APPENDIX E

Remedial Investigation Report

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

PRINCIPALS
Ferris, P.E.
J Perricone, P.E.
James Johnston, P.E.
Robert M. Gerard, CHMM
Philip M. Keegan (1942-1998)

Richard Erickson
Stanley Lewandowski
Mark Worthington, CHMM

SENIOR ASSOCIATES
Jayanti Chatterjee, CIH, PMP
John J. McHale
Mete Talimcioglu, Ph.D., P.E., CGWP

ASSOCIATES
Philip Angarone
Bashar Assadi, P.E.
William P. Call, P.G.
Erich Christiansen, P.E.
Drew M. Di Sessa, P.E., P.P.
James Giurintano, P.E., P.P.
Christopher Gulics
Ayman Hashem, P.E., PMP
Mohsen Hossein, Ph.D.
Robert Kingsbury
Patrick D. Lorimer, MPH
Joseph A. Lukas, P.E., PMP, CCE
Thomas O. Mineo, P.E.
Timothy F. Osborne, RCDD, LEED
Ronald J. Piccolo, P.E., P.P., CME
Robert Pinzon
William Reimer, C.L.A., R.L.A.
Lisa R. Sauer
Daniel Swayze, P.E.

July 20, 2006

Edwards and Kelcey, Inc.
299 Madison Avenue
PO Box 1936
Morristown, New Jersey 07962-1936

ATTN: MR. NEAL TOGLIA, P.E.

RE: REMEDIAL INVESTIGATION REPORT (RIR)
TREMLEY POINT ROAD CONNECTOR PROJECT OPS 2052
INTERCHANGE 12 - TREMLEY POINT
CARTERET, NEW JERSEY
PMK GROUP PROJECT #046108-05

Dear Mr. Toglia:

The **PMK Group Inc.** (PMK), acting as the environmental consultant for Edwards and Kelcey (E&K), herein presents the Remedial Investigation Report (RIR) for the investigation activities performed at the Tremley Point Road Connector Project located in Carteret, New Jersey, herein referred to as the "Site".

This RIR specifically addresses the environmental investigations completed along the proposed roadway alignments prior to the construction activities, and adheres to the requirements of the New Jersey Department of Environmental Protection (NJDEP) guidelines.

This RIR is submitted for your review and submission to the NJDEP. At this time, a meeting with the NJDEP is recommended to determine the next appropriate administrative action to take with the NJDEP. It is likely that a Remedial Action Workplan (RAW) will be required for the construction phase of the project.

Please review the attached and contact our office should you have comments and/or questions.

Respectfully,

Eric Meyer
Senior Project Scientist

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cc: Frank Lopatosky, E&K
Ron Piccolo, PMK
Gregg Furson, PMK

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

REMEDIAL INVESTIGATION REPORT
TREMLEY POINT ROAD CONNECTOR PROJECT OPS 2052
INTERCHANGE 12 - TREMLEY POINT
CARTERET, NEW JERSEY
PMK PROJECT #046108-05

PREPARED FOR:

EDWARDS AND KELCEY, INC.
299 MADISON AVENUE
P.O. BOX 1936
MORRISTOWN, NEW JERSEY 07962

PREPARED BY:

PMK GROUP INC.
65 JACKSON DRIVE, PO BOX 5000
CRANFORD, NEW JERSEY 07016

Prepared by:

Robert Pace
Staff Scientist

Reviewed by:

Eric Meyer
Senior Project Scientist

Released by:

Howard D. Feiler
Director of Geoenvironmental Services

July 20, 2006

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

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Plate No.		Description
1	-	USGS Site Location Plan
2	-	Site Plan
3	-	NJGS Historic Fill Map- Arthur Kill Quadrangle
4	-	Wetlands Location Map- NJDEP iMAP
5	-	Sample Location Plan

Table No.		Description
1	-	Site Sampling Summary
2	-	Soil Sampling Results
3	-	Sediment Sampling Results
4	-	Groundwater Sampling Results
5	-	Surface Water Sampling Results

Attachment No.		Description
1	-	Volume I of the Environmental Soil and Groundwater Sampling Report for the New Jersey Turnpike Authority Interchange 12 Improvements Project, December 2003
2	-	Waterfront Development/Freshwater Wetlands GP/Water Quality Certificate
3	-	NJDEP Report Certification Form

1.0 INTRODUCTION

PMK Group (PMK) was retained by the Edwards and Kelcey, Inc. to provide environmental consulting services associated with the completion of remedial investigation activities at Tremley Point Road Connector Project OPS 2052, Interchange 12-Tremley Point in Carteret, New Jersey (herein designated as "the Site"). The investigation activities were conducted in general accordance with our Remedial Investigation Workplan (RIW) dated October 24, 2005 and the NJDEP Technical Requirements for Site Remediation (N.J.A.C. 7:26E).

The purpose of the RI is the investigation of soil and groundwater contamination that that will impact the alignment of the proposed road connector project.

The location of the site is presented on the Site Location Map, Plate 1 (United States Geological Survey – Author Kill, NJ Topographic Quadrangle, 7.5 minute series). In addition, a site plan indicating pertinent site features is presented on the Site Plan, Plate 2.

2.0 PROJECT BACKGROUND

The Site is located where the New Jersey Turnpike Interchange 12 (mile point 95.9) runs through the Borough of Carteret, and the City of Linden. The Interchange 12 Improvements Project consists of the redesign and construction of Interchange 12 to improve the existing traffic congestion in the area; and the design and construction of a Connector Road that would originate from its southern terminus at Industrial Road in the Borough of Carteret, traverse the Rahway River, and intersect Tremley Point Road in the City of Linden at its northern terminus. The Connector Road would provide direct access from the New Jersey Turnpike's Interchange 12 to the Tremley Point area of the City of Linden, Union County, New Jersey; and therein reduce the impacts of the regional increase in development and the requirement for truck transport to/from this area.

The potential alignments being considered for the Connector Road are positioned on undeveloped existing wetlands, and over open water bodies. Only a very small portion of the southern end of the roadway is positioned on existing developed properties. A Site Location Map is attached as Plate 1 identifying the generalized project location.

This project has long been considered for transportation improvements to this area by the state, county and the New Jersey Turnpike Authority (NJTPA).

2.1 REMEDIAL INVESTIGATION WORKPLAN (RIW) (OCTOBER 2005)

The purpose of the RIW was to complete a limited environmental investigation of the soil and shallow groundwater media along the selected roadway alignments; and supplement the previous findings of the Paulus, Sokolowski & Sartor, LLC (PSS) report titled *Environmental Soil and Groundwater Sampling Report for the New Jersey Turnpike Authority Interchange 12 Improvements Project,* and dated *December 2003.* This media investigation will provide a limited screening of the environment/media that will be encountered during the proposed construction.

The goals for the RIW were to compare and characterize the soil and groundwater media sample results with selected and applicable regulatory criteria. The criteria comparison included those for soil, groundwater, surface water, and/or for offsite disposal. This comparison of said

criteria will permit the advanced preparation/engineering for the management of the materials during the proposed roadway construction, and for future health and safety considerations.

It is not the future intention of the project team to delineate and/or remediate/resolve any identified environmental impacts; but merely to remediate such material that will be immediately and directly affected by the footprint of the proposed construction, for the express purpose of installation/construction of the roadway.

2.2 Preliminary Assessment/ Site Investigation Report (PA/SIR) (2003)

In 2003, the NJTPA completed a preliminary sampling and analysis program to provide a limited environmental investigation of the proposed Site/alignments. The limited environmental investigation was conducted by PSS to specifically identify the presence/absence of contaminants in the near surface soils and shallow groundwater at the project site. The results of the investigation was titled *Environmental Soil and Groundwater Sampling Report for the New Jersey Turnpike Authority Interchange 12 Improvements Project, December 2003.* Attachment 1 contains volume 1 of the identified report as a supplemental reference.

The Report identified minor impacts to soil and/or shallow groundwater for a number of different types of constituents including Priority Pollutant Metals (PP Metals), and Base Neutrals (BN). The impacts to the shallow soil reflect constituent concentrations that were generally reflected above the New Jersey Department of Environmental Protection (NJDEP) Residential Direct Contact Soil Cleanup Criteria (RDCSCC), while below the Nonresidential Direct Contact Soil Cleanup Criteria (NRDCSCC). The impacts to the shallow groundwater reflect impacts above the Groundwater Quality Criteria (GQC) for PP Metals and Semi-Volatile Organic Compounds.

3.0 ENVIRONMENTAL SETTING

3.1 Historical Site Usage

Historically, a majority of the properties along the proposed alignment have never been utilized or developed, and were wetlands.

A minor section of one of the proposed roadway alignments borders the Former American Cyanamid Carteret Landfill (See Plate 2). American Cyanamid operated the Landfill from 1939 until 1973. The landfill is composed of six (6) unlined impoundments with earthen and wooden dikes covering approximately 100 acres, containing an estimated two-million tons of sludge. The sludge wastes deposited on site were resultant from the production of alum (aluminum sulfate) and yellow prussiate of soda (YPS). Alum is a chemical used in water treatment and styptic pencils and YPS is a complex ferro-cyanide salt used as an additive to table salt and road salt, among other uses. A 1981 sampling of the sludge from the impoundments identified complex cyanides of up to 3,500 parts per million. Following the closure of the landfill in 1973, sewage sludge was brought in to provide a viable organic base for vegetative cover, in order to prevent windborne escape of contamination. Groundwater contamination (metals, cyanide, phenols, and VOC) has also been identified on site.

3.2 Present Land Use

Historically, majorities of the property(s) that create the Site have never been utilized/developed, and are wetlands. A minor section of one of the proposed roadway alignments borders the

Former American Cyanamid Carteret Landfill Site. Plates 1 & 2 depict the existing site conditions.

3.3 SITE TOPOGRAPHY

The Site consists mainly of wetlands and marshes bisected by the Rahway River. Additional minor tributaries to the Rahway River, including Ralph's Creek and Crass Creek branching to the South, and Marshes Creek branching to the Northwest, segment the wetlands area. The site elevation is approximately 2.0' – 3.0' msl. Pertinent site features can be viewed on the Site Plan (Plate 2).

3.4 SITE GEOLOGY

The site is based in the Passaic formation (Lower Jurassic and Upper Triassic) and consists of reddish-brown to brownish-purple and grayish-red siltstone and shale with localized sandy mudstone is the prevailing regional geology (USGS Bedrock Geologic Map of Northern New Jersey). Bedrock in this general area is expected to be approximately 40-50 feet below existing grade.

3.5 SITE SOILS

The site is positioned within tidal influences of the Rahway River. The natural near surface soils consist of thinly interbedded layers of silt, sand, and clay derived from the rivers influence; in addition to substantial organic matter derived from the wetlands.

The shallow near surface soils also contain, and have been identified to be consistent with, historic fill materials. The New Jersey Geologic Survey (NJGS) has identified all, and/or, portions of the site to contain historic fill. Plate 3 contains the NJGS map titled Historic Fill of the Auther Kill Quadrangle, 2004, in which the site is identified as containing historic fill.

3.6 WETLANDS

The project road alignment traverses federal and state jurisdictional wetlands. Plate 4 identifies these wetlands as depicted on NJDEP IMAP. To accommodate the NJDEP administrative and regulatory requirements for wetlands disturbance, a Waterfront Development/Freshwater Wetlands GP/Water Quality Certificate was obtained for the investigation activities completed to date (Permit # 0000-05-0007.1 WFD 05Pd & 0000-05-0007.150001 GP12). The certificate is included as Attachment 2.

4.0 REMEDIAL INVESTIGATION

The remedial investigation consisted of soil, sediment, groundwater and surface water sampling on the Site. The investigations were performed to determine the presence/absence of soil, sediment, ground water, and surface water contamination within the footprint of the three (3) proposed roadway alignments identified as CR, A-5, and A-7. The investigation consisted of the advancement of thirty-two (32) soil borings (including ten (10) sediment samples), and the subsequent collection of samples for chemical analyses. The groundwater investigation consisted of the installation and sampling of nine (9) temporary groundwater sampling points (TGWSP's), as well as the collection of four (4) surface water samples. The environmental sample locations are identified on the Sample Location Plan - Plate 5.

4.1 Soil Investigation Methodologies

Between November 8, 2005 and January 31, 2006 representatives of PMK, and Warren George Associates (WG) of Jersey City, NJ (NJ licensed drillers) were on site to conduct geotechnical soil borings and environmental sampling along the three (3) proposed roadway connector alignments.

Soil samples were collected utilizing split spoon sampling methodology in conjunction with the Mud Rotary drilling methodology, and in general accordance with standard sampling protocol as detailed in the NJDEP Field Sampling Procedures Manual (August 2005). The soil borings were advanced to a maximum depth of approximately twelve (12.0) feet below surface grade (bsg), or groundwater interface, for the purposes of the environmental soil sampling. After collection of the environmental samples, the borings were then advanced to the bedrock (approximately 50 ft bsg) for geotechnical purposes.

One (1) soil sample was collected from each boring at an interval containing fill material, transition zones between stratigraphic soil profiles, at intervals coincident with field screening observations, 0-6" above the total depth of the boring, or 0-6" above the groundwater interface. For the seven (7) boring locations within the river, a shallow sediment sample was collected in addition to each soil sample.

Each soil sample/split spoon collected for environmental purposes was screened using field-screening methods in accordance with the protocols detailed in the NJDEP Field Sampling Procedures Manual (August 2005), and the NJDEP Field Analysis Manual (July 1994). All soil samples were analyzed for Total Petroleum Hydrocarbons (TPH), Priority Pollutant compounds plus a forward library search of forty additional non-targeted compounds (PP+40). Table 1, Site Sampling Summary, summarizes the sampling and testing protocol adopted.

4.2 Groundwater Investigation Methodologies

Groundwater samples were collected utilizing TGWSP. The TGWSPs were installed in nine (9) soil borings using 1.0" slotted PVC. The sampling points were installed in general accordance with Alternate Ground Surface Sampling Techniques Guide (AGWSTG, June 1994). The TGWSP's were sampled in accordance with NJDEP Field Sampling Procedures Manual (August, 2005). The groundwater samples were tested for TPH and PP + 40. Table 1, Site Sampling Summary, summarizes the sampling and testing protocol adopted.

4.3 Surface Water Investigation Methodologies

A limited surface water investigation was conducted order to determine the presence/absence of potential surface water contamination in areas where the water level did not warrant the instillation of a TGWSP. Surface water samples were also collected as a quality assurance measure because WG was using the river water for the creation of the drilling mud.

Four (4) surface water samples were collected from points selected in the field during drilling activities. The surface water samples were analyzed for PP+40. Table 1, Site Sampling Summary, summarizes the sampling and testing protocol adopted.

4.4 Quality Assurance/Quality Control (QA/QC) Plan

A Quality Assurance/ Quality Control (QA/QC) program consisting of the collection of a field and trip blank(s) was conducted to assess the potential for contamination encountered during transport of the samples to and from the analytical laboratory.

The trip blank sample(s) were submitted for VO+10 analyses. The field blank sample(s) were submitted for PP+40 analyses. Table 1, Site Sampling Summary, summarizes the sampling and testing protocol adopted.

5.0 LABORATORY TEST RESULTS

The criteria used to evaluate the soil sampling results include the most stringent NJDEP Soil Cleanup Criteria (SCC) Residential Direct Contact Soil Cleanup Criteria (RDCSCC), and the less restrictive Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC), both of which are presented in the N.J.A.C. 7:26D, revised May 3, 1999.

The sediment samples were specifically compared against the NJDEP Marine/Estuarine Sediment Screening Guidelines (SSG).

The criteria used to evaluate the groundwater sampling results is based upon the NJDEP Ground Water Quality Criteria (GQC) (N.J.A.C. 7:9-6 revised November, 2005) and the NJDEP memorandum – Changes to the Safe Drinking Water Act and Effects of GQC (February 5, 1997).

The sampling results are presented in four (4) distinct sections, one (1) section for each prospective alignment as follows:

CR	CR-1 to CR-77
A5	A5-1 to A5-4
A7	A7-1 to A7-7
Cytec Lagoon	E1 to E-3

It should be recognized that the environmental and geotechnical efforts included as part of this phase of the overall project represented a limited investigation. This being said only selected borings within the proposed alignments were sampled and analyzed, therefore the soil sample identification/numeration may not be interpreted as being sequential.

5.1 Soil and Sediment Laboratory Results

5.1.1 Proposed Alignment – CR Laboratory Results

A total of eighteen (18) soil borings were advanced along the proposed alignment CR and analyzed for TPH and PP+40 analytical parameters. The summarized results of soil samples CR-1 through CR-77 are indicated below. The soil and sediment sampling results for the laboratory analyses performed on the soil samples are summarized in Table 2 and 3 respectively, Soil and Sediment Sampling Results Summary.

A review of the VO+15 (mg/kg) analytical results for soil samples CR-1 through CR-77 indicated that none of the samples had concentrations that exceeded the RDCSCC, NRDCSCC and SSG.

A review of the BN+15 analytical results for soil samples CR-1 through CR-77 revealed that CR-10 had concentrations above the RDCSCC; while CR-33A had concentrations above the SSG.

A review of the Priority Pollutant Metals (PPM) analytical results for soil samples CR-1 through CR-77 revealed that CR-33A had concentrations above the SSG.

A review of the polychlorinated biphenyls (PCB) and pesticide analytical results for soil samples CR-1 through CR-77 revealed that CR-33A had concentrations above the SSG.

A review of the cyanide analytical results for soil samples CR-1 through CR-77 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the phenol analytical results for soil sample CR-1 through CR-77 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the total petroleum hydrocarbon (TPH) analytical results for soil samples CR-1 through CR-77 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

5.1.2 Proposed Alignment - A5 Laboratory Results

A total of four (4) soil borings were advanced along the proposed alignment CR and analyzed for TPH and PP+40 analytical parameters. The results of soil samples A5-1 through A5-4 are indicated below. The specific concentrations are identified on Tables 2 and 3.

A review of the VO+15 (mg/kg) analytical results for soil samples A5-1 through A5-4 indicated that none of the samples had concentrations that exceeded the RDCSCC, NRDCSCC and SSG.

A review of the BN+15 analytical results for soil samples A5-1 through A5-4 revealed that A5-1A and A5-1B, had concentrations above the SSG.

A review of the Priority Pollutant Metals (PPM) analytical results for soil samples A5-1 through A5-4 revealed that A5-1A and A5-1B, had concentrations above the SSG.

A review of the polychlorinated biphenyls (PCB) and pesticide analytical results for soil samples A5-1 through A5-4 indicated that none of the samples had concentrations that exceeded the RDCSCC, NRDCSCC and SSG.

A review of the cyanide analytical results for soil samples A5-1 through A5-4 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the phenol analytical results for soil sample A5-1 through A5-4 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the total petroleum hydrocarbon (TPH) analytical results for soil samples A5-1 through A5-4 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

5.1.3 Proposed Alignment - A7 Laboratory Results

A total of seven (7) soil borings were advanced along the proposed alignment CR and analyzed for TPH and PP+40 analytical parameters. The results of soil samples A7-1 through A7-7 are indicated below. The specific concentrations are identified on Tables 2 and 3.

A review of the VO+15 (mg/kg) analytical results for soil samples A7-1 through A7-7 indicated that none of the samples had concentrations that exceeded the RDCSCC, NRDCSCC and SSG.

A review of the BN+15 analytical results for soil samples A7-1 through A7-7 revealed that A7-3B had concentrations that exceeded the RDCSCC and the NRDCSCC; A7-3A and A7-5A, had concentrations above the SSG.

A review of the Priority Pollutant Metals (PPM) analytical results for soil samples A7-1 through A7-7 revealed that A7-3B and A7-5B had concentrations above the RDCSCC and the NRDCSCC; and A7-3A and A7-5A had concentrations above the SSG.

A review of the polychlorinated biphenyls (PCB) and pesticide analytical results for soil samples A7-1 through A7-7 revealed that A7-3B had concentrations above the RDCSCC; and A7-3A had concentrations above the SSG.

A review of the cyanide analytical results for soil samples A7-1 through A7-7 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the phenol analytical results for soil sample A7-1 through A7-7 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the total petroleum hydrocarbon (TPH) analytical results for soil samples A7-1 through A7-7 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

5.1.4 Cytec Lagoon Laboratory Results

A total of three (3) soil borings were advanced along the proposed alignment CR and analyzed for TPH and PP+40 analytical parameters. The results of soil samples E-1 through E-3 are indicated below. The specific concentrations are identified on Tables 2 and 3.

A review of the VO+15 (mg/kg) analytical results for soil samples E-1 through E-3 indicated that none of the samples had concentrations that exceeded the RDCSCC, NRDCSCC and SSG.

A review of the BN+15 analytical results for soil samples E-1 through E-3 revealed that E-3 had concentrations above the RDCSCC and the NRDCSCC.

A review of the Priority Pollutant Metals (PPM) analytical results for soil samples E-1 through E-3 revealed that E-2 had concentrations above the RDCSCC and the NRDCSCC.

A review of the polychlorinated biphenyls (PCB) and pesticide analytical results for soil samples E-1 through E-3 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the cyanide analytical results for soil samples E-1 through E-3 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the phenol analytical results for soil sample E-1 through E-3 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

A review of the total petroleum hydrocarbon (TPH) analytical results for soil samples E-1 through E-3 indicated none of the samples had concentrations above the RDCSCC, NRDCSCC and SSG.

5.2 Groundwater and Surface Water Laboratory Results

5.2.1 Groundwater Analytical Criteria

A total of eight (8) TGWSP's were installed along the three (3) proposed alignments (CR, A5 and A7), and each sample collected from the TGWSP's were analyzed for PP+40 analytical parameters. The criteria used to evaluate the groundwater sampling results is based upon the NJDEP Ground Water Quality Criteria (GQC) (N.J.A.C. 7:9-6 revised November 2005) and the NJDEP memorandum – Changes to the Safe Drinking Water Act and Effects of GQC (February 5, 1997).

5.2.2 Surface Water Analytical Criteria

A total of six (6) surface water samples were collected along the three (3) proposed alignments (CR, A5 and A7), and each sample was analyzed for PP+40 analytical parameters.

The criteria used to evaluate the surface water sampling results are based on the NJDEP Surface Water Quality Standards (SWQS) (N.J.A.C. 7:9B). These criteria are presented on the summary table.

The summarized results of groundwater and surface water samples are indicated below. The specific concentrations are identified on Tables 4 and 5.

5.2.1 Groundwater Laboratory Results

A review of the VO+15 (mg/kg) analytical results for the TGWSP's revealed that TW-CR1 and TW-CR68 had concentrations above the most stringent NJDEP GQC

A review of the BN+15 analytical results for the TGWSP's revealed that TW-CR68 had concentrations above the most stringent NJDEP GQC

A review of the Priority Pollutant Metals (PPM) analytical results for the TGWSP's revealed that TW-1, TW-A5-4 and TW-CR68 had concentrations above the most stringent NJDEP GQC

A review of the polychlorinated biphenyls (PCB) and pesticide analytical results for the TGWSP's indicated none of the samples had concentrations above the most stringent NJDEP GQC

A review of the cyanide analytical results for the TGWSP's indicated none of the samples had concentrations above the most stringent NJDEP GQC

A review of the phenol analytical results for the TGWSP's indicated none of the samples had concentrations above the most stringent NJDEP GQC

5.2.2 Surface Water Laboratory Results

A review of the VO+15 (mg/kg) analytical results for the surface water samples indicated that none of the samples had concentrations that exceeded the most stringent NJDEP SWQS.

A review of the BN+15 analytical results for the surface water samples revealed that SW-1, SW-2, SW-CR24, Tub-W and Tub-2 had concentrations above the most stringent NJDEP SWQS.

