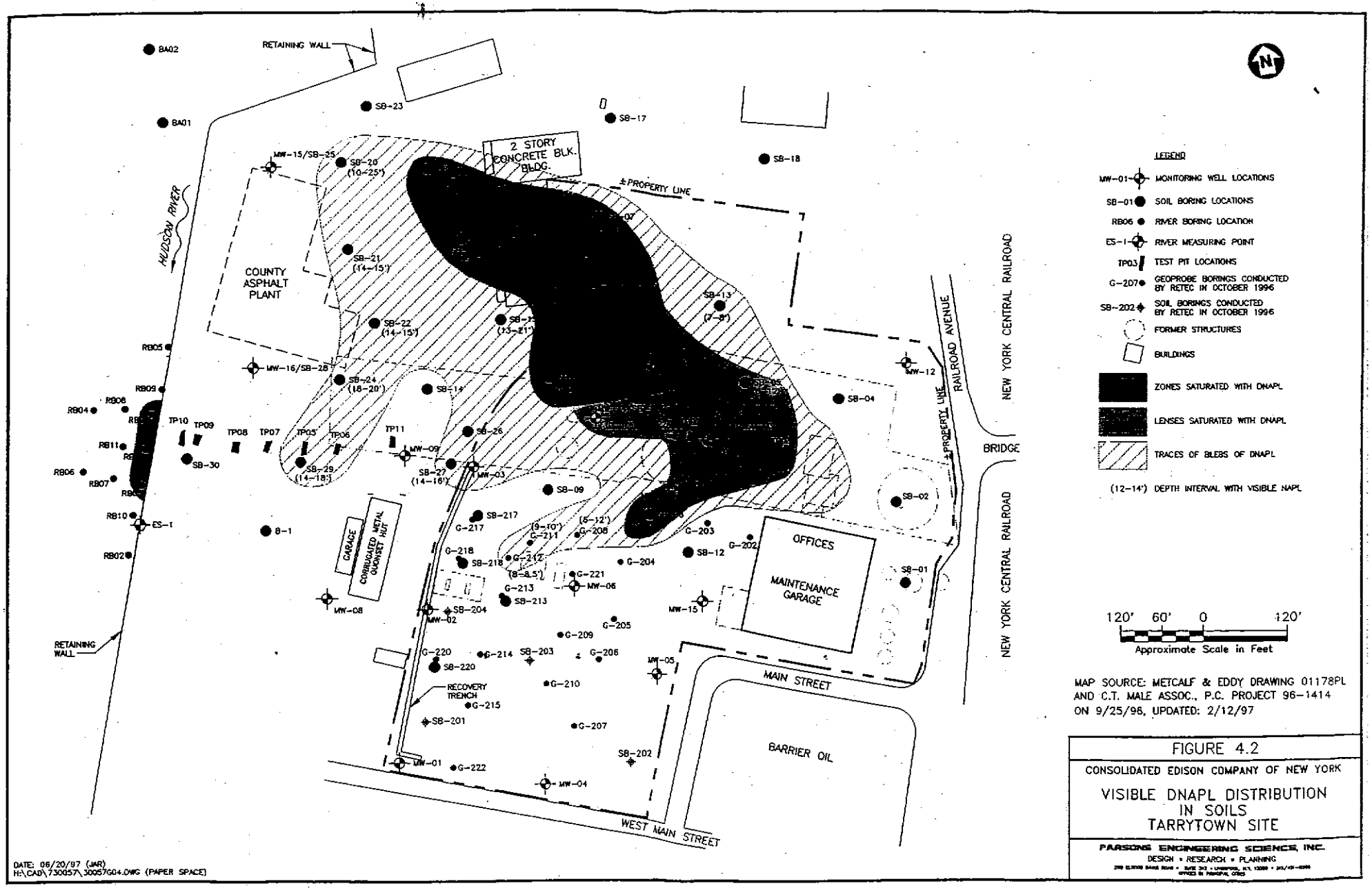
FIGURE 4.1

CONSOLIDATED EDISON COMPANY OF NEW YORK

VISUAL DISTRIBUTION OF LNAPL IN SOILS TARRYTOWN SITE

PARSONS ENGINEERING SCIENCE, INC.
DESIGN • RESEARCH • PLANNING

DATE: 06/20/97 (JAR)
H:\CAD\730057\30057G05.DWG (PAPER SPACE)



MAP SOURCE: METCALF & EDDY DRAWING 01178PL AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED: 2/12/97