A review of the Priority Pollutant Metals (PPM) analytical results for the surface water samples revealed that SW-1, SW-2, SW-4, SW-CR24, Tub-W and Tub-2 had concentrations above the most stringent NJDEP SWQS.

A review of the polychlorinated biphenyls (PCB) and pesticide analytical results for the surface water samples revealed that SW-1 and SW-CR24 had concentrations above the most stringent NJDEP SWQS.

A review of the cyanide analytical results for the surface water samples indicated none of the samples had concentrations above the most stringent NJDEP SWQS.

A review of the phenol analytical results for the surface water samples indicated none of the samples had concentrations above the most stringent NJDEP SWQS.

6.0 CERTIFICATION FORM

The Certification Form required pursuant to the NJDEP Technical Requirements for Site Remediation (N.J.A.C. 7:26E) is presented as Appendix 3.

7.0 BASELINE ECOLOGICAL ASSESSMENT

An Environmental Assessment (EA) is being completed for the project pursuant to the National Environmental Policy Act (NEPA, Public Law 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4(b), Sept. 13, 1982).

This EA will be a substitute for a BEE, and will be forwarded upon completion should it be requested by the NJDEP.

8.0 SUMMARY OF FINDINGS

Based on the information obtained during the limited site investigation and a review of the laboratory analytical results, we have determined the following:

8.1 Soil and Sediment Investigation

1. A total of thirty-two (32) soil borings were advanced to investigate the potential for subsurface contaminants on the Site.
2. One (1) soil sample was collected from the each soil boring location with the exception of the river borings, where two (2) soil samples were collected; one (1) sediment sample, and one (1) at the natural interface. All samples were analyzed for TPH and PP+40.
3. The soil sampling analytical results indicated contaminant concentrations in excess of the most stringent NJDEP SCC and SSG were contained in ten (10) soil samples: CR-10, CR-33A, A5-1A, A5-1B, A7-3A, A7-3B, A7-5A, A7-5B, E-2 and E-3.

8.2 Groundwater Investigation

The NJDEP approved sampling methodology (TGWSP) utilized to collect the groundwater sample is acknowledged as a screening tool to determine the presence/absence of potential groundwater contamination. This sampling methodology characteristically provides turbid samples, and is recognized to potentially provide biased (high) sample results, particularly for the metals.

1. A total of eight (8) TGWSP were installed in selected borings to investigate the potential for groundwater contamination on the subject Site.
2. The groundwater samples were analyzed for PP+40.
3. The groundwater sampling analytical results indicated contaminant concentrations of BN+15 and PPM in excess of the most stringent NJDEP GQC in four (4) groundwater samples: TW-1, TW-CR1, TW-CR68 and TW-A5-4.

8.3 Surface Water Investigation

1. A total of six (6) surface water samples were collected to investigate the potential for contamination along the potential alignments.
2. The surface water samples were analyzed for PP+40.
3. The surface water sampling analytical results indicated contaminant concentrations in excess of the most stringent NJDEP SWQS were contained in all six (6) samples collected: SW-1, SW-2, SW-4, SW-CR24, Tub-W and Tub-2.

9.0 CONCLUSION AND RECOMMENDATIONS:

The recommendations are herein divided into three (3) broad sections. These sections include the area north of the Rahway River; the Rahway River itself including sediment and soil samples; and the area south of the Rahway River. They are divided in this manner to reflect topographic sections of the project area, and because of the Deed Notice on the Cyanamid Property located on the south side of the river.

9.1 Soil and Sediment Recommendations

9.1.1 North of the Rahway River

There were no environmental impacts to the soil or sediment on this portion of the project.

9.1.2 Rahway River

The nature of the soil contaminants identified from the property includes Base Neutrals (CR-33, A5-1, A7-3 and A7-5), Pesticides and PCB's (CR-33 and A7-3), and Metals (CR-33, A5-1, A7-3 and A7-5).

The soil sample results concentrations for the soil/sediment contaminants in the soil borings exceed applicable NJDEP criteria, above both the Soil Cleanup Criteria (SCC), and the Sediment Screening Guidelines (SSG). The soil sample interval and the site specific development suggest that the contaminant concentrations may not be a result of regional historic fill, but may be a result of recent human influence (i.e. boat traffic).

During the proposed roadway construction, it is recommended that these isolated locations be remediated and the soil/sediment be managed and disposed at an off site location in accordance with applicable federal, state, and local requirements; and/or, a soil reuse plan be submitted to the NJDEP for use of the soil/sediment within the construction footprint. Note that said remedial activities and/or soil reuse may require permits from federal and/or state agencies; and will be implemented only for the disturbed area of the proposed roadway construction. Furthermore

interaction and/or advanced approval of the proposed on site operations will be required from the NJDEP case manager, and all on site activities will be required to be performed in accordance with applicable OSHA requirements.

9.1.3 South of the Rahway River

The nature of the soil contaminants identified from the property includes Base Neutrals (CR-10 and E-3) and Metals (E-2).

The soil sample results concentrations for the soil contaminants in soil borings exceed applicable NJDEP criteria, above both the Residential Direct Contact Soil Cleanup Criteria, and the Non-Residential Direct Contact Soil Cleanup Criteria. A Deed Notice and Engineering Controls (e.g. cap) already exists for the Cyanamid property, therefore supplemental ***active delineation and/or remediation is not recommended.***

To address the identified soil contamination on site, *Engineering (e.g. cap) and Administrative controls (e.g. Deed Notice) are recommended.* In detail the physical construction of the roadway, and surrounding improvements already planned as part of the roadway construction would serve as the Engineering Control, while a property specific Deed Notice will be established to reflect the effected roadway area. Greater detail regarding the proposed Engineering (e.g. cap) and Administrative controls (e.g. Deed Notice) activities would be provided in a project based RAW.

Note that said remedial activities may require permits from federal and/or state agencies; and will be implemented only for the disturbed area of the proposed roadway construction. Furthermore interaction and/or advanced approval of the proposed on site operations will be required from the NJDEP case manager, and all on site activities will be required to be performed in accordance with applicable OSHA requirements.

9.2 GROUNDWATER AND SURFACE WATER

9.2.1 Groundwater Recommendations

The purpose of the groundwater sampling and assessment were to provide generalized characterization of the shallow groundwater conditions within the project area, and to determine the potential effects to proposed construction activities. To that end, the recommendations contained wherein will provide a generalized characterization of the groundwater. The actual management of the groundwater during construction will be predicated upon the actual construction activity, its contact with the groundwater, as well as, the potential volume of water that will require management.

The project Remedial Action Workplan (RAW) will describe to the NJDEP the proposed methods for managing the groundwater. This should be provided to the NJDEP prior to roadway construction for their review and approval. As part of the RAW health and safety, on site engineering oversight, groundwater management/disposal, and soil disposition/reuse/off site disposal will be identified/addressed pursuant to the N.J.A.C. TRSR. Inclusive therein will be the required permits (e.g. federal, state, and local) for the disposal/reuse of the water, and the proposed management/treatment operations for the impacted water. Additionally, if construction dewatering activities are required as part of the proposed construction, Said activities may require permits from federal and/or state agencies. Furthermore interaction and/or advanced approval of the proposed on site operations will be required from the NJDEP case

manager, and all on site activities will be required to be performed in accordance with applicable OSHA requirements.

The nature of the groundwater contaminants identified from the Temporary Groundwater Sampling Points (TGWSP) for this section of the project includes Metals (TW-1 and TW-CR68) exceeding the applicable NJDEP Groundwater Quality Criteria (GQC).

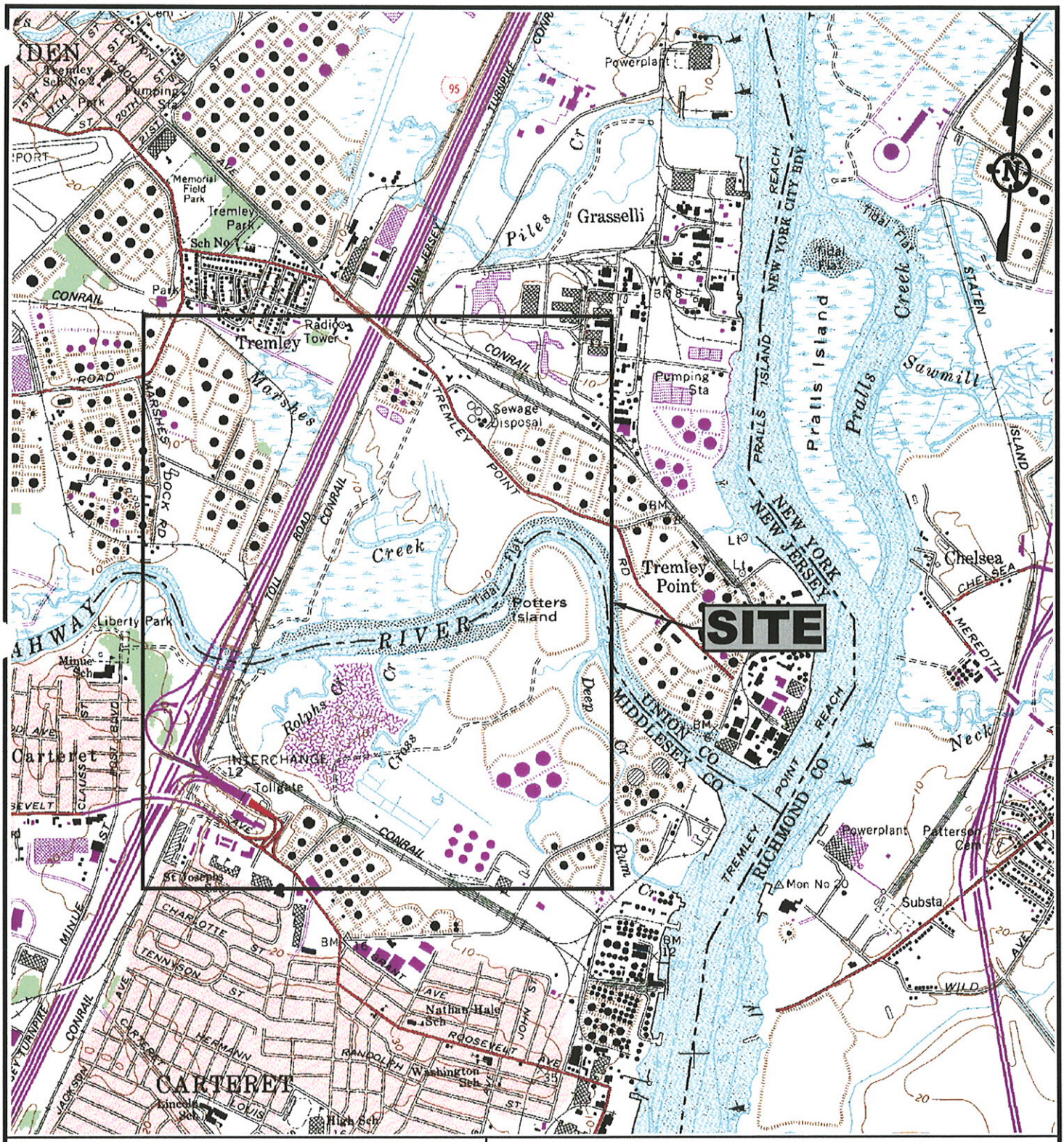
The selected NJDEP approved sampling methodology utilized to collect the groundwater samples (TGWSP), is acknowledged as a screening tool to determine the presence/absence of potential groundwater contamination. This sampling methodology characteristically provides turbid samples, and is recognized to potentially provide biased (high) sample results, particularly for the metals.
In this case to address/confirm the potential groundwater contamination on site, installation of a singular (1) groundwater monitoring well at each identified location(s), and the collection of a single (1) round of groundwater sampling for Metals is recommended. The monitoring well should be installed in accordance with N.J.A.C. Section 7:9D; and the single groundwater sample collected from each well should include a Totals Metals analysis and a Filtered/Dissolved Metals analysis.

The laboratory results of the singular groundwater sample from each well will confirm the character and quality of the shallow aquifer underlying the property. Based on the results of this limited assessment, additional recommendations can be forwarded, both for the environmental and construction applications of the project.

9.2.2 Surface Water

The surface water samples collected at the site was not a part of the original remediation plans, but, were sampled because the drillers were using it as part of their drilling operations, and a methos of quality assurance. During the project the drillers were able to obtain a permit from the NJDEP to use the river water at which time we stopped collecting surface samples.

The analytical results of the surface water does not have a direct impact to the project because of the tidal nature of the area and the contaminants may change day to day due to boat traffic, and rainfall. This data is included so as the road contractor may take this information into consideration during the construction phase, and for project supporting information for the NJDEP. No additional investigative and/or remedial actions are recommended.



USGS SITE LOCATION MAP

SOURCE:
U.S.G.S. TOPOGRAPHIC MAP
AUTHUR KILL, N.Y.-N.J. QUADRANGLE
1966 (PHOTO REVISED 1981)
CONTOUR INTERVAL: 10 FEET

TREMLEY POINT ROAD CONNECTOR PROJECT
INTERCHANGE 12 / TREMLEY POINT
CARTERET, NEW JERSEY

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS
65 Jackson Drive, Cranford, New Jersey 07016
(908) 497-8900* Fax: (908) 497-9134 * www.PMKgroup.com
CERTIFICATE OF AUTHORIZATION #GA277039

DRAWN BY: JF	DATE: 7-21-06
CHECKED BY: TB	SCALE: 1"=2,000'
PROJECT NO: 046108-05	PLATE NO. 1

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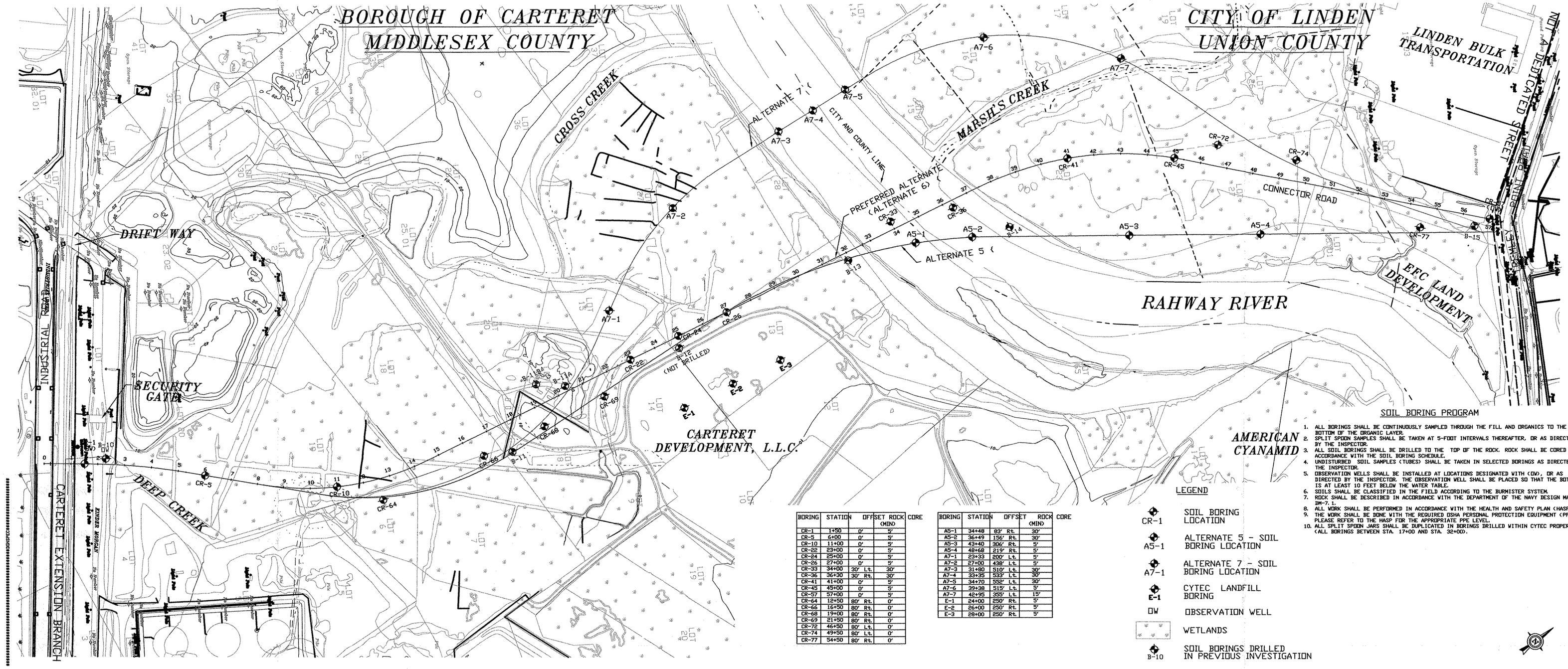

BORING	STATION	OFFSET	ROCK (MIN)	CORE
CR-1	1+50	0'		5'
CR-5	6+00	0'		5'
CR-10	11+00	0'		5'
CR-22	23+00	0'		5'
CR-24	25+00	0'		5'
CR-26	27+00	0'		5'
CR-33	34+00	30' Lt.		30'
CR-36	36+30	30' Rt.		30'
CR-41	41+00	0'		5'
CR-45	45+00	0'		5'
CR-57	57+00	0'		5'
CR-64	12+50	80' Rt.		0'
CR-66	16+50	80' Rt.		0'
CR-68	19+00	80' Rt.		0'
CR-69	21+50	80' Rt.		0'
CR-72	46+50	80' Lt.		0'
CR-74	49+50	80' Lt.		0'
CR-77	54+50	80' Rt.		0'

BORING	STATION	OFFSET	ROCK (MIN)	CORE
A5-1	34+48	83' Rt.		30'
A5-2	36+49	156' Rt.		30'
A5-3	43+40	306' Rt.		5'
A5-4	48+68	219' Rt.		5'
A7-1	23+33	200' Lt.		5'
A7-2	27+00	439' Lt.		5'
A7-3	31+80	510' Lt.		30'
A7-4	33+35	535' Lt.		30'
A7-5	34+70	552' Lt.		30'
A7-6	39+38	515' Lt.		5'
A7-7	42+95	355' Lt.		15'
E-1	24+00	250' Rt.		5'
E-2	26+00	250' Rt.		5'
E-3	28+00	250' Rt.		5'

LEGEND

CR-1	SOIL BORING LOCATION
A5-1	ALTERNATE 5 - SOIL BORING LOCATION
A7-1	ALTERNATE 7 - SOIL BORING LOCATION
E-1	CYTEC LANDFILL BORING
OW	OBSERVATION WELL
	WETLANDS
B-10	SOIL BORINGS DRILLED IN PREVIOUS INVESTIGATION

SOIL BORING PROGRAM

1. ALL BORINGS SHALL BE CONTINUOUSLY SAMPLED THROUGH THE FILL AND ORGANICS TO THE BOTTOM OF THE ORGANIC LAYER.
2. SPLIT SPOON SAMPLES SHALL BE TAKEN AT 5-FOOT INTERVALS THEREAFTER, OR AS DIRECTED BY THE INSPECTOR.
3. ALL SOIL BORINGS SHALL BE DRILLED TO THE TOP OF THE ROCK. ROCK SHALL BE CORED IN ACCORDANCE WITH THE SOIL BORING SCHEDULE.
4. UNDISTURBED SOIL SAMPLES (TUBES) SHALL BE TAKEN IN SELECTED BORINGS AS DIRECTED BY THE INSPECTOR.
5. OBSERVATION WELLS SHALL BE INSTALLED AT LOCATIONS DESIGNATED WITH (OW), OR AS DIRECTED BY THE INSPECTOR. THE OBSERVATION WELL SHALL BE PLACED SO THAT THE BOTTOM IS AT LEAST 10 FEET BELOW THE WATER TABLE.
6. SOILS SHALL BE CLASSIFIED IN THE FIELD ACCORDING TO THE BURMISTER SYSTEM.
7. ROCK SHALL BE DESCRIBED IN ACCORDANCE WITH THE DEPARTMENT OF THE NAVY DESIGN MANUAL, DM-7.1.
8. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HEALTH AND SAFETY PLAN (HASP).
9. THE WORK SHALL BE DONE WITH THE REQUIRED OSHA PERSONAL PROTECTION EQUIPMENT (PPE). PLEASE REFER TO THE HASP FOR THE APPROPRIATE PPE LEVEL.
10. ALL SPLIT SPOON JARS SHALL BE DUPLICATED IN BORINGS DRILLED WITHIN CYTEC PROPERTY. (ALL BORINGS BETWEEN STA. 17+00 AND STA. 32+00).

GRAPHIC SCALE

200 100 0 200 400

1 INCH =200 FEET

DATE	BY	REVISION

TREMLEY POINT ROAD CONNECTOR PROJECT
INTERCHANGE 12 / TREMLEY POINT
CARTERET, NEW JERSEY

SITE PLAN

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS
65 Jackson Drive, PO Box 5000, Cranford, NJ 07016
(908) 497-8900 Fax (908) 497-9134 www.PMKGroup.com
CERTIFICATE OF AUTHORIZATION #GA277039

DESIGNED BY	DATE PREPARED
	3-14-06
DRAWN BY	SCALE
JF	1"=200'
CHECKED BY	PROJECT NO.
RB	046108-05

PROFESSIONAL ENGINEER

N.J.P.E. LIC. NO.

PLATE NUMBER 2

SIGNATURE NOT VALID WITHOUT RAISED SEAL OF P.E.