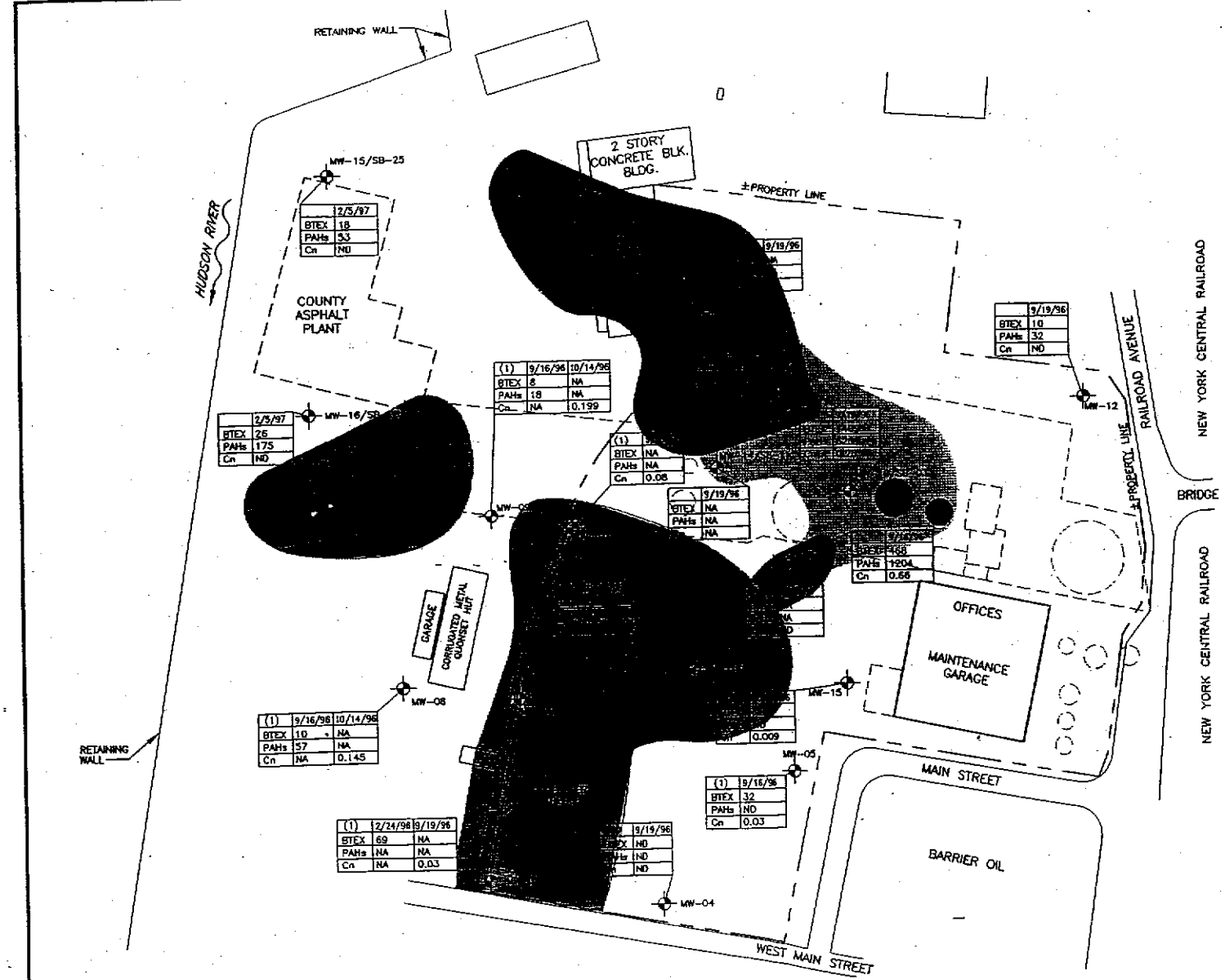
DATE: 06/20/97 (JAR)
H:\CAD\730057\30057G04.DWG (PAPER SPACE)

FIGURE 4.2

CONSOLIDATED EDISON COMPANY OF NEW YORK

VISIBLE DNAPL DISTRIBUTION IN SOILS TARRYTOWN SITE

PARSONS ENGINEERING SCIENCE, INC.
DESIGN • RESEARCH • PLANNING



MAP SOURCE: METCALF & EDDY DRAWING 01178PL AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED: 2/12/97

FIGURE 4.5

CONSOLIDATED EDISON COMPANY OF NEW YORK

BTEX, PAH AND CYANIDE CONCENTRATIONS IN GROUNDWATER SAMPLES TARRYTOWN SITE

PARSONS ENGINEERING SCIENCE, INC.