DATE

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TREMLEY POINT ROAD CONNECTOR PROJECT
INTERCHANGE 12 / TREMLEY POINT
CARTERET, NEW JERSEY

NJGS HISTORIC FILL MAP
ARTHUR KILL QUADRANGLES

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS
65 Jackson Drive, Cranford, New Jersey 07016
(908) 497-8900* Fax: (908) 497-9134 * www.PMKgroup.com
CERTIFICATE OF AUTHORIZATION #GA277039

DRAWN BY: JF	DATE: 7-21-06
CHECKED BY: TB	SCALE: N.T.S.
PROJECT NO: 046108-05	PLATE NO. 3

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TREMLEY POINT ROAD CONNECTOR PROJECT	NJDEP-iMAP WETLANDS LOCATION MAP
INTERCHANGE 12 / TREMLEY POINT CARTERET, NEW JERSEY	PMK Group CONSULTING & ENVIRONMENTAL ENGINEERS 65 Jackson Drive, Cranford, New Jersey 07016 (908) 497-8900* Fax: (908) 497-9134 * www.PMKgroup.com CERTIFICATE OF AUTHORIZATION #GA277039

DRAWN BY:	JF	DATE:	7-21-06
CHECKED BY:	TB	SCALE:	1"=2,000'
PROJECT NO:	046108-05	PLATE NO.	4

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L:\USGSmaps\USGSmap52

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE 1
SAMPLING RESULTS
TREMLEY POINT ROAD CONNECTOR PROJECT OPS 2052
INTERCHANGE 12 - TREMLEY POINT
CARTERET, NEW JERSEY
PMK GROUP #046108-05
UPDATED FEBRUARY 9, 2006

SAMPLING PROGRAM	PMK SAMPLE #	ALIGNMENT	SAMPLE DATE	DEPTH (FT.)	MATRIX	PARAMETERS	SAMPLING METHOD
SOIL SAMPLING PROGRAM							
	CR-1	CR	12/27/2005	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-5	CR	1/9/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-10	CR	1/6/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-22	CR	11/21/2005	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-24	CR	11/16/2005	**	SOIL/GW	TPH and PP+40	Mud Rotary/Split Spoon
	CR-26	CR	11/21/2005	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-33	CR	12/21/2005	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	CR-36	CR	12/30/2005	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	CR-41	CR	1/26/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-45	CR	1/25/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-57	CR	1/17/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-64	CR	1/6/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-66	CR	11/16/2005	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-68	CR	11/11/2005	**	SOIL/GW	TPH and PP+40	Mud Rotary/Split Spoon
	CR-69	CR	Installed - no sample	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-72	CR	1/20/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-74	CR	1/19/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	CR-77	CR	1/13/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	A5-1A	A5	12/23/2005		SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A5-1B	A5	12/23/2005		SEDIMENT	TPH and PP+41	Mud Rotary/Split Spoon
	A5-2A	A5	12/19/2005	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A5-2B	A5	12/19/2005	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A5-3	A5	1/25/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	A5-4	A5	1/20/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	A7-1	A7	1/11/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	A7-2	A7	1/12/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	A7-3A	A7	1/6/2006	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A7-3B	A7	1/6/2006	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A7-4A	A7	1/10/2006	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A7-4B	A7	1/10/2006	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A7-5A	A7	1/4/2006	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A7-5B	A7	1/4/2006	**	SEDIMENT	TPH and PP+40	Mud Rotary/Split Spoon
	A7-6	A7	1/30/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	A7-7	A7	1/27/2006	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	E-1	--	11/10/2005	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon
	E-2	--	11/8/2005	**	SOIL/GW	TPH and PP+40	Mud Rotary/Split Spoon
	E-3	--	11/8/2005	**	SOIL	TPH and PP+40	Mud Rotary/Split Spoon

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE 1
SAMPLING RESULTS
TREMLEY POINT ROAD CONNECTOR PROJECT OPS 2052
INTERCHANGE 12 - TREMLEY POINT
CARTERET, NEW JERSEY
PMK GROUP #046108-05
UPDATED FEBRUARY 9, 2006

SAMPLING PROGRAM	PMK SAMPLE #	ALIGNMENT	SAMPLE DATE	DEPTH (FT.)	MATRIX	PARAMETERS	SAMPLING METHOD
SOIL SAMPLING PROGRAM							
GROUNDWATER SAMPLING PROGRAM							
	TW-1 (E-2)	--	11/8/2005	Shallow Aquife	Groundwater	TPH and PP+40	Temporary Groundwater Sampling Point
	SW-CR24	CR	11/17/2005	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
	TW-CR68	CR	11/17/2005	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
	A5-3	A5	1/26/2006	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
	CR-41	CR	1/30/2006	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
	A7-6	A7	1/31/2006	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
	CR-72	CR	1/25/2006	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
	A5-4	A5	1/24/2005	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
	CR-57	CR	1/20/2006	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
	CR-1	CR	2/9/2006	Shallow Aquife	Groundwater	PP+40	Temporary Groundwater Sampling Point
SURFACE WATER SAMPLING PROGRAM							
	SW-1 (E-3)	--	11/9/2005		Surface Water	PP+40	Bailer
	SW-2 (CR-68)	CR	11/14/2005		Surface Water	PP+40	Bailer
	SW-4 (CR-26)	CR	11/17/2006		Surface Water	PP+40	Bailer
	Tub-W (A5-4)	A5	1/20/2006		Surface Water	PP+40	Bailer
	TUB-2 (A7-6)	A7	1/31/2006		Surface Water	PP+40	Bailer
TEST BLANKS							
	TB		11/8/2005			VO+10	
	TB		11/9/2005			VO+10	
	TB		11/10/2005			VO+10	
	TB		11/15/2005			VO+10	
	TB		11/16/2005			VO+10	
	TB		12/21/2005			VO+10	
	TB		1/4/2006			VO+10	
	TB		1/11/2006			VO+10	
	TB		1/13/2006			VO+10	
	TB		1/17/2006			VO+10	
	TB		1/25/2006			VO+10	
	TB		1/26/2006			VO+10	
	TB		2/9/2006			VO+10	
FIELD BLANKS							
	FB		11/15/2005			PP+40	
	FB		1/20/2006			PP+40	
	FB		1/24/2006			PP+40	
	FB		1/25/2006			PP+40	
	FB		1/26/2006			PP+40	
	FB		1/30/2006			PP+40	
	FB		1/31/2006			PP+40	
	FB		2/9/2006			PP+40	

LEGEND:
Bolded and Italicized sample ID's indicate Phase I, non-bolded text indicates Phase II
PP+40 - Priority pollutants plus a forward library search
TPH - Total Petroleum Hydrocarbons
** - One or two (1-2) soil sample(s) will be collected from each boring, at an interval containing fill material, transition zones between stratigraphic soil profiles, at intervals coincident with field screening observations, or 0-6" above the total depth of the boring or the groundwater interface; in concert with the NJDEP Field Sampling Procedures Manual (August, 2005), and the NJDEP Field Analysis Manual (July, 1994).

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TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-3	A5-4	A7-2	A7-3B	A7-4B	A7-5B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21273-1	J20915-2	J20245-1	J19821-4	J20031-2	J19641-2			
Date Collected		1/25/2006	1/20/2006	1/12/2006	1/6/2006	1/11/2006	1/4/2006			
Sampling Depth (ft.)		6.0-8.0	4.0-6.0	4.0-6.0	6.0-8.0	8.0-10.0	4.0-6.0			
Volatile Organic Compounds (VOC), mg/kg										
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	210	1000 (d)	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	34	70 (k)	1
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	22	420	1
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	570	1000 (d)	10
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	8	150	10
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	6	24	1
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	10	43	(r)
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	--	--	--
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	--	--	--
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	1	5	1
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	3	13	1
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	86	370	1
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	--	--	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	2 (k)	4 (k)	1
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	37	680	1

Legend:
- mg/kg: milligrams per kilogram
- SCC: NJDEP Soil Cleanup Criteria
- NA: Not Available
- ND: Not Detected above Laboratory Reported Detection Limits
- TVOC: Targeted Volatile Organic Compounds
- TIVOC: Tentatively Identified Volatile Organic Compounds
- 10: Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-3	A5-4	A7-2	A7-3B	A7-4B	A7-5B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21273-1	J20915-2	J20245-1	J19821-4	J20031-2	J19641-2			
Date Collected		1/25/2006	1/20/2006	1/12/2006	1/6/2006	1/11/2006	1/4/2006			
Sampling Depth (ft.)		6.0-8.0	4.0-6.0	4.0-6.0	6.0-8.0	8.0-10.0	4.0-6.0			
Volatile Organic Compounds (VOC), mg/kg										
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	--	--	--
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	19 (k)	28 (k)	1
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	520	1000 (d)	10
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	--	--	--
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	110	1000 (d)	1
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	ND	ND	ND	ND	ND	--	--	--
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	49	210	1
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	23	97	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	--	--	--
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	4 (k)	6 (k)	1
Toluene	108-88-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	500
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Trichloroethene	79-01-6	ND	ND	ND	ND	ND	ND	23	54 (k)	1
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	2	7	10
Xylenes (Total)	1330-20-7	ND	ND	ND	ND	ND	ND	410	1000 (d)	67 (s)
TVOC	--	0	0	0	0	0	0	1000	1000	--
TIVOC	--	3.8	0	0	50.9	0	0	1000	1000	

Legend:
- mg/kg: milligrams per kilogram
- SCC: NJDEP Soil Cleanup Criteria
- NA: Not Available
- ND: Not Detected above Laboratory Reported Detection Limits
- TVOC: Targeted Volatile Organic Compounds
- TIVOC: Tentatively Identified Volatile Organic Compounds
- 0: Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A7-6	A7-7	CR-1	CR-5	CR-10	CR-22	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21545-1	J21438-1	J19386-1	J19945-1	J19821-2	J16093-2			
Date Collected		1/30/2006	1/27/2006	12/27/2005	1/9/2006	1/6/2006	11/18/2005			
Sampling Depth (ft.)		20.0-22.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	8.0-10.0			
Volatile Organic Compounds (VOC), mg/kg										
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	210	1000 (d)	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	34	70 (k)	1
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	22	420	1
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	570	1000 (d)	10
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	8	150	10
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	6	24	1
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	10	43	(r)
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	--	--	--
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	--	--	--
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	1	5	1
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	3	13	1
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	86	370	1
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	--	--	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	2 (k)	4 (k)	1
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	37	680	1

Legend:
- mg/kg: milligrams per kilogram
- SCC: NJDEP Soil Cleanup Criteria
- NA: Not Available
- ND: Not Detected above Laboratory Reported Detection Limits
- TVOC: Targeted Volatile Organic Compounds
- TIVOC: Tentatively Identified Volatile Organic Compounds
- 10: Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A7-6	A7-7	CR-1	CR-5	CR-10	CR-22	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21545-1	J21438-1	J19386-1	J19945-1	J19821-2	J16093-2			
Date Collected		1/30/2006	1/27/2006	12/27/2005	1/9/2006	1/6/2006	11/18/2005			
Sampling Depth (ft.)		20.0-22.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	8.0-10.0			
Volatile Organic Compounds (VOC), mg/kg										
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	--	--	--
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	19 (k)	28 (k)	1
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	520	1000 (d)	10
cis-1,2-Dichloroethene	156-59-2	ND	ND	1.31	ND	ND	ND	79	1000 (d)	1
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	--	--	--
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	110	1000 (d)	1
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	ND	ND	ND	ND	ND	--	--	--
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	49	210	1
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	23	97	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	--	--	--
Tetrachloroethene	127-18-4	ND	ND	0.109J	ND	ND	ND	4 (k)	6 (k)	1
Toluene	108-88-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	500
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Trichloroethene	79-01-6	ND	ND	0.0851J	ND	ND	ND	23	54 (k)	1
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	2	7	10
Xylenes (Total)	1330-20-7	ND	ND	ND	ND	ND	ND	410	1000 (d)	67 (s)
TVOC	--	0	0	1.5041	0	0	0	1000	1000	--
TIVOC	--	0	0	0	0	0	0	1000	1000	

Legend:
- mg/kg: milligrams per kilogram
- SCC: NJDEP Soil Cleanup Criteria
- NA: Not Available
- ND: Not Detected above Laboratory Reported Detection Limits
- TVOC: Targeted Volatile Organic Compounds
- TIVOC: Tentatively Identified Volatile Organic Compounds
- 10: Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-24	CR-26	CR-33B	CR-41	CR-45	CR-57	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15874-2	J16093-3	J18881-2	J21331-1	J21273-2	J20598-1			
Date Collected		11/16/2005	11/18/2005	12/21/2005	1/26/2006	1/25/2006	1/17/2006			
Sampling Depth (ft.)		4.0-6.0	2.0-4.0	4.0-6.0	4.0-6.0	4.0-6.0	2.0-4.0			
Volatile Organic Compounds (VOC), mg/kg										
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	210	1000 (d)	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	34	70 (k)	1
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	22	420	1
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	570	1000 (d)	10
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	8	150	10
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	6	24	1
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	10	43	(r)
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	--	--	--
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	--	--	--
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	1	5	1
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	3	13	1
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	86	370	1
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	--	--	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	2 (k)	4 (k)	1
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	37	680	1

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-24	CR-26	CR-33B	CR-41	CR-45	CR-57	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15874-2	J16093-3	J18881-2	J21331-1	J21273-2	J20598-1			
Date Collected		11/16/2005	11/18/2005	12/21/2005	1/26/2006	1/25/2006	1/17/2006			
Sampling Depth (ft.)		4.0-6.0	2.0-4.0	4.0-6.0	4.0-6.0	4.0-6.0	2.0-4.0			
Volatile Organic Compounds (VOC), mg/kg										
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	--	--	--
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	19 (k)	28 (k)	1
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	520	1000 (d)	10
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	--	--	--
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	110	1000 (d)	1
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	ND	ND	ND	ND	ND	--	--	--
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	49	210	1
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	23	97	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	--	--	--
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	4 (k)	6 (k)	1
Toluene	108-88-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	500
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Trichloroethene	79-01-6	ND	ND	ND	ND	ND	ND	23	54 (k)	1
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	2	7	10
Xylenes (Total)	1330-20-7	ND	ND	ND	ND	ND	ND	410	1000 (d)	67 (s)
TVOC	--	0	0	0	0	0	0	1000	1000	--
TIVOC	--	0	0	0	0.61	0	0	1000	1000	

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10: Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-64	CR-66	CR-68	CR-72	CR-74	CR-77	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J19821-1	J15874-1	J15471-1	J20915-3	J20915-1	J20383-1			
Date Collected		1/6/2006	11/16/2005	11/11/2005	1/20/2006	1/19/2006	1/13/2006			
Sampling Depth (ft.)		4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	4.0-6.0	4.0-6.0			
Volatile Organic Compounds (VOC), mg/kg										
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	210	1000 (d)	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	34	70 (k)	1
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	22	420	1
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	570	1000 (d)	10
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	8	150	10
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	6	24	1
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	10	43	(r)
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	--	--	--
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	--	--	--
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	1	5	1
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	3	13	1
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	86	370	1
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	--	--	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	2 (k)	4 (k)	1
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	37	680	1

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-64	CR-66	CR-68	CR-72	CR-74	CR-77	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J19821-1	J15874-1	J15471-1	J20915-3	J20915-1	J20383-1			
Date Collected		1/6/2006	11/16/2005	11/11/2005	1/20/2006	1/19/2006	1/13/2006			
Sampling Depth (ft.)		4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	4.0-6.0	4.0-6.0			
Volatile Organic Compounds (VOC), mg/kg										
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	--	--	--
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	19 (k)	28 (k)	1
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	520	1000 (d)	10
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	--	--	--
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	110	1000 (d)	1
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	ND	ND	ND	ND	ND	--	--	--
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	49	210	1
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	23	97	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	--	--	--
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	4 (k)	6 (k)	1
Toluene	108-88-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	500
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Trichloroethene	79-01-6	ND	ND	ND	ND	ND	ND	23	54 (k)	1
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	2	7	10
Xylenes (Total)	1330-20-7	ND	ND	ND	ND	ND	ND	410	1000 (d)	67 (s)
TVOC	--	0	0	0	0	0	0	1000	1000	--
TIVOC	--	0	0	0	0	0	0	1000	1000	

Legend:
- mg/kg: milligrams per kilogram
- SCC: NJDEP Soil Cleanup Criteria
- NA: Not Available
- ND: Not Detected above Laboratory Reported Detection Limits
- TVOC: Targeted Volatile Organic Compounds
- TIVOC: Tentatively Identified Volatile Organic Compounds
- 10: Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-3	A5-4	A7-2	A7-3B	A7-4B	A7-5B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21273-1	J20915-2	J20245-1	J19821-4	J20031-2	J19641-2			
Date Collected		1/25/2006	1/20/2006	1/12/2006	1/6/2006	1/11/2006	1/4/2006			
Sampling Depth (ft.)		6.0-8.0	4.0-6.0	4.0-6.0	6.0-8.0	8.0-10.0	4.0-6.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	ND	ND	ND	68	1200	100
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	100
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	ND	ND	ND	5600	10000 (c)	50
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	ND	ND	ND	62	270	10
2,4-Dichlorophenol	120-83-2	ND	ND	ND	ND	ND	ND	170	3100	10
2,4-Dimethylphenol	105-67-9	ND	ND	ND	ND	ND	ND	1100	10000 (c)	10
2,4-Dinitrophenol	51-28-5	ND	ND	ND	ND	ND	ND	110	2100	10
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	ND	ND	ND	--	--	--
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	ND	ND	ND	--	--	--
2-Chloronapthalene	91-58-7	ND	ND	ND	ND	ND	ND	--	--	--
2-Chlorophenol	95-57-8	ND	ND	ND	ND	ND	ND	280	5100	10
2-Methylnaphthalene	91-57-6	ND	ND	ND	ND	ND	ND	--	--	--
2-Methylphenol	95-48-7	ND	ND	ND	ND	ND	ND	2800	10000 (c)	(r)
2-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--	--
2-Nitrophenol	88-75-5	ND	ND	ND	ND	ND	ND	--	--	--
3&4-Methylphenol	--	ND	ND	ND	ND	ND	ND	--	--	--
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	2	6	100
3-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--	--
4,6-Dinitro-2-methylphenol	--	ND	ND	ND	ND	ND	ND	--	--	--
4-Bromophenyl-phenylether	--	ND	ND	ND	ND	ND	ND	--	--	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	100
4-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	230	4200	(r)

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-3	A5-4	A7-2	A7-3B	A7-4B	A7-5B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21273-1	J20915-2	J20245-1	J19821-4	J20031-2	J19641-2			
Date Collected		1/25/2006	1/20/2006	1/12/2006	1/6/2006	1/11/2006	1/4/2006			
Sampling Depth (ft.)		6.0-8.0	4.0-6.0	4.0-6.0	6.0-8.0	8.0-10.0	4.0-6.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
4-Chlorophenyl-phenylether	7005-72-3	ND	ND	ND	ND	ND	ND	--	--	--
4-Nitroaniline	10061-02-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Nitrophenol	100-02-7	ND	ND	ND	ND	ND	ND	--	--	--
Acenaphthene	83-32-9	ND	ND	ND	0.301J	ND	ND	3400	10000 (c)	100
Acenaphthylene	71-55-6	ND	ND	ND	0.287J	ND	ND	--	--	--
Anthracene	120-12-7	ND	ND	ND	0.541J	ND	ND	10000 (c)	10000 (c)	100
Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	--	--	--
Benzo(a)anthracene	56-55-3	ND	ND	ND	1.04	ND	0.0344J	0.9	4	500
Benzo(a)pyrene	50-32-8	ND	ND	ND	0.865	ND	ND	0.66 (f)	0.66 (f)	100
Benzo(b)fluoranthene	205-99-2	ND	ND	ND	0.908	ND	ND	0.9	4	50
Benzo(g,h,i)perylene	191-24-2	ND	ND	ND	ND	ND	ND	--	--	--
Benzo(k)fluoranthene	207-08-9	ND	ND	ND	0.1	ND	ND	0.9	4	500
Benzoic Acid	65-85-0	ND	ND	ND	ND	ND	ND	--	--	--
Benzyl Alcohol	100-51-6	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	10000 (c)
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND	ND	ND	ND			
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	ND	ND	ND	0.66 (f)	3	10
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	ND	ND	ND	2300	10000 (c)	10
bis-(2-Ethylhexyl)phthalate	117-81-7	ND	0.0777J	0.362	92.3	ND	0.0713J	49	210	100
Butylbenzylphthalate	85-68-7	ND	ND	ND	ND	ND	ND	1100	10000 (c)	100
Carbazole	--	ND	ND	ND	ND	ND	ND	--	--	--
Chrysene	218-01-9	ND	ND	ND	1.59	ND	0.0429J	9	40	500
Di-n-butylphthalate	84-74-2	ND	ND	ND	ND	ND	ND	5700	10000 (c)	100
Di-n-octylphthalate	75-65-0	ND	ND	ND	ND	ND	ND	1100	10000 (c)	100
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	ND	ND	0.66 (f)	0.66 (f)	100

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-3	A5-4	A7-2	A7-3B	A7-4B	A7-5B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21273-1	J20915-2	J20245-1	J19821-4	J20031-2	J19641-2			
Date Collected		1/25/2006	1/20/2006	1/12/2006	1/6/2006	1/11/2006	1/4/2006			
Sampling Depth (ft.)		6.0-8.0	4.0-6.0	4.0-6.0	6.0-8.0	8.0-10.0	4.0-6.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
Dibenzofuran	132-64-9	ND	ND	ND	ND	ND	ND	--	--	--
Diethylphthalate	84-66-2	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	50
Dimethylphthalate	131-11-3	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	50
Fluoranthene	206-44-0	ND	ND	ND	2.65	ND	0.0862J	2300	10000 (c)	100
Fluorene	86-73-7	ND	ND	ND	ND	ND	ND	2300	10000 (c)	100
Hexachlorobenzene	118-74-1	ND	ND	ND	ND	ND	ND	0.66 (f)	2	100
Hexochlorobutadiene	87-68-3	ND	ND	ND	ND	ND	ND	1	21	100
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	ND	ND	ND	400	7300	100
Hexachloroethane	67-72-1	ND	ND	ND	ND	ND	ND	6	100	100
Indeno(1,2,3-cd)pyrene	193-39-5	ND	ND	ND	ND	ND	ND	0.9	4	500
Isophorone	78-59-1	ND	ND	ND	ND	ND	ND	1100	10000 (c)	50
N-Nitro-Di-n-propylamine	--	ND	ND	ND	ND	ND	ND	--	--	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	ND	ND	ND	--	--	--
N-Nitrosodiphenylamine	86-30-6	ND	ND	ND	ND	ND	ND	140	600	100
Naphthalene	91-20-3	ND	ND	ND	0.43	ND	ND	230	4200	100
Nitrobenzene	98-95-3	ND	ND	ND	ND	ND	ND	28	520	10
Pentachlorophenol	87-86-5	ND	ND	ND	ND	ND	ND	6	24	100
Phenanthrene	85-01-8	ND	ND	ND	0.906	ND	0.0536J	--	--	--
Pyrene	129-00-0	ND	ND	ND	3.6	ND	0.0796J	1700	10000 (c)	100
Pyridine	--	ND	ND	ND	ND	ND	ND	--	--	--
TSVOC	--	0	0.0777	0.362	104.389	0	0.368	--	--	--
TISVOC	--	4.6	2.9	5.12	213.7	0.45	2.97	--	--	--

Legend:
- mg/kg: milligrams per kilogram
- SCC: NJDEP Soil Cleanup Criteria
- NA: Not Available
- ND: Not Detected above Laboratory Reported Detection Limits
- TSVOC: Targeted Semi-Volatile Organic Compounds
- TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
- 10: Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A7-6	A7-7	CR-1	CR-5	CR-10	CR-22	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21545-1	J21438-1	J19386-1	J19945-1	J19821-2	J16093-2			
Date Collected		1/30/2006	1/27/2006	12/27/2005	1/9/2006	1/6/2006	11/18/2005			
Sampling Depth (ft.)		20.0-22.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	8.0-10.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	ND	ND	ND	68	1200	100
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	100
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	ND	ND	ND	5600	10000 (c)	50
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	ND	ND	ND	62	270	10
2,4-Dichlorophenol	120-83-2	ND	ND	ND	ND	ND	ND	170	3100	10
2,4-Dimethylphenol	105-67-9	ND	ND	ND	ND	ND	ND	1100	10000 (c)	10
2,4-Dinitrophenol	51-28-5	ND	ND	ND	ND	ND	ND	110	2100	10
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	ND	ND	ND	--	--	--
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	ND	ND	ND	--	--	--
2-Chloronapthalene	91-58-7	ND	ND	ND	ND	ND	ND	--	--	--
2-Chlorophenol	95-57-8	ND	ND	ND	ND	ND	ND	280	5100	10
2-Methylnaphthalene	91-57-6	ND	ND	ND	ND	ND	ND	--	--	--
2-Methylphenol	95-48-7	ND	ND	ND	ND	ND	ND	2800	10000 (c)	(r)
2-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--	--
2-Nitrophenol	88-75-5	ND	ND	ND	ND	ND	ND	--	--	--
3&4-Methylphenol	--	ND	ND	ND	ND	ND	ND	--	--	--
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	2	6	100
3-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--	--
4,6-Dinitro-2-methylphenol	--	ND	ND	ND	ND	ND	ND	--	--	--
4-Bromophenyl-phenylether	--	ND	ND	ND	ND	ND	ND	--	--	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	100
4-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	230	4200	(r)

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A7-6	A7-7	CR-1	CR-5	CR-10	CR-22	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21545-1	J21438-1	J19386-1	J19945-1	J19821-2	J16093-2			
Date Collected		1/30/2006	1/27/2006	12/27/2005	1/9/2006	1/6/2006	11/18/2005			
Sampling Depth (ft.)		20.0-22.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	8.0-10.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
4-Chlorophenyl-phenylether	7005-72-3		ND	ND	ND	ND	ND	--	--	--
4-Nitroaniline	10061-02-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Nitrophenol	100-02-7	ND	ND	ND	ND	ND	ND	--	--	--
Acenaphthene	83-32-9	ND	ND	ND	ND	0.298J	ND	3400	10000 (c)	100
Acenaphthylene	71-55-6	ND	ND	ND	ND	1.47	ND	--	--	--
Anthracene	120-12-7	ND	ND	ND	ND	2.24	ND	10000 (c)	10000 (c)	100
Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	--	--	--
Benzo(a)anthracene	56-55-3	ND	ND	ND	ND	6.97	ND	0.9	4	500
Benzo(a)pyrene	50-32-8	ND	ND	ND	ND	8.91	ND	0.66 (f)	0.66 (f)	100
Benzo(b)fluoranthene	205-99-2	ND	ND	ND	ND	6.9	ND	0.9	4	50
Benzo(g,h,i)perylene	191-24-2	ND	ND	ND	ND	2.99	ND	--	--	--
Benzo(k)fluoranthene	207-08-9	ND	ND	ND	ND	12.1	ND	0.9	4	500
Benzoic Acid	65-85-0	ND	ND	ND	ND	ND	ND	--	--	--
Benzyl Alcohol	100-51-6	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	10000 (c)
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND	ND	ND	ND			
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	ND	ND	ND	0.66 (f)	3	10
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	ND	ND	ND	2300	10000 (c)	10
bis-(2-Ethylhexyl)phthalate	117-81-7	ND	0.0809	41.4	ND	ND	0.231	49	210	100
Butylbenzylphthalate	85-68-7	ND	ND	0.14	ND	ND	ND	1100	10000 (c)	100
Carbazole	--	ND	ND	ND	ND	ND	ND	--	--	--
Chrysene	218-01-9	ND	ND	ND	ND	7.39	ND	9	40	500
Di-n-butylphthalate	84-74-2	ND	ND	ND	ND	ND	ND	5700	10000 (c)	100
Di-n-octylphthalate	75-65-0	ND	ND	2.62	ND	ND	ND	1100	10000 (c)	100
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	1.08	ND	0.66 (f)	0.66 (f)	100

Legend:

mg/kg:	milligrams per kilogram	milligrams per kilogram
SCC:	NJDEP Soil Cleanup Criteria	NJDEP Soil Cleanup Criteria
NA:	Not Available	Not Available
ND:	Not Detected above Laboratory Reported Detection Limits	Not Detected above Laboratory Reported Detection Limits
TSVOC:	Targeted Semi-Volatile Organic Compounds	Targeted Semi-Volatile Organic Compounds
TISVOC:	Tentatively Identified Semi-Volatile Organic Compounds	Tentatively Identified Semi-Volatile Organic Compounds
10	Concentration in excess of the most stringent NJDEP SCC	Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A7-6	A7-7	CR-1	CR-5	CR-10	CR-22	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21545-1	J21438-1	J19386-1	J19945-1	J19821-2	J16093-2			
Date Collected		1/30/2006	1/27/2006	12/27/2005	1/9/2006	1/6/2006	11/18/2005			
Sampling Depth (ft.)		20.0-22.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	8.0-10.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
Dibenzofuran	132-64-9	ND	ND	ND	ND	ND	ND	--	--	--
Diethylphthalate	84-66-2	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	50
Dimethylphthalate	131-11-3	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	50
Fluoranthene	206-44-0	ND	ND	ND	ND	12.7	ND	2300	10000 (c)	100
Fluorene	86-73-7	ND	ND	ND	ND	0.819	ND	2300	10000 (c)	100
Hexachlorobenzene	118-74-1	ND	ND	ND	ND	ND	ND	0.66 (f)	2	100
Hexochlorobutadiene	87-68-3	ND	ND	ND	ND	ND	ND	1	21	100
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	ND	ND	ND	400	7300	100
Hexachloroethane	67-72-1	ND	ND	ND	ND	ND	ND	6	100	100
Indeno(1,2,3-cd)pyrene	193-39-5	ND	ND	ND	ND	3	ND	0.9	4	500
Isophorone	78-59-1	ND	ND	ND	ND	ND	ND	1100	10000 (c)	50
N-Nitro-Di-n-propylamine	--	ND	ND	ND	ND	ND	ND	--	--	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	ND	ND	ND	--	--	--
N-Nitrosodiphenylamine	86-30-6	ND	ND	ND	ND	ND	ND	140	600	100
Naphthalene	91-20-3	ND	ND	ND	ND	ND	ND	230	4200	100
Nitrobenzene	98-95-3	ND	ND	ND	ND	ND	ND	28	520	10
Pentachlorophenol	87-86-5	ND	ND	ND	ND	ND	ND	6	24	100
Phenanthrene	85-01-8	ND	ND	ND	ND	6.64	ND	--	--	--
Pyrene	129-00-0	ND	ND	ND	ND	14	ND	1700	10000 (c)	100
Pyridine	--	ND	ND	ND	ND	ND	ND	--	--	--
TSVOC	--	0	0.0809	44.16	0	87.209	0.231	--	--	--
TISVOC	--	0	3.47	8.52	0.29	76.7	7.13	--	--	--

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-24	CR-26	CR-33B	CR-41	CR-45	CR-57	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15874-2	J16093-3	J18881-2	J21331-1	J21273-2	J20598-1			
Date Collected		11/16/2005	11/18/2005	12/21/2005	1/26/2006	1/25/2006	1/17/2006			
Sampling Depth (ft.)		4.0-6.0	2.0-4.0	4.0-6.0	4.0-6.0	4.0-6.0	2.0-4.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	ND	ND	ND	68	1200	100
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	100
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	ND	ND	ND	5600	10000 (c)	50
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	ND	ND	ND	62	270	10
2,4-Dichlorophenol	120-83-2	ND	ND	ND	ND	ND	ND	170	3100	10
2,4-Dimethylphenol	105-67-9	ND	ND	ND	ND	ND	ND	1100	10000 (c)	10
2,4-Dinitrophenol	51-28-5	ND	ND	ND	ND	ND	ND	110	2100	10
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	ND	ND	ND	--	--	--
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	ND	ND	ND	--	--	--
2-Chloronapthalene	91-58-7	ND	ND	ND	ND	ND	ND	--	--	--
2-Chlorophenol	95-57-8	ND	ND	ND	ND	ND	ND	280	5100	10
2-Methylnaphthalene	91-57-6	ND	ND	ND	ND	ND	ND	--	--	--
2-Methylphenol	95-48-7	ND	ND	ND	ND	ND	ND	2800	10000 (c)	(r)
2-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--	--
2-Nitrophenol	88-75-5	ND	ND	ND	ND	ND	ND	--	--	--
3&4-Methylphenol	--	ND	ND	ND	ND	ND	ND	--	--	--
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	2	6	100
3-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--	--
4,6-Dinitro-2-methylphenol	--	ND	ND	ND	ND	ND	ND	--	--	--
4-Bromophenyl-phenylether	--	ND	ND	ND	ND	ND	ND	--	--	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	100
4-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	230	4200	(r)

Legend:

mg/kg: milligrams per kilogram
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NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-24	CR-26	CR-33B	CR-41	CR-45	CR-57	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15874-2	J16093-3	J18881-2	J21331-1	J21273-2	J20598-1			
Date Collected		11/16/2005	11/18/2005	12/21/2005	1/26/2006	1/25/2006	1/17/2006			
Sampling Depth (ft.)		4.0-6.0	2.0-4.0	4.0-6.0	4.0-6.0	4.0-6.0	2.0-4.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
4-Chlorophenyl-phenylether	7005-72-3	ND	ND	ND	ND	ND	ND	--	--	--
4-Nitroaniline	10061-02-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Nitrophenol	100-02-7	ND	ND	ND	ND	ND	ND	--	--	--
Acenaphthene	83-32-9	ND	ND	ND	ND	ND	ND	3400	10000 (c)	100
Acenaphthylene	71-55-6	ND	ND	ND	ND	ND	ND	--	--	--
Anthracene	120-12-7	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	100
Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	--	--	--
Benzo(a)anthracene	56-55-3	ND	ND	ND	ND	ND	ND	0.9	4	500
Benzo(a)pyrene	50-32-8	ND	ND	ND	ND	ND	ND	0.66 (f)	0.66 (f)	100
Benzo(b)fluoranthene	205-99-2	ND	ND	ND	ND	ND	ND	0.9	4	50
Benzo(g,h,i)perylene	191-24-2	ND	ND	ND	ND	ND	ND	--	--	--
Benzo(k)fluoranthene	207-08-9	ND	ND	ND	ND	ND	ND	0.9	4	500
Benzoic Acid	65-85-0	ND	ND	ND	ND	ND	ND	--	--	--
Benzyl Alcohol	100-51-6	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	10000 (c)
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND	ND	ND	ND			
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	ND	ND	ND	0.66 (f)	3	10
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	ND	ND	ND	2300	10000 (c)	10
bis-(2-Ethylhexyl)phthalate	117-81-7	0.184	0.832	0.0983J	0.0765J	ND	0.204	49	210	100
Butylbenzylphthalate	85-68-7	ND	ND	ND	ND	ND	ND	1100	10000 (c)	100
Carbazole	--	ND	ND	ND	ND	ND	ND	--	--	--
Chrysene	218-01-9	ND	ND	ND	ND	ND	ND	9	40	500
Di-n-butylphthalate	84-74-2	ND	ND	ND	ND	ND	ND	5700	10000 (c)	100
Di-n-octylphthalate	75-65-0	ND	ND	ND	ND	ND	ND	1100	10000 (c)	100
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	ND	ND	0.66 (f)	0.66 (f)	100

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
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CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-24	CR-26	CR-33B	CR-41	CR-45	CR-57	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15874-2	J16093-3	J18881-2	J21331-1	J21273-2	J20598-1			
Date Collected		11/16/2005	11/18/2005	12/21/2005	1/26/2006	1/25/2006	1/17/2006			
Sampling Depth (ft.)		4.0-6.0	2.0-4.0	4.0-6.0	4.0-6.0	4.0-6.0	2.0-4.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
Dibenzofuran	132-64-9	ND	ND	ND	ND	ND	ND	--	--	--
Diethylphthalate	84-66-2	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	50
Dimethylphthalate	131-11-3	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	50
Fluoranthene	206-44-0	ND	ND	ND	ND	ND	ND	2300	10000 (c)	100
Fluorene	86-73-7	ND	ND	ND	ND	ND	ND	2300	10000 (c)	100
Hexachlorobenzene	118-74-1	ND	ND	ND	ND	ND	ND	0.66 (f)	2	100
Hexochlorobutadiene	87-68-3	ND	ND	ND	ND	ND	ND	1	21	100
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	ND	ND	ND	400	7300	100
Hexachloroethane	67-72-1	ND	ND	ND	ND	ND	ND	6	100	100
Indeno(1,2,3-cd)pyrene	193-39-5	ND	ND	ND	ND	ND	ND	0.9	4	500
Isophorone	78-59-1	ND	ND	ND	ND	ND	ND	1100	10000 (c)	50
N-Nitro-Di-n-propylamine	--	ND	ND	ND	ND	ND	ND	--	--	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	ND	ND	ND	--	--	--
N-Nitrosodiphenylamine	86-30-6	ND	ND	ND	ND	ND	ND	140	600	100
Naphthalene	91-20-3	ND	ND	ND	ND	ND	ND	230	4200	100
Nitrobenzene	98-95-3	ND	ND	ND	ND	ND	ND	28	520	10
Pentachlorophenol	87-86-5	ND	ND	ND	ND	ND	ND	6	24	100
Phenanthrene	85-01-8	ND	ND	ND	0.0484J	ND	ND	--	--	--
Pyrene	129-00-0	ND	ND	ND	ND	ND	ND	1700	10000 (c)	100
Pyridine	--	ND	ND	ND	ND	ND	ND	--	--	--
TSVOC	--	0.184	0.832	0.0983	0.1249	0	0.204	--	--	--
TISVOC	--	2.43	21.08	7.66	7.62	0	0.18	--	--	--

Legend:

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CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-64	CR-66	CR-68	CR-72	CR-74	CR-77	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J19821-1	J15874-1	J15471-1	J20915-3	J20915-1	J20383-1			
Date Collected		1/6/2006	11/16/2005	11/11/2005	1/20/2006	1/19/2006	1/13/2006			
Sampling Depth (ft.)		4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	4.0-6.0	4.0-6.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	ND	ND	ND	68	1200	100
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	100
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	ND	ND	ND	5600	10000 (c)	50
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	ND	ND	ND	62	270	10
2,4-Dichlorophenol	120-83-2	ND	ND	ND	ND	ND	ND	170	3100	10
2,4-Dimethylphenol	105-67-9	ND	ND	ND	ND	ND	ND	1100	10000 (c)	10
2,4-Dinitrophenol	51-28-5	ND	ND	ND	ND	ND	ND	110	2100	10
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	ND	ND	ND	--	--	--
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	ND	ND	ND	--	--	--
2-Chloronapthalene	91-58-7	ND	ND	ND	ND	ND	ND	--	--	--
2-Chlorophenol	95-57-8	ND	ND	ND	ND	ND	ND	280	5100	10
2-Methylnaphthalene	91-57-6	ND	ND	ND	ND	ND	ND	--	--	--
2-Methylphenol	95-48-7	ND	ND	ND	ND	ND	ND	2800	10000 (c)	(r)
2-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--	--
2-Nitrophenol	88-75-5	ND	ND	ND	ND	ND	ND	--	--	--
3&4-Methylphenol	--	ND	ND	ND	ND	ND	ND	--	--	--
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	2	6	100
3-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--	--
4,6-Dinitro-2-methylphenol	--	ND	ND	ND	ND	ND	ND	--	--	--
4-Bromophenyl-phenylether	--	ND	ND	ND	ND	ND	ND	--	--	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	100
4-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	230	4200	(r)

Legend:

mg/kg: milligrams per kilogram
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TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-64	CR-66	CR-68	CR-72	CR-74	CR-77	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J19821-1	J15874-1	J15471-1	J20915-3	J20915-1	J20383-1			
Date Collected		1/6/2006	11/16/2005	11/11/2005	1/20/2006	1/19/2006	1/13/2006			
Sampling Depth (ft.)		4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	4.0-6.0	4.0-6.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
4-Chlorophenyl-phenylether	7005-72-3	ND	ND	ND	ND	ND	ND	--	--	--
4-Nitroaniline	10061-02-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Nitrophenol	100-02-7	ND	ND	ND	ND	ND	ND	--	--	--
Acenaphthene	83-32-9	ND	ND	0.071	ND	ND	ND	3400	10000 (c)	100
Acenaphthylene	71-55-6	ND	ND	ND	ND	ND	ND	--	--	--
Anthracene	120-12-7	ND	ND	0.0934	ND	ND	ND	10000 (c)	10000 (c)	100
Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	--	--	--
Benzo(a)anthracene	56-55-3	ND	ND	0.135	ND	ND	ND	0.9	4	500
Benzo(a)pyrene	50-32-8	ND	ND	0.125	ND	ND	ND	0.66 (f)	0.66 (f)	100
Benzo(b)fluoranthene	205-99-2	ND	ND	0.125	ND	ND	ND	0.9	4	50
Benzo(g,h,i)perylene	191-24-2	ND	ND	0.039	ND	ND	ND	--	--	--
Benzo(k)fluoranthene	207-08-9	ND	ND	0.1	ND	ND	ND	0.9	4	500
Benzoic Acid	65-85-0	ND	ND	ND	ND	ND	ND	--	--	--
Benzyl Alcohol	100-51-6	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	10000 (c)
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND	ND	ND	ND			
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	ND	ND	ND	0.66 (f)	3	10
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	ND	ND	ND	2300	10000 (c)	10
bis-(2-Ethylhexyl)phthalate	117-81-7	2.99	1.25	3.39	ND	0.423	0.796	49	210	100
Butylbenzylphthalate	85-68-7	ND	ND	0.112	ND	ND	ND	1100	10000 (c)	100
Carbazole	--	ND	ND	ND	ND	ND	ND	--	--	--
Chrysene	218-01-9	ND	ND	0.127	ND	ND	0.0256J	9	40	500
Di-n-butylphthalate	84-74-2	ND	ND	ND	ND	ND	ND	5700	10000 (c)	100
Di-n-octylphthalate	75-65-0	ND	ND	0.953	ND	ND	ND	1100	10000 (c)	100
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	ND	ND	0.66 (f)	0.66 (f)	100

Legend:

mg/kg: milligrams per kilogram
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TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-64	CR-66	CR-68	CR-72	CR-74	CR-77	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J19821-1	J15874-1	J15471-1	J20915-3	J20915-1	J20383-1			
Date Collected		1/6/2006	11/16/2005	11/11/2005	1/20/2006	1/19/2006	1/13/2006			
Sampling Depth (ft.)		4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	4.0-6.0	4.0-6.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg										
Dibenzofuran	132-64-9	ND	ND	ND	ND	ND	ND	--	--	--
Diethylphthalate	84-66-2	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	50
Dimethylphthalate	131-11-3	ND	ND	ND	ND	ND	ND	10000 (c)	10000 (c)	50
Fluoranthene	206-44-0	ND	ND	0.33	0.0361J	ND	0.0361J	2300	10000 (c)	100
Fluorene	86-73-7	ND	ND	0.0891	ND	ND	ND	2300	10000 (c)	100
Hexachlorobenzene	118-74-1	ND	ND	ND	ND	ND	ND	0.66 (f)	2	100
Hexochlorobutadiene	87-68-3	ND	ND	ND	ND	ND	ND	1	21	100
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	ND	ND	ND	400	7300	100
Hexachloroethane	67-72-1	ND	ND	ND	ND	ND	ND	6	100	100
Indeno(1,2,3-cd)pyrene	193-39-5	ND	ND	0.0354	ND	ND	ND	0.9	4	500
Isophorone	78-59-1	ND	ND	ND	ND	ND	ND	1100	10000 (c)	50
N-Nitro-Di-n-propylamine	--	ND	ND	ND	ND	ND	ND	--	--	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	ND	ND	ND	--	--	--
N-Nitrosodiphenylamine	86-30-6	ND	ND	ND	ND	ND	ND	140	600	100
Naphthalene	91-20-3	ND	ND	0.0203	0.0471J	ND	ND	230	4200	100
Nitrobenzene	98-95-3	ND	ND	ND	ND	ND	ND	28	520	10
Pentachlorophenol	87-86-5	ND	ND	ND	ND	ND	ND	6	24	100
Phenanthrene	85-01-8	ND	ND	0.339	0.399	ND	ND	--	--	--
Pyrene	129-00-0	ND	ND	0.461	0.0852J	ND	0.0328J	1700	10000 (c)	100
Pyridine	--	ND	ND	ND	ND	ND	ND	--	--	--
TSVOC	--	2.99	1.25	17	0.5674	0.423	0.8905	--	--	--
TISVOC	--	42.4	2.53	1.31	18.43	0.31	3.22	--	--	--

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PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-3	A5-4	A7-2	A7-3B	A7-4B	A7-5B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21273-1	J20915-2	J20245-1	J19821-4	J20031-2	J19641-2			
Date Collected		1/25/2006	1/20/2006	1/12/2006	1/6/2006	1/11/2006	1/4/2006			
Sampling Depth (ft.)		6.0-8.0	4.0-6.0	4.0-6.0	6.0-8.0	8.0-10.0	4.0-6.0			
PCBs & Pesticides, mg/kg										
Aldrin	309-00-2	ND	ND	ND	ND	ND	ND	0.04	0.17	50
alpha-BHC	319-84-6	ND	ND	ND	ND	ND	ND	--	--	--
beta-BHC	319-85-7	ND	ND	ND	ND	ND	ND	--	--	--
Chlordane	57-74-9	ND	ND	ND	ND	ND	ND	--	--	--
delta-BHC	--	ND	ND	ND	ND	ND	ND	--	--	--
Dieldrin	7440-48-4	ND	ND	ND	0.0372	ND	ND	0.042	0.18	50
Endosulfan 1	959-98-8	ND	ND	ND	ND	ND	ND	--	--	--
Endosulfan II	7439-92-1	ND	ND	ND	ND	ND	ND	--	--	--
Endosulfan sulfate	1031-07-8	ND	ND	ND	ND	ND	ND	--	--	--
Endrin	79-20-9	ND	ND	ND	ND	ND	ND	17	310	50
Endrin aldehyde	91-58-7	ND	ND	ND	ND	ND	ND	--	--	--
Endrin ketone	--	ND	ND	ND	ND	ND	ND	--	--	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	ND	ND	ND	0.52	2.2	50
Heptachlor	76-44-8	ND	ND	ND	ND	ND	ND	0.15	0.65	50
Heptachlorepoxide	1024-57-3	ND	ND	ND	ND	ND	ND	--	--	--
Methoxychlor	72-43-5	ND	ND	ND	ND	ND	ND	280	5200	50
4,4-DDD	91-57-6	ND	ND	0.0117	0.0357	ND	ND	3	12	50
4,4-DDE	72-55-9	ND	ND	0.0109	0.14	ND	ND	2	9	50
4,4-DDT	50-29-3	ND	ND	ND	ND	ND	ND	2	9	500
Toxaphene	71-55-6	ND	ND	ND	ND	ND	ND	0.10 (k)	0.2 (k)	50
Aroclor-1016	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1221	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1232	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1242	--	ND	ND	ND	1.69	ND	ND	0.49	2	50
Aroclor-1248	100-02-7	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1254	132-64-9	ND	ND	ND	1.12	ND	ND	0.49	2	50
Aroclor-1260	--	ND	ND	ND	0.429	ND	ND	0.49	2	50
Aroclor-1262	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1268	--	ND	ND	ND	ND	ND	ND	0.49	2	50

Legend:
mg/kg: milligrams per kilogram
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A7-6	A7-7	CR-1	CR-5	CR-10	CR-22	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21545-1	J21438-1	J19386-1	J19945-1	J19821-2	J16093-2			
Date Collected		1/30/2006	1/27/2006	12/27/2005	1/9/2006	1/6/2006	11/18/2005			
Sampling Depth (ft.)		20.0-22.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	8.0-10.0			
PCBs & Pesticides, mg/kg										
Aldrin	309-00-2	ND	ND	ND	ND	ND	ND	0.04	0.17	50
alpha-BHC	319-84-6	ND	ND	ND	ND	ND	ND	--	--	--
beta-BHC	319-85-7	ND	ND	ND	ND	ND	ND	--	--	--
Chlordane	57-74-9	ND	ND	ND	ND	ND	ND	--	--	--
delta-BHC	--	ND	ND	ND	ND	ND	ND	--	--	--
Dieldrin	7440-48-4	ND	ND	ND	ND	ND	ND	0.042	0.18	50
Endosulfan 1	959-98-8	ND	ND	ND	ND	ND	ND	--	--	--
Endosulfan II	7439-92-1	ND	ND	ND	ND	ND	ND	--	--	--
Endosulfan sulfate	1031-07-8	ND	ND	ND	ND	ND	ND	--	--	--
Endrin	79-20-9	ND	ND	ND	ND	ND	ND	17	310	50
Endrin aldehyde	91-58-7	ND	ND	ND	ND	ND	ND	--	--	--
Endrin ketone	--	ND	ND	ND	ND	ND	ND	--	--	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	ND	ND	ND	0.52	2.2	50
Heptachlor	76-44-8	ND	ND	ND	ND	ND	ND	0.15	0.65	50
Heptachlorepoxide	1024-57-3	ND	ND	ND	ND	ND	ND	--	--	--
Methoxychlor	72-43-5	ND	ND	ND	ND	ND	ND	280	5200	50
4,4-DDD	91-57-6	ND	0.0053	ND	ND	ND	ND	3	12	50
4,4-DDE	72-55-9	ND	ND	ND	ND	ND	ND	2	9	50
4,4-DDT	50-29-3	ND	ND	ND	ND	ND	ND	2	9	500
Toxaphene	71-55-6	ND	ND	ND	ND	ND	ND	0.10 (k)	0.2 (k)	50
Aroclor-1016	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1221	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1232	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1242	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1248	100-02-7	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1254	132-64-9	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1260	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1262	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1268	--	ND	ND	ND	ND	ND	ND	0.49	2	50