DESIGN • RESEARCH • PLANNING

DATE: 06/20/97 (JAR)
H:\CAD\730057\30057G09.DWG (PAPER SPACE)

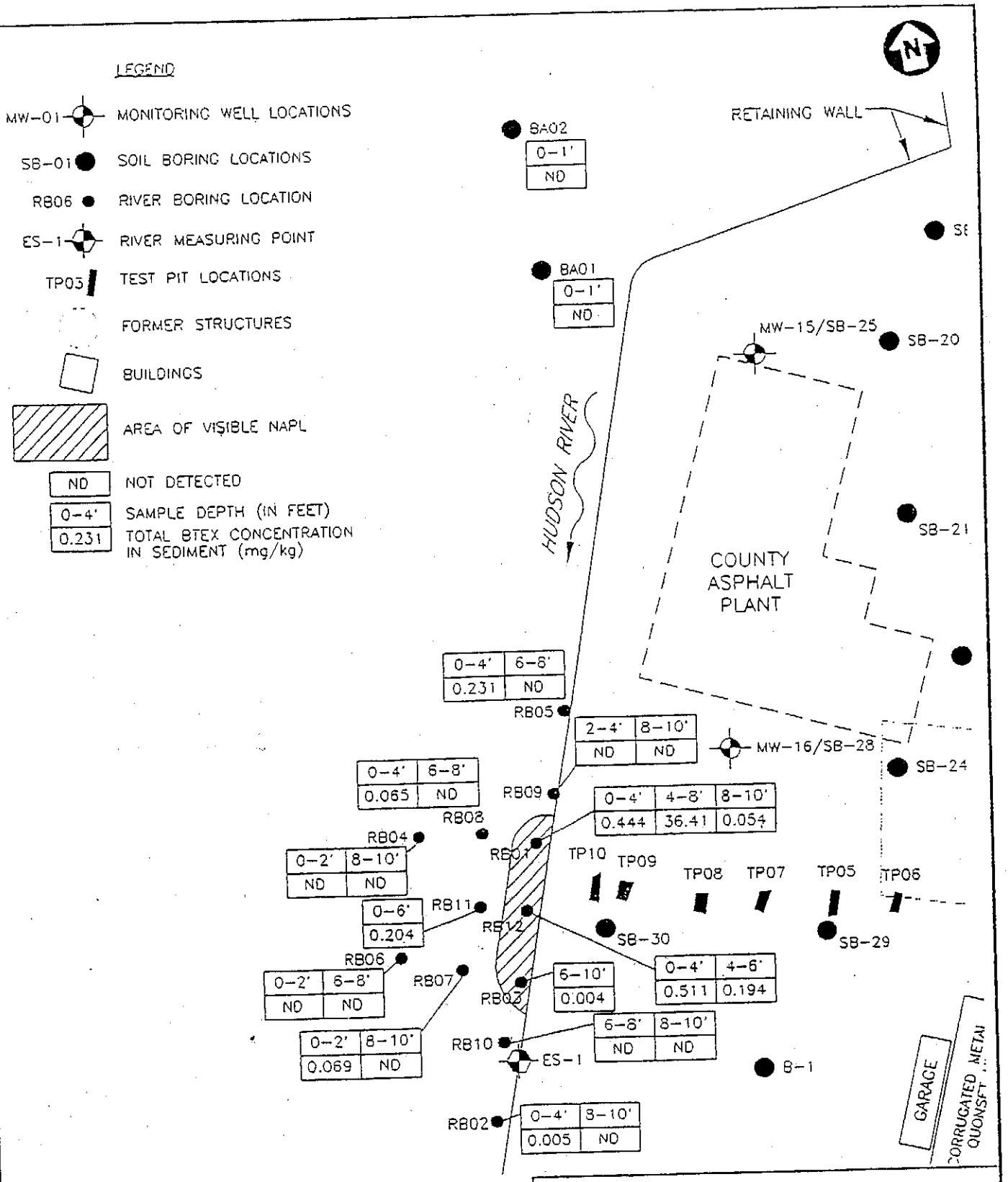


FIGURE 4.6

CONSOLIDATED EDISON COMPANY OF NEW YORK

TOTAL BTEX CONCENTRATIONS IN SEDIMENT SAMPLES TARRYTOWN SITE

SOURCE: METCALF & EDDY DRAWING 01178PL AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED: 2/12/97

DATE: 06/05/97 (JHG)
H:\CAD\730057\30057G06.DWG (PAPER SPACE)