Legend:
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-24	CR-26	CR-33B	CR-41	CR-45	CR-57	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15874-2	J16093-3	J18881-2	J21331-1	J21273-2	J20598-1			
Date Collected		11/16/2005	11/18/2005	12/21/2005	1/26/2006	1/25/2006	1/17/2006			
Sampling Depth (ft.)		4.0-6.0	2.0-4.0	4.0-6.0	4.0-6.0	4.0-6.0	2.0-4.0			
PCBs & Pesticides, mg/kg										
Aldrin	309-00-2	ND	ND	ND	ND	ND	ND	0.04	0.17	50
alpha-BHC	319-84-6	ND	ND	ND	ND	ND	ND	--	--	--
beta-BHC	319-85-7	ND	ND	ND	ND	ND	ND	--	--	--
Chlordane	57-74-9	ND	ND	ND	ND	ND	ND	--	--	--
delta-BHC	--	ND	ND	ND	ND	ND	ND	--	--	--
Dieldrin	7440-48-4	ND	ND	ND	ND	ND	ND	0.042	0.18	50
Endosulfan 1	959-98-8	ND	ND	ND	ND	ND	ND	--	--	--
Endosulfan II	7439-92-1	ND	ND	ND	ND	ND	ND	--	--	--
Endosulfan sulfate	1031-07-8	ND	ND	ND	ND	ND	ND	--	--	--
Endrin	79-20-9	ND	ND	ND	ND	ND	ND	17	310	50
Endrin aldehyde	91-58-7	ND	ND	ND	ND	ND	ND	--	--	--
Endrin ketone	--	ND	ND	ND	ND	ND	ND	--	--	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	ND	ND	ND	0.52	2.2	50
Heptachlor	76-44-8	ND	ND	ND	ND	ND	ND	0.15	0.65	50
Heptachlorepoxide	1024-57-3	ND	ND	ND	ND	ND	ND	--	--	--
Methoxychlor	72-43-5	ND	ND	ND	ND	ND	ND	280	5200	50
4,4-DDD	91-57-6	ND	ND	ND	ND	ND	ND	3	12	50
4,4-DDE	72-55-9	ND	ND	ND	ND	ND	ND	2	9	50
4,4-DDT	50-29-3	ND	ND	ND	ND	ND	ND	2	9	500
Toxaphene	71-55-6	ND	ND	ND	ND	ND	ND	0.10 (k)	0.2 (k)	50
Aroclor-1016	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1221	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1232	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1242	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1248	100-02-7	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1254	132-64-9	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1260	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1262	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1268	--	ND	ND	ND	ND	ND	ND	0.49	2	50

Legend:
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-64	CR-66	CR-68	CR-72	CR-74	CR-77	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J19821-1	J15874-1	J15471-1	J20915-3	J20915-1	J20383-1			
Date Collected		1/6/2006	11/16/2005	11/11/2005	1/20/2006	1/19/2006	1/13/2006			
Sampling Depth (ft.)		4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	4.0-6.0	4.0-6.0			
PCBs & Pesticides, mg/kg										
Aldrin	309-00-2	ND	ND	ND	ND	ND	ND	0.04	0.17	50
alpha-BHC	319-84-6	ND	ND	ND	ND	ND	ND	--	--	--
beta-BHC	319-85-7	ND	ND	ND	ND	ND	ND	--	--	--
Chlordane	57-74-9	ND	ND	ND	ND	ND	ND	--	--	--
delta-BHC	--	ND	ND	ND	ND	ND	ND	--	--	--
Dieldrin	7440-48-4	ND	ND	ND	ND	ND	ND	0.042	0.18	50
Endosulfan 1	959-98-8	ND	ND	ND	ND	ND	ND	--	--	--
Endosulfan II	7439-92-1	ND	ND	ND	ND	ND	ND	--	--	--
Endosulfan sulfate	1031-07-8	ND	ND	ND	ND	ND	ND	--	--	--
Endrin	79-20-9	ND	ND	ND	ND	ND	ND	17	310	50
Endrin aldehyde	91-58-7	ND	ND	ND	ND	ND	ND	--	--	--
Endrin ketone	--	ND	ND	ND	ND	ND	ND	--	--	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	ND	ND	ND	0.52	2.2	50
Heptachlor	76-44-8	ND	ND	ND	ND	ND	ND	0.15	0.65	50
Heptachlorepoxide	1024-57-3	ND	ND	ND	ND	ND	ND	--	--	--
Methoxychlor	72-43-5	ND	ND	ND	ND	ND	ND	280	5200	50
4,4-DDD	91-57-6	ND	ND	0.0061	ND	ND	ND	3	12	50
4,4-DDE	72-55-9	ND	ND	0.0024	ND	ND	0.003	2	9	50
4,4-DDT	50-29-3	ND	ND	ND	ND	ND	0.0068	2	9	500
Toxaphene	71-55-6	ND	ND	ND	ND	ND	ND	0.10 (k)	0.2 (k)	50
Aroclor-1016	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1221	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1232	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1242	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1248	100-02-7	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1254	132-64-9	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1260	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1262	--	ND	ND	ND	ND	ND	ND	0.49	2	50
Aroclor-1268	--	ND	ND	ND	ND	ND	ND	0.49	2	50

Legend:
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-3	A5-4	A7-2	A7-3B	A7-4B	A7-5B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21273-1	J20915-2	J20245-1	J19821-4	J20031-2	J19641-2			
Date Collected		1/25/2006	1/20/2006	1/12/2006	1/6/2006	1/11/2006	1/4/2006			
Sampling Depth (ft.)		6.0-8.0	4.0-6.0	4.0-6.0	6.0-8.0	8.0-10.0	4.0-6.0			
Metals, mg/kg										
Antimony	7440-36-0	ND	ND	ND	ND	ND	ND	14	340	(h)
Arsernic	7440-38-2	ND	ND	14	67.6	4.1	14.1	20 (e)	20 (e)	(h)
Barium	88-75-5	ND	ND	ND	ND	ND	1.2	700	47000 (n)	(h)
Beryllium	105-67-9	ND	ND	ND	1.2	ND	0.7	2 (e)	2 (e)	(h)
Cadmium	7440-43-9	ND	ND	ND	15.2	ND	42.1	39	100	(h)
Chromium	7440-47-3	28.7	2.8	43.5	335	12.7	17.7	--	--	--
Copper	7440-50-8	19.5	4.9	57.9	520	6.3	15.9	600 (m)	600 (m)	(h)
Lead	7439-92-1	23.2	ND	39.6	392	4.8	0.22	400 (p)	600 (q)	(h)
Mercury	7439-97-6	ND	ND	0.81	13.5	ND	26.2	14	270	(h)
Nickel	1634-04-4	13.9	ND	30.7	58.1	10.9	2.2	250	2400 (k) (n)	(h)
Selenium	91-58-7	ND	ND	ND	6.7	ND	ND	63	3100 (n)	(h)
Silver	7440-22-4	ND	ND	ND	4.4	ND	ND	110	4100 (n)	(h)
Thallium	71-55-6	ND	ND	ND	ND	ND	ND	2 (f)	2 (f)	(h)
Zinc	7440-66-6	32.6	14.2	93.2	774	25.4	80.1	1500 (m)	1500 (m)	(h)
Cyanide	57-12-5	1.9	ND	ND	107	ND	ND	1100	21000 (o)	(h)

Legend:
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A7-6	A7-7	CR-1	CR-5	CR-10	CR-22	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21545-1	J21438-1	J19386-1	J19945-1	J19821-2	J16093-2			
Date Collected		1/30/2006	1/27/2006	12/27/2005	1/9/2006	1/6/2006	11/18/2005			
Sampling Depth (ft.)		20.0-22.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	8.0-10.0			
Metals, mg/kg										
Antimony	7440-36-0	ND	ND	ND	ND	ND	ND	14	340	(h)
Arsenic	7440-38-2	3.2	10.8	3.8	6.8	ND	5.6	20 (e)	20 (e)	(h)
Barium	88-75-5	ND	1.1	ND	ND	ND	ND	700	47000 (n)	(h)
Beryllium	105-67-9	0.62	ND	1.1	1	ND	0.86	2 (e)	2 (e)	(h)
Cadmium	7440-43-9	ND	ND	0.69	ND	ND	ND	39	100	(h)
Chromium	7440-47-3	17.1	40.1	23.1	34	12.2	19.3	--	--	--
Copper	7440-50-8	19.5	18.3	17.4	16.3	6.2	8.1	600 (m)	600 (m)	(h)
Lead	7439-92-1	7.6	17	11.2	15.4	8	16.4	400 (p)	600 (q)	(h)
Mercury	7439-97-6	ND	ND	ND	0.046	0.039	0.057	14	270	(h)
Nickel	1634-04-4	15.8	25.5	23.7	31.7	7.9	10.6	250	2400 (k) (n)	(h)
Selenium	91-58-7	ND	ND	ND	ND	ND	ND	63	3100 (n)	(h)
Silver	7440-22-4	ND	ND	ND	ND	ND	ND	110	4100 (n)	(h)
Thallium	71-55-6	ND	ND	ND	ND	ND	ND	2 (f)	2 (f)	(h)
Zinc	7440-66-6	43.4	80.3	51.7	70.4	24.1	30.4	1500 (m)	1500 (m)	(h)
Cyanide	57-12-5	ND	ND	ND	ND	ND	1.3	1100	21000 (o)	(h)

Legend:
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-24	CR-26	CR-33B	CR-41	CR-45	CR-57	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15874-2	J16093-3	J18881-2	J21331-1	J21273-2	J20598-1			
Date Collected		11/16/2005	11/18/2005	12/21/2005	1/26/2006	1/25/2006	1/17/2006			
Sampling Depth (ft.)		4.0-6.0	2.0-4.0	4.0-6.0	4.0-6.0	4.0-6.0	2.0-4.0			
Metals, mg/kg										
Antimony	7440-36-0	ND	ND	ND	ND	ND	ND	14	340	(h)
Arsenic	7440-38-2	8	16.1	14.1	ND	3.8	2.9	20 (e)	20 (e)	(h)
Barium	88-75-5	ND	ND	ND	ND	ND	ND	700	47000 (n)	(h)
Beryllium	105-67-9	1.2	ND	1.2	ND	ND	ND	2 (e)	2 (e)	(h)
Cadmium	7440-43-9	ND	2.5	ND	ND	ND	ND	39	100	(h)
Chromium	7440-47-3	36.6	64	41.8	6.6	6.2	26.1	--	--	--
Copper	7440-50-8	17.7	41.4	15.8	11.1	11.3	13.2	600 (m)	600 (m)	(h)
Lead	7439-92-1	14.1	33.7	13.3	ND	11.3	13.2	400 (p)	600 (q)	(h)
Mercury	7439-97-6	ND	ND	ND	ND	ND	ND	14	270	(h)
Nickel	1634-04-4	26	48.5	27.1	9.3	11.8	19.5	250	2400 (k) (n)	(h)
Selenium	91-58-7	ND	ND	ND	ND	ND	ND	63	3100 (n)	(h)
Silver	7440-22-4	ND	ND	ND	ND	ND	ND	110	4100 (n)	(h)
Thallium	71-55-6	ND	ND	ND	ND	ND	ND	2 (f)	2 (f)	(h)
Zinc	7440-66-6	74.7	137	82	ND	5.7	52.8	1500 (m)	1500 (m)	(h)
Cyanide	57-12-5	2	7.3	ND	0.63	0.87	ND	1100	21000 (o)	(h)

Legend:
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-64	CR-66	CR-68	CR-72	CR-74	CR-77	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J19821-1	J15874-1	J15471-1	J20915-3	J20915-1	J20383-1			
Date Collected		1/6/2006	11/16/2005	11/11/2005	1/20/2006	1/19/2006	1/13/2006			
Sampling Depth (ft.)		4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	4.0-6.0	4.0-6.0			
Metals, mg/kg										
Antimony	7440-36-0	ND	ND	ND	ND	ND	ND	14	340	(h)
Arsenic	7440-38-2	ND	6.5	4.1	ND	ND	14.5	20 (e)	20 (e)	(h)
Barium	88-75-5	ND	ND	ND	ND	ND	ND	700	47000 (n)	(h)
Beryllium	105-67-9	ND	ND	ND	ND	ND	0.74	2 (e)	2 (e)	(h)
Cadmium	7440-43-9	ND	ND	ND	ND	ND	ND	39	100	(h)
Chromium	7440-47-3	13.3	14.5	18.3	5.1	6.3	27.7	--	--	--
Copper	7440-50-8	11.1	7.5	69.5	8.7	9.6	81.8	600 (m)	600 (m)	(h)
Lead	7439-92-1	14.2	15.8	66.1	11.3	ND	74.7	400 (p)	600 (q)	(h)
Mercury	7439-97-6	0.15	ND	0.34	ND	ND	0.058	14	270	(h)
Nickel	1634-04-4	ND	13.2	22	8.5	9.3	21	250	2400 (k) (n)	(h)
Selenium	91-58-7	ND	ND	ND	ND	ND	ND	63	3100 (n)	(h)
Silver	7440-22-4	ND	ND	ND	ND	ND	ND	110	4100 (n)	(h)
Thallium	71-55-6	ND	ND	ND	ND	ND	ND	2 (f)	2 (f)	(h)
Zinc	7440-66-6	22.6	47	124	26.4	ND	54.9	1500 (m)	1500 (m)	(h)
Cyanide	57-12-5	ND	ND	ND	0.53	0.97	ND	1100	21000 (o)	(h)

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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-3	A5-4	A7-2	A7-3B	A7-4B	A7-5B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21273-1	J20915-2	J20245-1	J19821-4	J20031-2	J19641-2			
Date Collected		1/25/2006	1/20/2006	1/12/2006	1/6/2006	1/11/2006	1/4/2006			
Sampling Depth (ft.)		6.0-8.0	4.0-6.0	4.0-6.0	6.0-8.0	8.0-10.0	4.0-6.0			
Total Petroleum Hydrocarbons(TPH), mg/kg										
TPH	--	203	ND	ND	1370	ND	ND	10,000	10,000	--

Legend:
mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
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TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A7-6	A7-7	CR-1	CR-5	CR-10	CR-22	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J21545-1	J21438-1	J19386-1	J19945-1	J19821-2	J16093-2			
Date Collected		1/30/2006	1/27/2006	12/27/2005	1/9/2006	1/6/2006	11/18/2005			
Sampling Depth (ft.)		20.0-22.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	8.0-10.0			
Total Petroleum Hydrocarbons(TPH), mg/kg										
TPH	--	ND	ND	NA	ND	ND	ND	10,000	10,000	--

Legend:
mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
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TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-24	CR-26	CR-33B	CR-41	CR-45	CR-57	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15874-2	J16093-3	J18881-2	J21331-1	J21273-2	J20598-1			
Date Collected		11/16/2005	11/18/2005	12/21/2005	1/26/2006	1/25/2006	1/17/2006			
Sampling Depth (ft.)		4.0-6.0	2.0-4.0	4.0-6.0	4.0-6.0	4.0-6.0	2.0-4.0			
Total Petroleum Hydrocarbons(TPH), mg/kg										
TPH	--	ND	ND	ND	52.8	51	ND	10,000	10,000	--

Legend:
mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
10 Concentration in excess of the most stringent NJDEP SCC

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TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	CR-64	CR-66	CR-68	CR-72	CR-74	CR-77	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J19821-1	J15874-1	J15471-1	J20915-3	J20915-1	J20383-1			
Date Collected		1/6/2006	11/16/2005	11/11/2005	1/20/2006	1/19/2006	1/13/2006			
Sampling Depth (ft.)		4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	4.0-6.0	4.0-6.0			
Total Petroleum Hydrocarbons(TPH), mg/kg										
TPH	--	155	ND	767	164	ND	53.5	10,000	10,000	--

Legend:
mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15027-3	J15259-3	J15874-2	J18881-3	J19641-3	J20031-3	J20383-2			
Date Collected		11/8/2005	11/9/2005	11/16/2005	12/21/2005	1/4/2006	1/11/2006	1/13/2006			
Volatile Organic Compounds (VOC), mg/kg											
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	ND	210	1000 (d)	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	ND	34	70 (k)	1
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	ND	22	420	1
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	ND	570	1000 (d)	10
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	ND	8	150	10
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	ND	6	24	1
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	ND	10	43	(r)
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	ND	--	--	--
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	ND	--	--	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	ND	--	--	--
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	ND	1	5	1
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	ND	3	13	1
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	ND	--	--	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	ND	86	370	1
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	ND	--	--	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	ND	2 (k)	4 (k)	1
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	ND	37	680	1

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15027-3	J15259-3	J15874-2	J18881-3	J19641-3	J20031-3	J20383-2			
Date Collected		11/8/2005	11/9/2005	11/16/2005	12/21/2005	1/4/2006	1/11/2006	1/13/2006			
Volatile Organic Compounds (VOC), mg/kg											
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	ND	--	--	--
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	ND	19 (k)	28 (k)	1
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	ND	520	1000 (d)	10
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	ND	--	--	--
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	ND	110	1000 (d)	1
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	ND	--	--	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Methyl tert-butyl ether (MTBE	1634-04-4	ND	ND	ND	ND	ND	ND	ND	--	--	--
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	ND	49	210	1
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	ND	23	97	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	ND	--	--	--
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	ND	4 (k)	6 (k)	1
Toluene	108-88-3	ND	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	500
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Trichloroethene	79-01-6	ND	ND	ND	ND	ND	ND	ND	23	54 (k)	1
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	ND	2	7	10
Xylenes (Total)	1330-20-7	ND	ND	ND	ND	ND	ND	ND	410	1000 (d)	67 (s)
TVOC	--	0	0	0	0	0	0	0	1000	1000	--
TIVOC	--	0	0	0	0	0	0	0	1000	1000	

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
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10 Concentration in excess of the most stringent NJDEP SCC

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CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J20598-2	J21273-5	J21331-3	J21438-2	J21673-4	J22421-3			
Date Collected		1/17/2006	1/25/2006	1/26/2006	1/27/2006	1/31/2006	2/9/2006			
Volatile Organic Compounds (VOC), mg/kg										
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	210	1000 (d)	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	34	70 (k)	1
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	22	420	1
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	570	1000 (d)	10
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	8	150	10
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	6	24	1
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	10	43	(r)
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	5100	10000 (c)	50
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	570	10000 (c)	100
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	--	--	--
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	--	--	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	--	--	--
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	1	5	1
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	3	13	1
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	86	370	1
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	--	--	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	2 (k)	4 (k)	1
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	37	680	1

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
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TABLE #2
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TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J20598-2	J21273-5	J21331-3	J21438-2	J21673-4	J22421-3			
Date Collected		1/17/2006	1/25/2006	1/26/2006	1/27/2006	1/31/2006	2/9/2006			
Volatile Organic Compounds (VOC), mg/kg										
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	--	--	--
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	19 (k)	28 (k)	1
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	520	1000 (d)	10
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	ND	ND	ND	79	1000 (d)	1
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	--	--	--
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	110	1000 (d)	1
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	100
Methyl tert-butyl ether (MTBE	1634-04-4	ND	ND	ND	ND	ND	ND	--	--	--
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	49	210	1
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	23	97	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	--	--	--
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	4 (k)	6 (k)	1
Toluene	108-88-3	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	500
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	1000 (d)	1000 (d)	50
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	4	5 (k)	1
Trichloroethene	79-01-6	ND	ND	ND	ND	ND	ND	23	54 (k)	1
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	--	--	--
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	2	7	10
Xylenes (Total)	1330-20-7	ND	ND	ND	ND	ND	ND	410	1000 (d)	67 (s)
TVOC	--	0	0	0	0	0	0	1000	1000	--
TIVOC	--	0	0	0	0	0	0	1000	1000	

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
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TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	E-1	E-2	E-3	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15319-1	J15027-2	J15027-1			
Date Collected		11/10/2005	11/8/2005	11/8/2005			
Sampling Depth (ft.)		1.5-2.0	4.0-6.0	2.0-4.0			
Volatile Organic Compounds (VOC), mg/kg							
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	210	1000 (d)	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	34	70 (k)	1
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	22	420	1
1,1-Dichloroethane	75-34-3	ND	ND	ND	570	1000 (d)	10
1,1-Dichloroethene	75-35-4	ND	ND	ND	8	150	10
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	5100	10000 (c)	50
1,2-Dichloroethane	107-06-2	ND	ND	ND	6	24	1
1,2-Dichloropropane	78-87-5	ND	ND	ND	10	43	(r)
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	5100	10000 (c)	50
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	570	10000 (c)	100
2-Butanone	78-93-3	ND	ND	ND	1000 (d)	1000 (d)	50
2-Chloroethylvinylether	110-75-8	ND	ND	ND	--	--	--
2-Hexanone	591-78-6	ND	ND	ND	--	--	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	1000 (d)	1000 (d)	50
Acetone	67-64-1	ND	ND	ND	1000 (d)	1000 (d)	100
Acrolein	107-02-8	ND	ND	ND	--	--	--
Acrylonitrile	107-13-1	ND	ND	ND	1	5	1
Benzene	71-43-2	ND	ND	ND	3	13	1
Bromochloromethane	--	ND	ND	ND	--	--	--
Bromoform	75-25-2	ND	ND	ND	86	370	1
Bromomethane	74-83-9	ND	ND	ND	79	1000 (d)	1
Carbon Disulfide	75-15-0	ND	ND	ND	--	--	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	2 (k)	4 (k)	1
Chlorobenzene	108-90-7	ND	ND	ND	37	680	1

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

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TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	E-1	E-2	E-3	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15319-1	J15027-2	J15027-1			
Date Collected		11/10/2005	11/8/2005	11/8/2005			
Sampling Depth (ft.)		1.5-2.0	4.0-6.0	2.0-4.0			
Volatile Organic Compounds (VOC), mg/kg							
Chloroethane	75-00-3	ND	ND	ND	--	--	--
Chloroform	67-66-3	ND	ND	ND	19 (k)	28 (k)	1
Chloromethane	74-87-3	ND	ND	ND	520	1000 (d)	10
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	79	1000 (d)	1
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	4	5 (k)	1
Di-isopropyl-ether	108-20-3	ND	ND	ND	--	--	--
Dibromochloromethane	124-48-1	ND	ND	ND	110	1000 (d)	1
Dichlorodifluoromethane	--	ND	ND	ND	--	--	--
Ethylbenzene	100-41-4	ND	ND	ND	1000 (d)	1000 (d)	100
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	ND	ND	--	--	--
Methylene Chloride	75-09-2	ND	ND	ND	49	210	1
Styrene	100-42-5	ND	ND	ND	23	97	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	--	--	--
Tetrachloroethene	127-18-4	ND	ND	ND	4 (k)	6 (k)	1
Toluene	108-88-3	ND	ND	ND	1000 (d)	1000 (d)	500
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	1000 (d)	1000 (d)	50
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	4	5 (k)	1
Trichloroethene	79-01-6	ND	ND	ND	23	54 (k)	1
Trichlorofluoromethane	--	ND	ND	ND	--	--	--
Vinyl Acetate	108-05-4	ND	ND	ND	--	--	--
Vinyl chloride	75-01-4	ND	ND	ND	2	7	10
Xylenes (Total)	1330-20-7	ND	ND	ND	410	1000 (d)	67 (s)
TVOC	--	0	0	0	--	--	--
TIVOC	--	0	0	1.07	--	--	--

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10 : Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	E-1	E-2	E-3	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15319-1	J15027-2	J15027-1			
Date Collected		11/10/2005	11/8/2005	11/8/2005			
Sampling Depth (ft.)		1.5-2.0	4.0-6.0	2.0-4.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg							
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	68	1200	100
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	5100	10000 (c)	50
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	5100	10000 (c)	100
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	570	10000 (c)	100
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	5600	10000 (c)	50
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	62	270	10
2,4-Dichlorophenol	120-83-2	ND	ND	ND	170	3100	10
2,4-Dimethylphenol	105-67-9	ND	ND	ND	1100	10000 (c)	10
2,4-Dinitrophenol	51-28-5	ND	ND	ND	110	2100	10
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	--	--	--
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	--	--	--
2-Chloronapthalene	91-58-7	ND	ND	ND	--	--	--
2-Chlorophenol	95-57-8	ND	ND	ND	280	5100	10
2-Methylnaphthalene	91-57-6	ND	ND	ND	--	--	--
2-Methylphenol	95-48-7	ND	ND	ND	2800	10000 (c)	(r)
2-Nitroaniline	--	ND	ND	ND	--	--	--
2-Nitrophenol	88-75-5	ND	ND	ND	--	--	--
3&4-Methylphenol	--	ND	ND	ND	--	--	--
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	2	6	100
3-Nitroaniline	--	ND	ND	ND	--	--	--
4,6-Dinitro-2-methylphenol	--	ND	ND	ND	--	--	--
4-Bromophenyl-phenylether	--	ND	ND	ND	--	--	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	10000 (c)	10000 (c)	100
4-Chloroaniline	106-47-8	ND	ND	ND	230	4200	(r)

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
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TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	E-1	E-2	E-3	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15319-1	J15027-2	J15027-1			
Date Collected		11/10/2005	11/8/2005	11/8/2005			
Sampling Depth (ft.)		1.5-2.0	4.0-6.0	2.0-4.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg							
4-Chlorophenyl-phenylether	7005-72-3	ND	ND	ND	--	--	--
4-Nitroaniline	10061-02-6	ND	ND	ND	--	--	--
4-Nitrophenol	100-02-7	ND	ND	ND	--	--	--
Acenaphthene	83-32-9	0.0297	ND	0.427	3400	10000 (c)	100
Acenaphthylene	71-55-6	0.0302	ND	0.036	--	--	--
Anthracene	120-12-7	0.101	ND	1.04	10000 (c)	10000 (c)	100
Benzidine	92-87-5	ND	ND	ND	--	--	--
Benzo(a)anthracene	56-55-3	0.225	0.0338	1.96	0.9	4	500
Benzo(a)pyrene	50-32-8	0.253	ND	1.7	0.66 (f)	0.66 (f)	100
Benzo(b)fluoranthene	205-99-2	0.199	ND	0.95	0.9	4	50
Benzo(g,h,i)perylene	191-24-2	0.0916	ND	0.728	--	--	--
Benzo(k)fluoranthene	207-08-9	0.249	ND	2.26	0.9	4	500
Benzoic Acid	65-85-0	ND	ND	ND	--	--	--
Benzyl Alcohol	100-51-6	ND	ND	ND	10000 (c)	10000 (c)	10000 (c)
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND			
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	0.66 (f)	3	10
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	2300	10000 (c)	10
bis-(2-Ethylhexyl)phthalate	117-81-7	0.217	0.283	6.99	49	210	100
Butylbenzylphthalate	85-68-7	0.378	ND	2.26	1100	10000 (c)	100
Carbazole	--	ND	ND	ND	--	--	--
Chrysene	218-01-9	0.246	0.0559	1.82	9	40	500
Di-n-butylphthalate	84-74-2	ND	ND	ND	5700	10000 (c)	100
Di-n-octylphthalate	75-65-0	ND	ND	ND	1100	10000 (c)	100
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	0.66 (f)	0.66 (f)	100

Legend:

mg/kg: milligrams per kilogram
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TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	E-1	E-2	E-3	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15319-1	J15027-2	J15027-1			
Date Collected		11/10/2005	11/8/2005	11/8/2005			
Sampling Depth (ft.)		1.5-2.0	4.0-6.0	2.0-4.0			
Semi-Volatile Organic Compounds (SVOC), mg/kg							
Dibenzofuran	132-64-9	ND	ND	ND	--	--	--
Diethylphthalate	84-66-2	ND	ND	ND	10000 (c)	10000 (c)	50
Dimethylphthalate	131-11-3	ND	ND	ND	10000 (c)	10000 (c)	50
Fluoranthene	206-44-0	0.447	0.0874	3.65	2300	10000 (c)	100
Fluorene	86-73-7	0.0234	ND	0.331	2300	10000 (c)	100
Hexachlorobenzene	118-74-1	ND	ND	ND	0.66 (f)	2	100
Hexochlorobutadiene	87-68-3	ND	ND	ND	1	21	100
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	400	7300	100
Hexachloroethane	67-72-1	ND	ND	ND	6	100	100
Indeno(1,2,3-cd)pyrene	193-39-5	0.0829	ND	0.605	0.9	4	500
Isophorone	78-59-1	ND	ND	ND	1100	10000 (c)	50
N-Nitro-Di-n-propylamine	--	ND	ND	ND	--	--	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	--	--	--
N-Nitrosodiphenylamine	86-30-6	ND	ND	ND	140	600	100
Naphthalene	91-20-3	ND	ND	0.0885	230	4200	100
Nitrobenzene	98-95-3	ND	ND	ND	28	520	10
Pentachlorophenol	87-86-5	ND	ND	ND	6	24	100
Phenanthrene	85-01-8	0.288	0.0523	2.54	--	--	--
Pyrene	129-00-0	0.515	0.0839	7.94	1700	10000 (c)	100
Pyridine	--	ND	ND	ND	--	--	--
TSVOC	--	15	6	17	--	--	--
TISVOC	--	0.52	7.82	9.02	--	--	--

Legend:

mg/kg: milligrams per kilogram
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TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	E-1	E-2	E-3	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15319-1	J15027-2	J15027-1			
Date Collected		11/10/2005	11/8/2005	11/8/2005			
Sampling Depth (ft.)		1.5-2.0	4.0-6.0	2.0-4.0			
PCBs & Pesticides, mg/kg							
Aldrin	309-00-2	ND	ND	ND	0.04	0.17	50
alpha-BHC	319-84-6	ND	ND	ND	--	--	--
beta-BHC	319-85-7	ND	ND	ND	--	--	--
Chlordane	57-74-9	ND	ND	ND	--	--	--
delta-BHC	--	ND	ND	ND	--	--	--
Dieldrin	7440-48-4	0.004	ND	ND	0.042	0.18	50
Endosulfan 1	959-98-8	ND	ND	ND	--	--	--
Endosulfan II	7439-92-1	ND	ND	ND	--	--	--
Endosulfan sulfate	1031-07-8	ND	ND	ND	--	--	--
Endrin	79-20-9	ND	ND	ND	17	310	50
Endrin aldehyde	91-58-7	ND	ND	ND	--	--	--
Endrin ketone	--	ND	ND	ND	--	--	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	0.52	2.2	50
Heptachlor	76-44-8	ND	ND	ND	0.15	0.65	50
Heptachlorepoxide	1024-57-3	ND	ND	ND	--	--	--
Methoxychlor	72-43-5	ND	ND	ND	280	5200	50
4,4-DDD	91-57-6	ND	ND	ND	3	12	50
4,4-DDE	72-55-9	ND	ND	ND	2	9	50
4,4-DDT	50-29-3	0.0021	ND	ND	2	9	500
Toxaphene	71-55-6	ND	ND	ND	0.10 (k)	0.2 (k)	50
Aroclor-1016	--	ND	ND	ND	0.49	2	50
Aroclor-1221	--	ND	ND	ND	0.49	2	50
Aroclor-1232	--	ND	ND	ND	0.49	2	50
Aroclor-1242	--	ND	ND	ND	0.49	2	50
Aroclor-1248	100-02-7	ND	ND	ND	0.49	2	50
Aroclor-1254	132-64-9	ND	ND	0.0897	0.49	2	50
Aroclor-1260	--	ND	ND	ND	0.49	2	50
Aroclor-1262	--	ND	ND	ND	0.49	2	50
Aroclor-1268	--	ND	ND	ND	0.49	2	50

Legend:
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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #2
SOIL LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	E-1	E-2	E-3	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID.#		J15319-1	J15027-2	J15027-1			
Date Collected		11/10/2005	11/8/2005	11/8/2005			
Sampling Depth (ft.)		1.5-2.0	4.0-6.0	2.0-4.0			
Metals, mg/kg							
Antimony	7440-36-0	ND	ND	ND	14	340	(h)
Arsernic	7440-38-2	10.4	6.5	1.3	20 (e)	20 (e)	(h)
Barium	88-75-5	ND	ND	ND	700	47000 (n)	(h)
Beryllium	105-67-9	ND	ND	ND	2 (e)	2 (e)	(h)
Cadmium	7440-43-9	1.5	2.7	0.56	39	100	(h)
Chromium	7440-47-3	28.2	20.6	20.6	--	--	--
Copper	7440-50-8	99.8	21.5	28.7	600 (m)	600 (m)	(h)
Lead	7439-92-1	222	52.7	56.1	400 (p)	600 (q)	(h)
Mercury	7439-97-6	0.26	0.13	0.24	14	270	(h)
Nickel	1634-04-4	18	15.5	12	250	2400 (k) (n)	(h)
Selenium	91-58-7	ND	ND	ND	63	3100 (n)	(h)
Silver	7440-22-4	ND	ND	ND	110	4100 (n)	(h)
Thallium	71-55-6	ND	ND	ND	2 (f)	2 (f)	(h)
Zinc	7440-66-6	186	1820	50.1	1500 (m)	1500 (m)	(h)
Cyanide	57-12-5	0.47	57.5	0.65	1100	21000 (o)	(h)

Legend:

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10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #3
SEDIMENT LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-1A	A5-1B	A7-3A	A7-4A	A7-5A	CR-33A	Marine/Estuarine Sediment Screening Guidelines (mg/kg)
Laboratory ID.#		J19075-1	J19075-2	J19821-3	J20031-1	J19641-1	J18881-1	
Date Collected		12/23/2005	12/23/2005	1/6/2006	1/11/2006	1/4/2005	12/21/2005	
Sampling Depth (ft.)		0.0-2.0	2.0-4.0	0.0-2.0	0.0-2.0	0.0-2.0	0.0-2.0	
Volatile Organic Compounds (VOC), mg/kg								
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	--
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	--
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	--
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	--
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	--
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	0.188J	ND	--
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	--
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	--
1,3-Dichlorobenzene	541-73-1	ND	ND	0.239J	ND	ND	ND	--
1,4-Dichlorobenzene	106-46-7	ND	ND	0.645J	ND	0.459J	ND	--
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	--
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	--
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	--
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	--
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	--
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	--
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	0.34
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	--
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	--
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	--
Chlorobenzene	108-90-7	ND	ND	0.502J	ND	ND	ND	--

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
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TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #3
SEDIMENT LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-1A	A5-1B	A7-3A	A7-4A	A7-5A	CR-33A	Marine/Estuarine Sediment Screening Guidelines (mg/kg)
Laboratory ID.#		J19075-1	J19075-2	J19821-3	J20031-1	J19641-1	J18881-1	
Date Collected		12/23/2005	12/23/2005	1/6/2006	1/11/2006	1/4/2005	12/21/2005	
Sampling Depth (ft.)		0.0-2.0	2.0-4.0	0.0-2.0	0.0-2.0	0.0-2.0	0.0-2.0	
Volatile Organic Compounds (VOC), mg/kg								
Chloroethane	75-00-3	ND	ND	ND	ND		ND	--
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	--
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	--
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	ND	ND	ND	--
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	--
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	--
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	--
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	--
Ethylbenzene	100-41-4	ND	ND	0.91	ND	ND	ND	1.4
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	ND	ND	ND	ND	ND	--
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	--
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	--
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	--
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	0.45
Toluene	108-88-3	ND	ND	1.59	ND	ND	ND	2.5
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	--
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	--
Trichloroethene	79-01-6	ND	ND	ND	ND	ND	ND	1.6
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	--
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	--
Xylenes (Total)	1330-20-7	ND	ND	3.58	ND	ND	ND	--
TVOC	--	0	0	6.08	0	0.647	0	--
TIVOC	--	80.4	0	201.7	0	35.9	4.4	--

Legend:
- mg/kg: milligrams per kilogram
- SCC: NJDEP Soil Cleanup Criteria
- NA: Not Available
- ND: Not Detected above Laboratory Reported Detection Limits
- TVOC: Targeted Volatile Organic Compounds
- TIVOC: Tentatively identified Volatile Organic Compounds
- 10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #3
SEDIMENT LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-1A	A5-1B	A7-3A	A7-4A	A7-5A	CR-33A	Marine/Estuarine Sediment Screening Guidelines (mg/kg)
Laboratory ID.#		J19075-1	J19075-2	J19821-3	J20031-1	J19641-1	J18881-1	
Date Collected		12/23/2005	12/23/2005	1/6/2006	1/11/2006	1/4/2005	12/21/2005	
Sampling Depth (ft.)		0.0-2.0	2.0-4.0	0.0-2.0	0.0-2.0	0.0-2.0	0.0-2.0	
Semi-Volatile Organic Compounds (SVOC), mg/kg								
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	ND	ND	ND	--
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	--
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	--
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	--
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	ND	ND	ND	--
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	ND	ND	ND	--
2,4-Dichlorophenol	120-83-2	ND	ND	ND	ND	ND	ND	--
2,4-Dimethylphenol	105-67-9	ND	ND	ND	ND	ND	ND	--
2,4-Dinitrophenol	51-28-5	ND	ND	ND	ND	ND	ND	--
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	ND	ND	ND	--
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	ND	ND	ND	--
2-Chloronapthalene	91-58-7	ND	ND	ND	ND	ND	ND	--
2-Chlorophenol	95-57-8	ND	ND	ND	ND	ND	ND	--
2-Methylnaphthalene	91-57-6	ND	ND	ND	ND	ND	ND	0.07
2-Methylphenol	95-48-7	ND	ND	ND	ND	ND	ND	--
2-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--
2-Nitrophenol	88-75-5	ND	ND	ND	ND	ND	ND	--
3&4-Methylphenol	--	ND	ND	ND	ND	ND	ND	--
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	--
3-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--
4,6-Dinitro-2-methylphenol	--	ND	ND	ND	ND	ND	ND	--
4-Bromophenyl-phenylether	--	ND	ND	ND	ND	ND	ND	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	ND	ND	ND	--
4-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	--

Legend:

mg/kg: milligrams per kilogram
SCC: NJDEP Soil Cleanup Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of the most stringent NJDEP SCC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #3
SEDIMENT LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-1A	A5-1B	A7-3A	A7-4A	A7-5A	CR-33A	Marine/Estuarine Sediment Screening Guidelines (mg/kg)
Laboratory ID.#		J19075-1	J19075-2	J19821-3	J20031-1	J19641-1	J18881-1	
Date Collected		12/23/2005	12/23/2005	1/6/2006	1/11/2006	1/4/2005	12/21/2005	
Sampling Depth (ft.)		0.0-2.0	2.0-4.0	0.0-2.0	0.0-2.0	0.0-2.0	0.0-2.0	
Semi-Volatile Organic Compounds (SVOC), mg/kg								
4-Chlorophenyl-phenylether	7005-72-3	ND	ND	ND	ND	ND	ND	--
4-Nitroaniline	10061-02-6	ND	ND	ND	ND	ND	ND	--
4-Nitrophenol	100-02-7	ND	ND	ND	ND	ND	ND	--
Acenaphthene	83-32-9	ND	ND	0.399J	ND	0.836	0.0567	0.016
Acenaphthylene	71-55-6	0.0910	0.114J	0.414J	ND	0.231	ND	0.044
Anthracene	120-12-7	0.1481	0.186	1.26	ND	1.52	0.116J	0.085
Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	--
Benzo(a)anthracene	56-55-3	0.371	0.558	1.92	ND	2.56	0.215	0.261
Benzo(a)pyrene	50-32-8	0.301	0.472	1.62	ND	1.65	0.177	0.43
Benzo(b)fluoranthene	205-99-2	0.232	0.461	1.95	ND	1.71	0.177	--
Benzo(g,h,i)perylene	191-24-2	0.122	0.113	0.459J	ND	0.327	0.0363J	0.17
Benzo(k)fluoranthene	207-08-9	0.219	0.393	ND	ND	0.996	0.169	0.24
Benzoic Acid	65-85-0	ND	ND	ND	ND	ND	ND	--
Benzyl Alcohol	100-51-6	ND	ND	ND	ND	ND	ND	--
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND	ND	ND	ND	--
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	ND	ND	ND	--
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	ND	ND	ND	--
bis-(2-Ethylhexyl)phthalate	117-81-7	0.404	0.184	59.8	0.0551J	0.75	0.187	--
Butylbenzylphthalate	85-68-7	ND	ND	ND	ND	ND	ND	--
Carbazole	--	ND	ND	ND	ND	ND	ND	--
Chrysene	218-01-9	0.397	0.562	2.39	ND	2.66	0.209	0.384
Di-n-butylphthalate	84-74-2	ND	ND	ND	ND	ND	ND	--
Di-n-octylphthalate	75-65-0	ND	ND	4.2	ND	ND	ND	--
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	0.14J	ND	0.063

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SEDIMENT LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-1A	A5-1B	A7-3A	A7-4A	A7-5A	CR-33A	Marine/Estuarine Sediment Screening Guidelines (mg/kg)
Laboratory ID.#		J19075-1	J19075-2	J19821-3	J20031-1	J19641-1	J18881-1	
Date Collected		12/23/2005	12/23/2005	1/6/2006	1/11/2006	1/4/2005	12/21/2005	
Sampling Depth (ft.)		0.0-2.0	2.0-4.0	0.0-2.0	0.0-2.0	0.0-2.0	0.0-2.0	
Semi-Volatile Organic Compounds (SVOC), mg/kg								
Dibenzofuran	132-64-9	ND	ND	ND	ND	ND	ND	--
Diethylphthalate	84-66-2	ND	ND	ND	ND	ND	ND	--
Dimethylphthalate	131-11-3	ND	ND	ND	ND	ND	ND	--
Fluoranthene	206-44-0	0.639	0.899	3.71	ND	6.36	0.373	0.6
Fluorene	86-73-7	ND	ND	0.909	ND	1.17	0.0579J	0.019
Hexachlorobenzene	118-74-1	ND	ND	ND	ND	ND	ND	--
Hexochlorobutadiene	87-68-3	ND	ND	ND	ND	ND	ND	--
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	ND	ND	ND	--
Hexachloroethane	67-72-1	ND	ND	ND	ND	ND	ND	--
Indeno(1,2,3-cd)pyrene	193-39-5	0.119	0.124	ND	ND	0.316	0.0418	0.2
Isophorone	78-59-1	ND	ND	ND	ND	ND	ND	--
N-Nitro-Di-n-propylamine	--	ND	ND	ND	ND	ND	ND	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	ND	ND	ND	--
N-Nitrosodiphenylamine	86-30-6	ND	ND	ND	ND	ND	ND	--
Naphthalene	91-20-3	ND	ND	0.727	ND	0.164J	ND	0.16
Nitrobenzene	98-95-3	ND	ND	ND	ND	ND	ND	--
Pentachlorophenol	87-86-5	ND	ND	ND	ND	ND	ND	--
Phenanthrene	85-01-8	0.0684	0.0875J	2.23	ND	6.09	0.334	0.24
Pyrene	129-00-0	0.734	1.03	4.85	ND	5.72	0.424	0.665
Pyridine	--	ND	ND	ND	ND	ND	ND	--
TSVOC	--	3.6064	4.982	85.566	0.0551	32.896	2.5737	--
TISVOC	--	14.75	16.38	390.2	1.49	65.3	4.34	--

Legend:

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CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #3
SEDIMENT LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-1A	A5-1B	A7-3A	A7-4A	A7-5A	CR-33A	Marine/Estuarine Sediment Screening Guidelines (mg/kg)
Laboratory ID.#		J19075-1	J19075-2	J19821-3	J20031-1	J19641-1	J18881-1	
Date Collected		12/23/2005	12/23/2005	1/6/2006	1/11/2006	1/4/2005	12/21/2005	
Sampling Depth (ft.)		0.0-2.0	2.0-4.0	0.0-2.0	0.0-2.0	0.0-2.0	0.0-2.0	
PCBs & Pesticides, mg/kg								
Aldrin	309-00-2	ND	ND	ND	ND	ND	ND	0.002
alpha-BHC	319-84-6	ND	ND	ND	ND	ND	ND	--
beta-BHC	319-85-7	ND	ND	ND	ND	ND	ND	
Chlordane	57-74-9	ND	ND	ND	ND	ND	ND	0.007
delta-BHC	--	ND	ND	ND	ND	ND	ND	--
Dieldrin	7440-48-4	ND	ND	ND	ND	ND	ND	0.002
Endosulfan 1	959-98-8	ND	ND	ND	ND	ND	ND	--
Endosulfan II	7439-92-1	ND	ND	ND	ND	ND	ND	--
Endosulfan sulfate	1031-07-8	ND	ND	ND	ND	ND	ND	--
Endrin	79-20-9	ND	ND	ND	ND	ND	ND	0.003
Endrin aldehyde	91-58-7	ND	ND	ND	ND	ND	ND	--
Endrin ketone	--	ND	ND	ND	ND	ND	ND	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	ND	ND	ND	0.003
Heptachlor	76-44-8	ND	ND	ND	ND	ND	ND	--
Heptachlorepoxide	1024-57-3	ND	ND	ND	ND	ND	ND	0.005
Methoxychlor	72-43-5	ND	ND	ND	ND	ND	ND	--
4,4-DDD	91-57-6	ND	ND	ND	ND	ND	0.0058	0.008
4,4-DDE	72-55-9	ND	ND	0.133	ND	ND	0.0068	0.0022
4,4-DDT	50-29-3	ND	ND	ND	ND	ND	0.0467	0.0016
Toxaphene	71-55-6	ND	ND	ND	ND	ND	ND	--
Aroclor-1016	--	ND	ND	ND	ND	ND	ND	0.007
Aroclor-1221	--	ND	ND	ND	ND	ND	ND	--
Aroclor-1232	--	ND	ND	ND	ND	ND	ND	--
Aroclor-1242	--	ND	ND	0.921	ND	ND	ND	--
Aroclor-1248	100-02-7	ND	ND	ND	ND	ND	ND	0.03
Aroclor-1254	132-64-9	ND	ND	0.815	ND	ND	ND	0.06
Aroclor-1260	--	ND	ND	0.196	ND	ND	ND	0.005
Aroclor-1262	--	ND	ND	ND	ND	ND	NA	--
Aroclor-1268	--	ND	ND	ND	ND	ND	NA	--