PARSONS ENGINEERING SCIENCE, INC.
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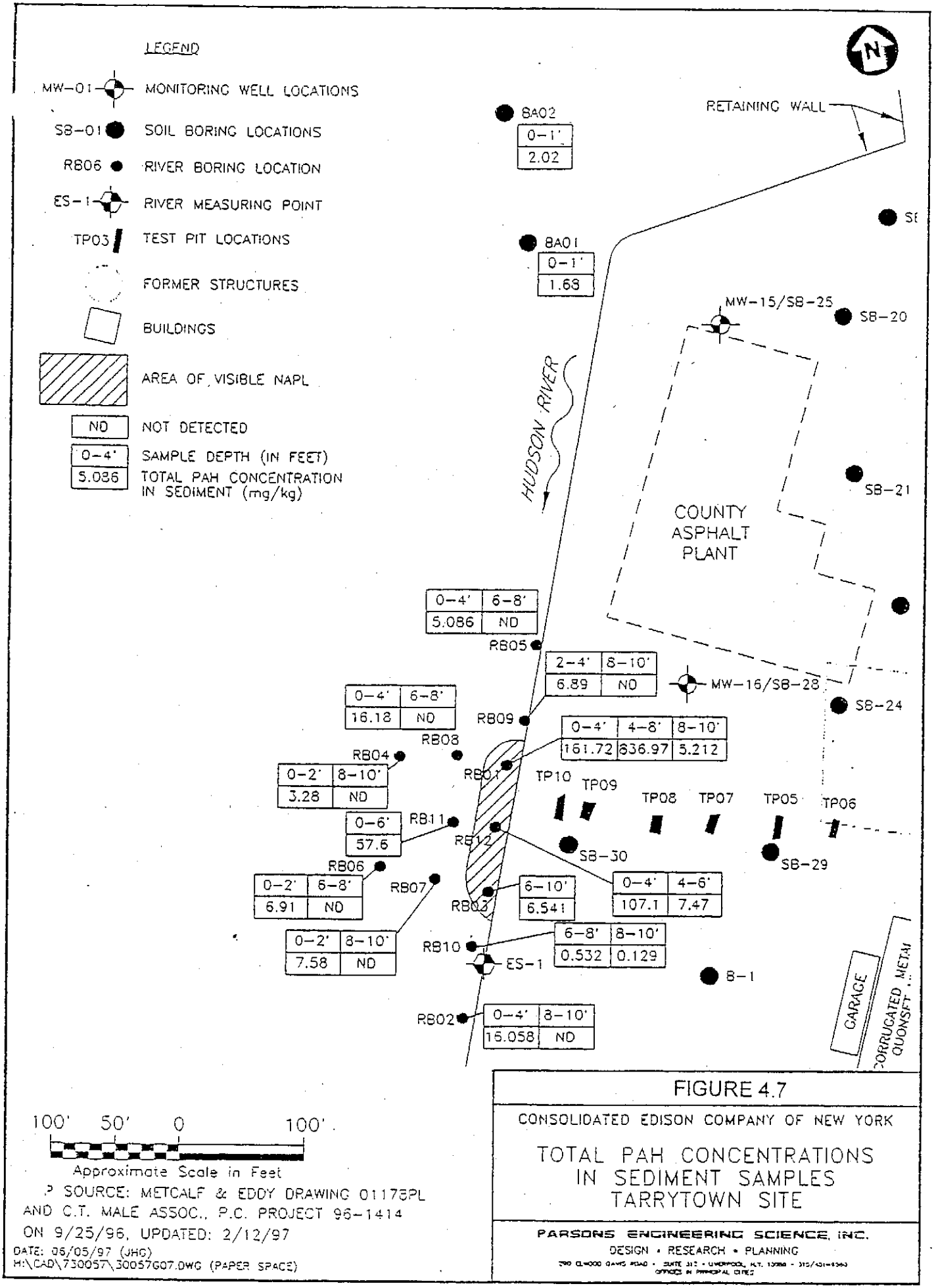

FIGURE 4.7

CONSOLIDATED EDISON COMPANY OF NEW YORK

TOTAL PAH CONCENTRATIONS IN SEDIMENT SAMPLES TARRYTOWN SITE

SOURCE: METCALF & EDDY DRAWING 01178PL AND C.T. MALE ASSOC., P.C. PROJECT 96-1414 ON 9/25/96, UPDATED: 2/12/97

DATE: 06/05/97 (JHC)
H:\CAD\730057\30057G07.DWG (PAPER SPACE)

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290 ELWOOD DAVIS ROAD • SUITE 312 • LIVERPOOL, N.Y. 13088 • 315/451-9560
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