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CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #3
SEDIMENT LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-1A	A5-1B	A7-3A	A7-4A	A7-5A	CR-33A	Marine/Estuarine Sediment Screening Guidelines (mg/kg)
Laboratory ID.#		J19075-1	J19075-2	J19821-3	J20031-1	J19641-1	J18881-1	
Date Collected		12/23/2005	12/23/2005	1/6/2006	1/11/2006	1/4/2005	12/21/2005	
Sampling Depth (ft.)		0.0-2.0	2.0-4.0	0.0-2.0	0.0-2.0	0.0-2.0	0.0-2.0	
Metals, mg/kg								
Antimony	7440-36-0	ND	ND	ND	ND	1.9	ND	--
Arsernic	7440-38-2	49.9	20.3	100	5.6	181	11.1	8.2
Beryllium	105-67-9	ND	ND	1.3	ND	1.6	0.82	--
Cadmium	7440-43-9	ND	ND	4.6	ND	5.7	0.52	1.2
Chromium	7440-47-3	115	47	603	15.1	642	33.5	81
Copper	7440-50-8	252	56.7	309	8.3	703	18.9	34
Lead	7439-92-1	256	47.2	303	6.6	743	22.2	47
Mercury	7439-97-6	1.1	0.23	15	ND	7.9	0.39	0.15
Nickel	1634-04-4	47.3	25.2	53.3	11.2	75.3	20.6	21
Selenium	91-58-7	7.8	ND	7	ND	20.5	ND	--
Silver	7440-22-4	ND	ND	ND	ND	2.3	ND	1
Thallium	71-55-6	ND	ND	ND	ND	ND	ND	--
Zinc	7440-66-6	416	134	536	30.8	909	82.1	150
Cyanide	57-12-5	2.9	0.92	43.3	ND	ND	ND	--

Legend:

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PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #3
SEDIMENT LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	A5-1A	A5-1B	A7-3A	A7-4A	A7-5A	CR-33A	Marine/Estuarine Sediment Screening Guidelines (mg/kg)
Laboratory ID.#		J19075-1	J19075-2	J19821-3	J20031-1	J19641-1	J18881-1	
Date Collected		12/23/2005	12/23/2005	1/6/2006	1/11/2006	1/4/2005	12/21/2005	
Sampling Depth (ft.)		0.0-2.0	2.0-4.0	0.0-2.0	0.0-2.0	0.0-2.0	0.0-2.0	
Total Petroleum Hydrocarbons (mg/kg)								
TPH	--	1090	159	792	ND	4610	58.8	--

Legend:
mg/kg: milligrams per kilogram
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10 Concentration in excess of the most stringent NJDEP SCC

Sample No.	CASRN #	A7-3A	Marine/Estuarine Sediment Screening
Laboratory ID #		J19821-3	
Date Collected		1/6/2006	
Sampling Depth (ft.)		0.0-2.0	
Acenaphthene	83-32-9	0.399J	0.016
Acenaphthylene	71-55-6	0.414J	0.044
Anthracene	120-12-7	1.26	0.085
Benzo(a)anthracene	56-55-3	1.92	0.261
Benzo(a)pyrene	50-32-8	1.62	0.43
Benzo(g,h,i)perylene	191-24-2	0.459J	0.17
Chrysene	218-01-9	2.39	0.384
Fluoranthene	206-44-0	3.71	0.6
Fluorene	86-73-7	0.909	0.019
Phenanthrene	85-01-8	2.23	0.24
Pyrene	129-00-0	4.86	0.665
4,4-DDE	72-55-9	0.133	0.0022
Arodor-1254	132-64-9	0.815	0.06
Arodor-1260	–	0.196	0.005
Arsenic	7440-38-2	100	8.2
Cadmium	7440-43-9	4.6	1.2
Chromium	7440-47-3	603	81
Copper	7440-50-8	309	34
Lead	7439-92-1	303	47
Mercury	7439-97-6	15	0.15
Nickel	1634-04-4	53.3	21
Zinc	7440-66-6	536	150

Sample No.	CASRN #	A7-3B	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC	Impact to Ground water SCC (mg/kg)
Laboratory ID #		J19821-4			
Date Collected		1/6/2006			
Sampling Depth (ft.)		6.0-8.0			
Benzo(a)anthracene	56-55-3	1.04	0.9	4	500
Benzo(a)pyrene	50-32-8	0.865	0.66 (f)	0.66 (f)	100
Benzo(b)fluoranthene	205-99-2	0.908	0.9	4	50

Sample No.	CASRN #	CR-33A	Marine/Estuarine Sediment Screening
Laboratory ID #		J18881-1	
Date Collected		12/21/2005	
Sampling Depth (ft.)		0.0-2.0	
Acenaphthene	83-32-9	0.0567	0.016
Anthracene	120-12-7	0.116J	0.085
4,4-DDE	72-55-9	0.0068	0.0022
4,4-DDT	50-29-3	0.0467	0.0016
Arsenic	7440-38-2	11.1	8.2
Mercury	7439-97-6	0.39	0.15

Sample No.	CASRN #	A7-5A	Marine/Estuarine Sediment Screening
Laboratory ID #		J19641-1	
Date Collected		1/4/2005	
Sampling Depth (ft.)		0.0-2.0	
Benzo(a)anthracene	56-55-3	2.56	0.261
Benzo(a)pyrene	50-32-8	1.65	0.43
Benzo(g,h,i)perylene	191-24-2	0.327	0.17
Benzo(k)fluoranthene	207-08-9	0.996	0.24
Chrysene	218-01-9	2.66	0.384
Dibenzo(a,h)anthracene	53-70-3	0.14J	0.063
Fluoranthene	206-44-0	6.36	0.6
Fluorene	86-73-7	1.17	0.019
Indeno(1,2,3-cd)pyrene	193-39-5	0.316	0.2
Naphthalene	91-20-3	0.164J	0.16
Phenanthrene	85-01-8	6.09	0.24
Pyrene	129-00-0	5.72	0.665
Arsenic	7440-38-2	181	8.2
Cadmium	7440-43-9	5.7	1.2
Chromium	7440-47-3	642	81
Copper	7440-50-8	703	34
Lead	7439-92-1	743	47
Mercury	7439-97-6	7.9	0.15
Nickel	1634-04-4	75.3	21
Silver	7440-22-4	2.3	1
Zinc	7440-66-6	909	150

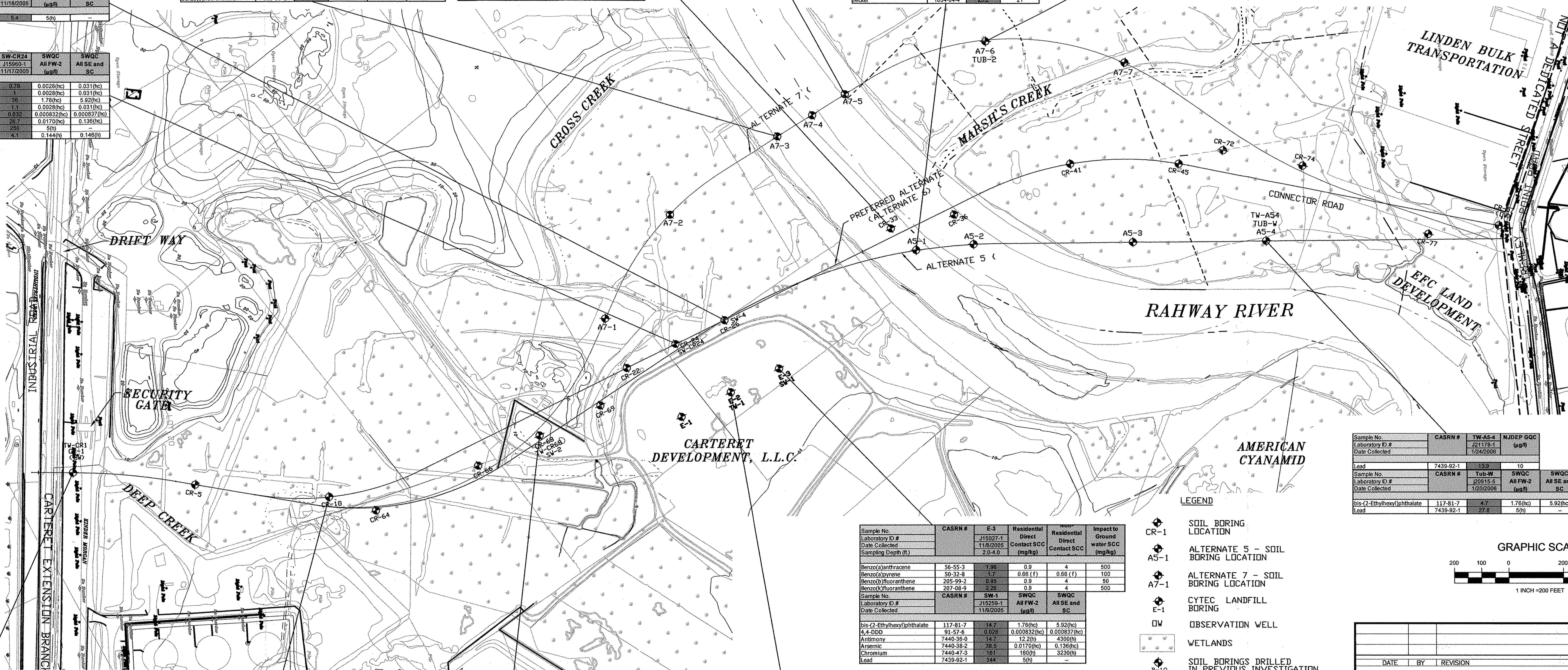
Sample No.	CASRN #	A5-1A	Marine/Estuarine Sediment Screening Guidelines
Laboratory ID #		J19075-1	
Date Collected		12/23/2005	
Sampling Depth (ft.)		0.0-2.0	
Acenaphthylene	71-55-6	0.091J	0.044
Anthracene	120-12-7	0.148J	0.085
Benzo(a)anthracene	56-55-3	0.371	0.261
Chrysene	218-01-9	0.397	0.384
Fluoranthene	206-44-0	0.639	0.6
Pyrene	129-00-0	0.734	0.665
Arsenic	7440-38-2	49.9	8.2
Chromium	7440-47-3	115	81
Copper	7440-50-8	252	34
Lead	7439-92-1	256	47
Mercury	7439-97-6	1.1	0.15
Nickel	1634-04-4	47.3	21
Zinc	7440-66-6	416	150

Sample No.	CASRN #	A5-1B	Marine/Estuarine Sediment Screening
Laboratory ID #		J19075-2	
Date Collected		12/23/2005	
Sampling Depth (ft.)		2.0-4.0	
Acenaphthylene	71-55-6	0.114J	0.044
Anthracene	120-12-7	0.186	0.085
Benzo(a)anthracene	56-55-3	0.558	0.261
Benzo(a)pyrene	50-32-8	0.472	0.43
Benzo(k)fluoranthene	207-08-9	0.393	0.24
Chrysene	218-01-9	0.562	0.384
Fluoranthene	206-44-0	0.899	0.6
Pyrene	129-00-0	1.03	0.665
Arsenic	7440-38-2	20.3	8.2
Chromium	7440-47-3	47	81
Copper	7440-50-8	56.7	34
Lead	7439-92-1	47.2	47
Mercury	7439-97-6	0.23	0.15
Nickel	1634-04-4	25.2	21

Sample No.	CASRN #	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC
Laboratory ID #		J21673-2		
Date Collected		1/31/2006		
bis-(2-Ethylhexyl)phthalate	117-81-7	3.1	1.76(hc)	5.92(hc)
Arsenic	7440-38-2	4.3	0.0170(hc)	0.136(hc)

Sample No.	CASRN #	SW-4	SWQC All FW-2 (µg/l)	SWQC All SE and SC
Laboratory ID #		J16093-1		
Date Collected		11/18/2005		
Lead	7439-92-1	5.4	5(h)	–

Sample No.	CASRN #	SW-CR24	SWQC All FW-2 (µg/l)	SWQC All SE and SC
Laboratory ID #		J15960-1		
Date Collected		11/17/2005		
Benzo(a)anthracene	56-55-3	0.79	0.0028(hc)	0.031(hc)
Benzo(a)pyrene	50-32-8	1	0.0028(hc)	0.031(hc)
bis-(2-Ethylhexyl)phthalate	117-81-7	36	1.76(hc)	5.92(hc)
Chrysene	218-01-9	1.1	0.0028(hc)	0.031(hc)
4,4-DDD	91-57-6	0.032	0.000832(hc)	0.000837(hc)
Arsenic	7440-38-2	26.7	0.0170(hc)	0.136(hc)
Lead	7439-92-1	250	5(h)	–
Mercury	7439-97-6	4.1	0.144(h)	0.146(h)



Sample No.	CASRN #	TW-A5-4	NJDEP GQC (µg/l)
Laboratory ID #		J21178-1	
Date Collected		1/24/2006	
Lead	7439-92-1	13.9	10

Sample No.	CASRN #	Tub-W	SWQC All FW-2 (µg/l)	SWQC All SE and SC
Laboratory ID #		J20915-5		
Date Collected		1/20/2006		
bis-(2-Ethylhexyl)phthalate	117-81-7	4.7	1.76(hc)	5.92(hc)
Lead	7439-92-1	27.8	5(h)	–

Sample No.	CASRN #	E-3	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC	Impact to Ground water SCC (mg/kg)
Laboratory ID #		J15027-1			
Date Collected		11/8/2005			
Sampling Depth (ft.)		2.0-4.0			
Benzo(a)anthracene	56-55-3	1.96	0.9	4	500
Benzo(a)pyrene	50-32-8	1.7	0.66 (f)	0.66 (f)	100
Benzo(b)fluoranthene	205-99-2	0.95	0.9	4	50
Benzo(k)fluoranthene	207-08-9	2.26	0.9	4	500

Sample No.	CASRN #	SW-1	SWQC All FW-2 (µg/l)	SWQC All SE and SC
Laboratory ID #		J15259-1		
Date Collected		11/9/2005		
bis-(2-Ethylhexyl)phthalate	117-81-7	14.7	1.76(hc)	5.92(hc)
4,4-DDD	91-57-6	0.028	0.000832(hc)	0.000837(hc)
Antimony	7440-36-0	14.7	12.2(h)	4300(h)
Arsenic	7440-38-2	38.5	0.0170(hc)	0.136(hc)
Chromium	7440-47-3	161	160(h)	3230(h)
Lead	7439-92-1	344	5(h)	–

LEGEND

- CR-1 SOIL BORING LOCATION
- A5-1 ALTERNATE 5 – SOIL BORING LOCATION
- A7-1 ALTERNATE 7 – SOIL BORING LOCATION
- E-1 CYTEC LANDFILL BORING
- OW OBSERVATION WELL
- WETLANDS
- B-10 SOIL BORINGS DRILLED IN PREVIOUS INVESTIGATION

GRAPHIC SCALE

200 100 0 200 400

1 INCH =200 FEET

Sample No.	CASRN #	TW-CR1	NJDEP GQC (µg/l)
Laboratory ID #		J22421-1	
Date Collected		2/9/2006	
cis-1,2-Dichloroethene	156-59-2	72.8	70^
Vinyl chloride	75-01-4	8.8	5

Sample No.	CASRN #	CR-10	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID #		J19821-2			
Date Collected		1/6/2006			
Sampling Depth (ft)		6.0-8.0			
Benzo(a)anthracene	56-55-3	6.97	0.9	4	500
Benzo(a)pyrene	50-32-8	8.91	0.66 (f)	0.66 (f)	100
Benzo(b)fluoranthene	205-99-2	6.9	0.9	4	50
Benzo(k)fluoranthene	207-08-9	12.1	0.9	4	500
Dibenzo(a,h)anthracene	53-70-3	1.08	0.66 (f)	0.66 (f)	100
Indeno(1,2,3-cd)pyrene	193-39-5	3	0.9	4	500

Sample No.	CASRN #	TW-CR68	NJDEP GQC (µg/l)
Laboratory ID #		J15960-2	
Date Collected		11/17/2005	
Benzene	71-43-2	42.8	1
Benzo(a)anthracene	56-55-3	2.4	0.2^
Benzo(a)pyrene	50-32-8	2	0.2^
Benzo(k)fluoranthene	207-08-9	2.2	1^
Butylbenzylphthalate	85-68-7	189	100
Arsenic	7440-38-2	9.2	8
Chromium	7440-47-3	104	100
Lead	7439-92-1	158	10

Sample No.	CASRN #	SW-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC
Laboratory ID #		J15662-1		
Date Collected		11/14/2005		
bis-(2-Ethylhexyl)phthalate	117-81-7	2.3	1.76(hc)	5.92(hc)
Lead	7439-92-1	29.6	5(h)	–

Sample No.	CASRN #	E-2	Residential Direct Contact SCC (mg/kg)	Non-Residential Direct Contact SCC (mg/kg)	Impact to Ground water SCC (mg/kg)
Laboratory ID #		J15027-2			
Date Collected		11/8/2005			
Sampling Depth (ft.)		4.0-6.0			
Zinc	7440-66-6	1820	1500 (m)	1500 (m)	(h)

Sample No.	CASRN #	TW-1	NJDEP GQC (µg/l)
Laboratory ID #		J15259-2	
Date Collected		11/9/2005	
Lead	7439-92-1	20.9	10

DATE	BY	REVISION

TREMLEY POINT ROAD CONNECTOR PROJECT
INTERCHANGE 12 / TREMLEY POINT
CARTERET, NEW JERSEY

SAMPLE LOCATION PLAN

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS
65 Jackson Drive, PO Box 5000, Cranford, NJ 07016
(908) 497-8900 Fax (908) 497-9134 www.PMKGroup.com
CERTIFICATE OF AUTHORIZATION #GA277039

DESIGNED BY	DATE PREPARED 3-13-06
DRAWN BY JF	SCALE 1"=200'
CHECKED BY RB	PROJECT NO. 046108-05
N.J.P.E. LIC. NO.	PLATE NUMBER 5

PROFESSIONAL ENGINEER

SIGNATURE NOT VALID WITHOUT RAISED SEAL OF P.E. DATE

G:\Client\Clients A-F\Edwards and Kelcey\Project Data\046108-Tremley Point Road Connector Project OPS 2052\CADD\046108-SI.dwg, Sample Location Plan 24X36, 7/21/2006 10:58:59 AM, FrankJ

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	TW-1	TW-A5-3	TW-A5-4	TW-A7-6	TW-CR1	TW-CR41	TW-CR57	TW-CR68	TW-CR72	NJDEP GQC (µg/l)
Laboratory ID.#		J15259-2	J21331-2	J21178-1	J21673-1	J22421-1	J21545-2	J20915-4	J15960-2	J21273-3	
Date Collected		11/9/2005	1/26/2006	1/24/2006	1/31/2006	2/9/2006	1/30/2006	1/20/2006	11/17/2005	1/25/2006	
Volatile Organic Compounds (VOC), µg/l											
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	3
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	50^
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	600
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	600
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	ND	4	ND	75
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	400
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	700
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	10^
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	ND	42.8	ND	1
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	4
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	800
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	ND	22.6	ND	50^
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	ND	111	ND	100^
Chloroform	67-66-3	ND	ND	0.84J	ND	ND	ND	ND	ND	ND	6

Legend:

µg/l: micrograms per liter, ppb
GQC: NJDEP Groundwater Quality Criteria for Class II-A Aquifers
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10 Concentration in excess of NJDEP GQC
^: Interim Specific GQC
*: Interim Generic GQC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	TW-1	TW-A5-3	TW-A5-4	TW-A7-6	TW-CR1	TW-CR41	TW-CR57	TW-CR68	TW-CR72	NJDEP GQC (µg/l)
Laboratory ID.#		J15259-2	J21331-2	J21178-1	J21673-1	J22421-1	J21545-2	J20915-4	J15960-2	J21273-3	
Date Collected		11/9/2005	1/26/2006	1/24/2006	1/31/2006	2/9/2006	1/30/2006	1/20/2006	11/17/2005	1/25/2006	
Volatile Organic Compounds (VOC), µg/l											
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	30
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	ND	72.8	ND	ND	ND	ND	70^
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	20000^
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	ND	4	ND	700
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	70^
Methylene Chloride	75-09-2	ND	1.1	ND	ND	ND	ND	ND	ND	ND	3^
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Toluene	108-88-3	ND	3.9	ND	ND	ND	ND	0.50J	48.2	ND	1000
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Trichloroethene	79-01-6	ND	ND	ND	ND	0.81	ND	ND	ND	ND	1
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	7000^
Vinyl chloride	75-01-4	ND	ND	ND	ND	8.8	ND	ND	ND	ND	5
Xylenes (Total)	1330-20-7	ND	ND	0.56	ND	ND	ND	ND	53.5	ND	1000^
TVOC	--	0	5	1.4	0	82.41	0	0.5	7	0	500*
TIVOC	--	0	54	0	0	0	0	0	398.7	13.9	500*

Legend:

µg/l: micrograms per liter, ppb
GQC: NJDEP Groundwater Quality Criteria for Class II-A Aquifers
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10.0 Concentration in excess of NJDEP GQC
^: Interim Specific GQC
*: Interim Generic GQC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	FB	FB	FB	FB	FB	FB	FB	FB	NJDEP GQC (µg/l)
Laboratory ID.#		J15960-3	J20915-6	J21178-2	J21273-5	J21331-3	J21545-3	J21673-3	J22421-2	
Date Collected		11/17/2005	1/20/2006	1/24/2006	1/25/2006	1/26/2006	1/30/2006	1/31/2006	2/9/2006	
Volatile Organic Compounds (VOC), µg/l										
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	ND	ND	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	ND	ND	2
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	ND	ND	3
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	ND	ND	50^
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	ND	ND	2
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	ND	ND	600
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	ND	ND	2
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	ND	ND	1
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	ND	ND	600
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	ND	ND	75
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	ND	ND	--
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	ND	ND	100^
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	ND	ND	100^
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	ND	ND	400
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	ND	ND	700
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	ND	ND	10^
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	ND	ND	50
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	ND	ND	1
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	ND	ND	4
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	ND	ND	--
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	ND	ND	800
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	ND	ND	2
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	ND	ND	50^
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	ND	ND	100^
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	ND	ND	6

Legend:

µg/l: micrograms per liter, ppb
GQC: NJDEP Groundwater Quality Criteria for Class II-A Aquifers
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TVOC: Targeted Volatile Organic Compounds
TIVOC: Tentatively Identified Volatile Organic Compounds
10: Concentration in excess of NJDEP GQC
^: Interim Specific GQC
*: Interim Generic GQC

PMK Group
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TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	FB	FB	FB	FB	FB	FB	FB	FB	NJDEP GQC (µg/l)
Laboratory ID.#		J15960-3	J20915-6	J21178-2	J21273-5	J21331-3	J21545-3	J21673-3	J22421-2	
Date Collected		11/17/2005	1/20/2006	1/24/2006	1/25/2006	1/26/2006	1/30/2006	1/31/2006	2/9/2006	
Volatile Organic Compounds (VOC), µg/l										
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	ND	ND	30
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	ND	ND	ND	ND	ND	70^
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	ND	ND	--
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	ND	ND	20000^
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	ND	ND	10
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	ND	ND	700
Methyl tert-butyl ether (MTB	1634-04-4	ND	ND	ND	ND	ND	ND	ND	ND	70^
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	ND	ND	3^
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	ND	ND	100
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	ND	ND	100^
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	ND	ND	1
Toluene	108-88-3	ND	ND	ND	ND	ND	ND	ND	ND	1000
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	ND	ND	100
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	ND	ND	--
Trichloroethene	79-01-6	ND	ND	ND	ND	ND	ND	ND	ND	1
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	ND	ND	7000^
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	ND	ND	5
Xylenes (Total)	1330-20-7	ND	ND	ND	ND	ND	ND	ND	ND	1000^
TVOC	--	0	0	0	0	0	0	0	0	500*
TIVOC	--	0	0	0	0	0	0	0	0	500*

Legend:
- µg/l: micrograms per liter, ppb
- GQC: NJDEP Groundwater Quality Criteria for Class II-A Aquifers
- NA: Not Available
- ND: Not Detected above Laboratory Reported Detection Limits
- TVOC: Targeted Volatile Organic Compounds
- TIVOC: Tentatively Identified Volatile Organic Compounds
- 10: Concentration in excess of NJDEP GQC
- ^: Interim Specific GQC
- *: Interim Generic GQC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	TW-1	TW-A5-3	TW-A5-4	TW-A7-6	TW-CR1	TW-CR41	TW-CR57	TW-CR68	TW-CR72	NJDEP GQC (µg/l)
Laboratory ID.#		J15259-2	J21331-2	J21178-1	J21673-1	J22421-1	J21545-2	J20915-4	J15960-2	J21273-3	
Date Collected		11/9/2005	1/26/2006	1/24/2006	1/31/2006	2/9/2006	1/30/2006	1/20/2006	11/17/2005	1/25/2006	
Semi-Volatile Organic Compounds (SVOC), µg/l											
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	9
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	600
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	600
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	ND	16.1	ND	75
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	700
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
2,4-Dichlorophenol	120-83-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
2,4-Dimethylphenol	105-67-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
2,4-Dinitrophenol	51-28-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	40
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
2-Chloronapthalene	91-58-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	600^
2-Chlorophenol	95-57-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	40
2-Methylnaphthalene	91-57-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
2-Methylphenol	95-48-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
2-Nitroaniline	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
2-Nitrophenol	88-75-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
3&4-Methylphenol	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	60
3-Nitroaniline	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
4,6-Dinitro-2-methylphenol	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
4-Bromophenyl-phenylether	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
4-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	30^

Legend:
µg/l: micrograms per liter, ppb
GQC: NJDEP Groundwater Quality Criteria for Class II-A Aquifers
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
10 Concentration in excess of NJDEP GQC
^: Interim Specific GQC
*: Interim Generic GQC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	TW-1	TW-A5-3	TW-A5-4	TW-A7-6	TW-CR1	TW-CR41	TW-CR57	TW-CR68	TW-CR72	NJDEP GQC (µg/l)
Laboratory ID.#		J15259-2	J21331-2	J21178-1	J21673-1	J22421-1	J21545-2	J20915-4	J15960-2	J21273-3	
Date Collected		11/9/2005	1/26/2006	1/24/2006	1/31/2006	2/9/2006	1/30/2006	1/20/2006	11/17/2005	1/25/2006	
Semi-Volatile Organic Compounds (SVOC), µg/l											
4-Chlorophenyl-phenylether	7005-72-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
4-Nitroaniline	10061-02-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
4-Nitrophenol	100-02-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
Acenaphthene	83-32-9	ND	ND	ND	ND	ND	ND	ND	3.6	ND	400
Acenaphthylene	71-55-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Anthracene	120-12-7	ND	ND	ND	ND	ND	ND	ND	2.2	ND	2000
Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
Benzo(a)anthracene	56-55-3	ND	ND	ND	ND	ND	ND	ND	2.4	ND	0.2^
Benzo(a)pyrene	50-32-8	ND	ND	ND	ND	ND	ND	ND	2	ND	0.2^
Benzo(b)fluoranthene	205-99-2	ND	ND	ND	ND	ND	ND	ND	1.8	ND	10^
Benzo(g,h,i)perylene	191-24-2	ND	ND	ND	ND	ND	ND	ND	0.8	ND	100^
Benzo(k)fluoranthene	207-08-9	ND	ND	ND	ND	ND	ND	ND	2.2	ND	1^
Benzoic Acid	65-85-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	30000^
Benzyl Alcohol	100-51-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	2000
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	300
bis-(2-Ethylhexyl)phthalate	117-81-7	6	ND	23	ND	2.6	1.3J	24	25.8	ND	30
Butylbenzylphthalate	85-68-7	ND	ND	ND	ND	ND	ND	ND	189	ND	100
Carbazole	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Chrysene	218-01-9	ND	ND	ND	ND	ND	ND	ND	2.6	ND	5^
Di-n-butylphthalate	84-74-2	ND	ND	ND	ND	ND	ND	ND	6	ND	900
Di-n-octylphthalate	117-84-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5^

Legend:
µg/l: micrograms per liter, ppb
GQC: NJDEP Groundwater Quality Criteria for Class II-A Aquifers
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
TSVOC: Targeted Semi-Volatile Organic Compounds
TISVOC: Tentatively Identified Semi-Volatile Organic Compounds
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PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	TW-1	TW-A5-3	TW-A5-4	TW-A7-6	TW-CR1	TW-CR41	TW-CR57	TW-CR68	TW-CR72	NJDEP GQC (µg/l)
Laboratory ID.#		J15259-2	J21331-2	J21178-1	J21673-1	J22421-1	J21545-2	J20915-4	J15960-2	J21273-3	
Date Collected		11/9/2005	1/26/2006	1/24/2006	1/31/2006	2/9/2006	1/30/2006	1/20/2006	11/17/2005	1/25/2006	
Semi-Volatile Organic Compounds (SVOC), µg/l											
Dibenzofuran	132-64-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	100^
Diethylphthalate	84-66-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	5000
Dimethylphthalate	131-11-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Fluoranthene	206-44-0	ND	ND	ND	ND	ND	ND	ND	6.7	ND	300
Fluorene	86-73-7	ND	ND	ND	ND	ND	ND	ND	4.5	ND	300
Hexachlorobenzene	118-74-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Hexochlorobutadiene	87-68-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
Hexachloroethane	67-72-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Indeno(1,2,3-cd)pyrene	193-39-5	ND	ND	ND	ND	ND	ND	ND	0.72	ND	10^
Isophorone	78-59-1	ND	ND	ND	ND	ND	ND	ND	6.5	ND	100
N-Nitro-Di-n-propylamine	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
N-Nitrosodiphenylamine	86-30-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
Naphthalene	91-20-3	ND	0.371	ND	ND	ND	0.274	ND	15.5	ND	300^
Nitrobenzene	98-95-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Pentachlorophenol	87-86-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Phenanthrene	85-01-8	ND	ND	ND	ND	ND	ND	ND	10.2	ND	100^
Phenol	108-95-2	ND	3.7J	40.5	ND	ND	19.6	ND	ND	68.2	4000
Pyrene	129-00-0	ND	ND	ND	ND	ND	ND	ND	5.4	ND	200
Pyridine	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
TSVOC	--	6	4.071	40.5	0	2.6	21.174	24	304.02	68.2	--
TISVOC	--	6.9	508.5	475.4	0	27.9	99.5	0	1022	384	--

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TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	FB	FB	FB	FB	FB	FB	FB	FB	NJDEP GQC (µg/l)
Laboratory ID.#		J15960-3	J20915-6	J21178-2	J21273-5	J21331-3	J21545-3	J21673-3	J22421-2	
Date Collected		11/17/2005	1/20/2006	1/24/2006	1/25/2006	1/26/2006	1/30/2006	1/31/2006	2/9/2006	
Semi-Volatile Organic Compounds (SVOC), µg/l										
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	ND	ND	ND	ND	ND	9
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	ND	ND	600
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	ND	ND	600
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	ND	ND	75
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	ND	ND	ND	ND	ND	700
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	ND	ND	ND	ND	ND	20
2,4-Dichlorophenol	120-83-2	ND	ND	ND	ND	ND	ND	ND	ND	20
2,4-Dimethylphenol	105-67-9	ND	ND	ND	ND	ND	ND	ND	ND	100
2,4-Dinitrophenol	51-28-5	ND	ND	ND	ND	ND	ND	ND	ND	40
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	ND	ND	ND	ND	ND	10
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	ND	ND	ND	ND	ND	--
2-Chloronapthalene	91-58-7	ND	ND	ND	ND	ND	ND	ND	ND	600^
2-Chlorophenol	95-57-8	ND	ND	ND	ND	ND	ND	ND	ND	40
2-Methylnaphthalene	91-57-6	ND	ND	ND	ND	ND	ND	ND	ND	100^
2-Methylphenol	95-48-7	ND	ND	ND	ND	ND	ND	ND	ND	--
2-Nitroaniline	--	ND	ND	ND	ND	ND	ND	ND	ND	--
2-Nitrophenol	88-75-5	ND	ND	ND	ND	ND	ND	ND	ND	100^
3&4-Methylphenol	--	ND	ND	ND	ND	ND	ND	ND	ND	--
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	ND	ND	60
3-Nitroaniline	--	ND	ND	ND	ND	ND	ND	ND	ND	--
4,6-Dinitro-2-methylphenol	--	ND	ND	ND	ND	ND	ND	ND	ND	--
4-Bromophenyl-phenylether	--	ND	ND	ND	ND	ND	ND	ND	ND	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	ND	ND	ND	ND	ND	100^
4-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	ND	ND	30^

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TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	FB	FB	FB	FB	FB	FB	FB	FB	NJDEP GQC (µg/l)
Laboratory ID.#		J15960-3	J20915-6	J21178-2	J21273-5	J21331-3	J21545-3	J21673-3	J22421-2	
Date Collected		11/17/2005	1/20/2006	1/24/2006	1/25/2006	1/26/2006	1/30/2006	1/31/2006	2/9/2006	
Semi-Volatile Organic Compounds (SVOC), µg/l										
4-Chlorophenyl-phenylether	7005-72-3	ND	ND	ND	ND	ND	ND	ND	ND	100^
4-Nitroaniline	10061-02-6	ND	ND	ND	ND	ND	ND	ND	ND	--
4-Nitrophenol	100-02-7	ND	ND	ND	ND	ND	ND	ND	ND	100^
Acenaphthene	83-32-9	ND	ND	ND	ND	ND	ND	ND	ND	400
Acenaphthylene	71-55-6	ND	ND	ND	ND	ND	ND	ND	ND	--
Anthracene	120-12-7	ND	ND	ND	ND	ND	ND	ND	ND	2000
Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	ND	ND	50
Benzo(a)anthracene	56-55-3	ND	ND	ND	ND	ND	ND	ND	ND	0.2^
Benzo(a)pyrene	50-32-8	ND	ND	ND	ND	ND	ND	ND	ND	0.2^
Benzo(b)fluoranthene	205-99-2	ND	ND	ND	ND	ND	ND	ND	ND	10^
Benzo(g,h,i)perylene	191-24-2	ND	ND	ND	ND	ND	ND	ND	ND	100^
Benzo(k)fluoranthene	207-08-9	ND	ND	ND	ND	ND	ND	ND	ND	1^
Benzoic Acid	65-85-0	ND	ND	ND	ND	ND	ND	ND	ND	30000^
Benzyl Alcohol	100-51-6	ND	ND	ND	ND	ND	ND	ND	ND	2000
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND	ND	ND	ND	ND	ND	100^
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	ND	ND	ND	ND	ND	10
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	ND	ND	ND	ND	ND	300
bis-(2-Ethylhexyl)phthalate	117-81-7	ND	ND	ND	ND	ND	ND	ND	ND	30
Butylbenzylphthalate	85-68-7	ND	ND	ND	ND	ND	ND	ND	ND	100
Carbazole	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Chrysene	218-01-9	ND	ND	ND	ND	ND	ND	ND	ND	5^
Di-n-butylphthalate	84-74-2	ND	ND	ND	ND	ND	ND	ND	ND	900
Di-n-octylphthalate	117-84-0	ND	ND	ND	ND	ND	ND	ND	ND	100
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	ND	ND	ND	ND	0.5^

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TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	FB	FB	FB	FB	FB	FB	FB	FB	NJDEP GQC (µg/l)
Laboratory ID.#		J15960-3	J20915-6	J21178-2	J21273-5	J21331-3	J21545-3	J21673-3	J22421-2	
Date Collected		11/17/2005	1/20/2006	1/24/2006	1/25/2006	1/26/2006	1/30/2006	1/31/2006	2/9/2006	
Semi-Volatile Organic Compounds (SVOC), µg/l										
Dibenzofuran	132-64-9	ND	ND	ND	ND	ND	ND	ND	ND	100^
Diethylphthalate	84-66-2	ND	ND	ND	ND	ND	ND	ND	ND	5000
Dimethylphthalate	131-11-3	ND	ND	ND	ND	ND	ND	ND	ND	--
Fluoranthene	206-44-0	ND	ND	ND	ND	ND	ND	ND	ND	300
Fluorene	86-73-7	ND	ND	ND	ND	ND	ND	ND	ND	300
Hexachlorobenzene	118-74-1	ND	ND	ND	ND	ND	ND	ND	ND	10
Hexochlorobutadiene	87-68-3	ND	ND	ND	ND	ND	ND	ND	ND	1
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	ND	ND	ND	ND	ND	50
Hexachloroethane	67-72-1	ND	ND	ND	ND	ND	ND	ND	ND	10
Indeno(1,2,3-cd)pyrene	193-39-5	ND	ND	ND	ND	ND	ND	ND	ND	10^
Isophorone	78-59-1	ND	ND	ND	ND	ND	ND	ND	ND	100
N-Nitro-Di-n-propylamine	--	ND	ND	ND	ND	ND	ND	ND	ND	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	ND	ND	ND	ND	ND	20
N-Nitrosodiphenylamine	86-30-6	ND	ND	ND	ND	ND	ND	ND	ND	20
Naphthalene	91-20-3	ND	ND	ND	ND	ND	ND	ND	ND	300^
Nitrobenzene	98-95-3	ND	ND	ND	ND	ND	ND	ND	ND	10
Pentachlorophenol	87-86-5	ND	ND	ND	ND	ND	ND	ND	ND	1
Phenanthrene	85-01-8	ND	ND	ND	ND	ND	ND	ND	ND	100^
Phenol	108-95-2	ND	ND	ND	ND	ND	ND	ND	ND	4000
Pyrene	129-00-0	ND	ND	ND	ND	ND	ND	ND	ND	200
Pyridine	--	ND	ND	ND	ND	ND	ND	ND	ND	--
TSVOC	--	0	0	0	0	0	0	0	0	--
TISVOC	--	0	0	0	0	0	0	0	0	--

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PMK Group
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TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	TW-1	TW-A5-3	TW-A5-4	TW-A7-6	TW-CR1	TW-CR41	TW-CR57	TW-CR68	TW-CR72	NJDEP GQC (µg/l)
Laboratory ID.#		J15259-2	J21331-2	J21178-1	J21673-1	J22421-1	J21545-2	J20915-4	J15960-2	J21273-3	
Date Collected		11/9/2005	1/26/2006	1/24/2006	1/31/2006	2/9/2006	1/30/2006	1/20/2006	11/17/2005	1/25/2006	
PCBs & Pesticides, µg/l											
Aldrin	309-00-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04
alpha-BHC	319-84-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02
beta-BHC	319-85-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2
Chlordane	57-74-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5
delta-BHC	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Dieldrin	60-57-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.03
Endosulfan 1	959-98-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4
Endosulfan II	7439-92-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Endosulfan sulfate	1031-07-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4
Endrin	79-20-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	7000
Endrin aldehyde	91-58-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	600
Endrin ketone	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Heptachlor	76-44-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4
Heptachlorepoxide	1024-57-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2
Methoxychlor	1634-04-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	40
4,4-DDD	91-57-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
4,4-DDE		ND	ND	ND	ND	ND	ND	ND	ND	ND	--
4,4-DDT	50-29-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
Toxaphene	71-55-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	3
Aroclor-1016	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1221	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1232	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1242	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1248	100-02-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Aroclor-1254	132-64-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Aroclor-1260	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1262	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1268	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--

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TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	FB	FB	FB	FB	FB	FB	FB	FB	NJDEP GQC (µg/l)
Laboratory ID.#		J15960-3	J20915-6	J21178-2	J21273-5	J21331-3	J21545-3	J21673-3	J22421-2	
Date Collected		11/17/2005	1/20/2006	1/24/2006	1/25/2006	1/26/2006	1/30/2006	1/31/2006	2/9/2006	
PCBs & Pesticides, µg/l										
Aldrin	309-00-2	ND	ND	ND	ND	ND	ND	ND	ND	0.04
alpha-BHC	319-84-6	ND	ND	ND	ND	ND	ND	ND	ND	0.02
beta-BHC	319-85-7	ND	ND	ND	ND	ND	ND	ND	ND	0.2
Chlordane	57-74-9	ND	ND	ND	ND	ND	ND	ND	ND	0.5
delta-BHC	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Dieldrin	60-57-1	ND	ND	ND	ND	ND	ND	ND	ND	0.03
Endosulfan 1	959-98-8	ND	ND	ND	ND	ND	ND	ND	ND	0.4
Endosulfan II	7439-92-1	ND	ND	ND	ND	ND	ND	ND	ND	10
Endosulfan sulfate	1031-07-8	ND	ND	ND	ND	ND	ND	ND	ND	0.4
Endrin	79-20-9	ND	ND	ND	ND	ND	ND	ND	ND	7000
Endrin aldehyde	91-58-7	ND	ND	ND	ND	ND	ND	ND	ND	600
Endrin ketone	--	ND	ND	ND	ND	ND	ND	ND	ND	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	ND	ND	ND	ND	ND	100
Heptachlor	76-44-8	ND	ND	ND	ND	ND	ND	ND	ND	0.4
Heptachlorepoxide	1024-57-3	ND	ND	ND	ND	ND	ND	ND	ND	0.2
Methoxychlor	1634-04-4	ND	ND	ND	ND	ND	ND	ND	ND	40
4,4-DDD	91-57-6	ND	ND	ND	ND	ND	ND	ND	ND	100
4,4-DDE		ND	ND	ND	ND	ND	ND	ND	ND	--
4,4-DDT	50-29-3	ND	ND	ND	ND	ND	ND	ND	ND	0.1
Toxaphene	71-55-6	ND	ND	ND	ND	ND	ND	ND	ND	3
Aroclor-1016	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1221	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1232	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1242	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1248	100-02-7	ND	ND	ND	ND	ND	ND	ND	ND	100
Aroclor-1254	132-64-9	ND	ND	ND	ND	ND	ND	ND	ND	100
Aroclor-1260	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1262	--	ND	ND	ND	ND	ND	ND	ND	ND	--
Aroclor-1268	--	ND	ND	ND	ND	ND	ND	ND	ND	--

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TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	TW-1	TW-A5-3	TW-A5-4	TW-A7-6	TW-CR1	TW-CR41	TW-CR57	TW-CR68	TW-CR72	NJDEP GQC (µg/l)
Laboratory ID.#		J15259-2	J21331-2	J21178-1	J21673-1	J22421-1	J21545-2	J20915-4	J15960-2	J21273-3	
Date Collected		11/9/2005	1/26/2006	1/24/2006	1/31/2006	2/9/2006	1/30/2006	1/20/2006	11/17/2005	1/25/2006	
Metals, µg/l											
Antimony	7440-36-0	ND	ND	ND	ND	ND	7.2	ND	ND	ND	20
Arsenic	7440-38-2	ND	6.1	4.9	3.9	5.6	ND	ND	9.2	3.2	8
Barium	88-75-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	2000
Beryllium	105-67-9	ND	ND	ND	ND	1.6	ND	ND	ND	ND	20
Cadmium	7440-43-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	4
Chromium	7440-47-3	14.4	ND	ND	ND	81.4	ND	ND	104	20.6	100
Copper	7440-50-8	42.7	30.3	ND	ND	143	ND	ND	153	32.7	1000
Lead	7439-92-1	20.9	ND	13.9	ND	65.8	ND	5.8	158	22.9	10
Mercury	7439-97-6	ND	ND	0.48	ND	ND	ND	ND	0.22	ND	2
Nickel	1634-04-4	ND	ND	ND	ND	60.5	ND	ND	60.3	ND	100
Selenium	91-58-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	600
Silver	7440-22-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	30
Thallium	71-55-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Zinc	7440-66-6	57.9	44.2	ND	ND	185	ND	26.1	327	ND	5000
Cyanide	57-12-5	2.6	0.47	ND	ND	0.014	ND	ND	ND	0.079	200

Legend:
µg/l: micrograms per liter, ppb
GQC: NJDEP Groundwater Quality Criteria for Class II-A Aquifers
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
10 Concentration in excess of NJDEP GQC
^: Interim Specific GQC
*: Interim Generic GQC

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #4
GROUNDWATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	FB	FB	FB	FB	FB	FB	FB	FB	NJDEP GQC (µg/l)
Laboratory ID.#		J15960-3	J20915-6	J21178-2	J21273-5	J21331-3	J21545-3	J21673-3	J22421-2	
Date Collected		11/17/2005	1/20/2006	1/24/2006	1/25/2006	1/26/2006	1/30/2006	1/31/2006	2/9/2006	
Metals, µg/l										
Antimony	7440-36-0	ND	ND	ND	ND	ND	ND	ND	ND	20
Arsenic	7440-38-2	ND	ND	ND	ND	ND	ND	ND	ND	8
Barium	88-75-5	ND	ND	ND	ND	ND	ND	ND	ND	2000
Beryllium	105-67-9	ND	ND	ND	ND	ND	ND	ND	ND	20
Cadmium	7440-43-9	ND	ND	ND	ND	ND	ND	ND	ND	4
Chromium	7440-47-3	ND	ND	ND	ND	ND	ND	ND	ND	100
Copper	7440-50-8	ND	ND	ND	ND	ND	ND	ND	ND	1000
Lead	7439-92-1	ND	ND	ND	ND	ND	ND	ND	ND	10
Mercury	7439-97-6	ND	ND	ND	ND	ND	ND	ND	ND	2
Nickel	1634-04-4	ND	ND	ND	ND	ND	ND	ND	ND	100
Selenium	91-58-7	ND	ND	ND	ND	ND	ND	ND	ND	600
Silver	7440-22-4	ND	ND	ND	ND	ND	ND	ND	ND	30
Thallium	71-55-6	ND	ND	ND	ND	ND	ND	ND	ND	10
Zinc	7440-66-6	ND	ND	ND	ND	ND	ND	ND	ND	5000
Cyanide	57-12-5	ND	ND	ND	ND	ND	ND	ND	ND	200

Legend:
µg/l: micrograms per liter, ppb
GQC: NJDEP Groundwater Quality Criteria for Class II-A Aquifers
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
Concentration in excess of NJDEP GQC
^: Interim Specific GQC
*: Interim Generic GQC

PMK Group
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TABLE #5
SURFACE WATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	J20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
Volatile Organic Compounds (VOC), µg/l									
1,1,1-Trichloroethane	71-55-6	ND	ND	ND	ND	ND	ND	127(h)	--
1,1,2,2-Tetrachloroethane	79-34-5	ND	ND	ND	ND	ND	ND	1.72(hcc)	--
1,1,2-Trichloroethane	79-00-5	ND	ND	ND	ND	ND	ND	13.5(h)	--
1,1-Dichloroethane	75-34-3	ND	ND	ND	ND	ND	ND	--	--
1,1-Dichloroethene	75-35-4	ND	ND	ND	ND	ND	ND	4.81(h)	--
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	2520(h)	16500(h)
1,2-Dichloroethane	107-06-2	ND	ND	ND	ND	ND	ND	0.291(hc)	99(hc)
1,2-Dichloropropane	78-87-5	ND	ND	ND	ND	ND	ND	--	--
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	2620(h)	22200(h)
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	343(h)	3159(h)
2-Butanone	78-93-3	ND	ND	ND	ND	ND	ND	--	--
2-Chloroethylvinylether	110-75-8	ND	ND	ND	ND	ND	ND	--	--
2-Hexanone	591-78-6	ND	ND	ND	ND	ND	ND	--	--
4-Methyl-2-pentanone	108-10-1	ND	ND	ND	ND	ND	ND	--	--
Acetone	67-64-1	ND	ND	ND	ND	ND	ND	--	--
Acrolein	107-02-8	ND	ND	ND	ND	ND	ND	320(h)	780(h)
Acrylonitrile	107-13-1	ND	ND	ND	ND	ND	ND	0.0591(hc)	0.665(hc)

Legend:

µg/l: micrograms per liter, ppb
SWQC Surface Water Quality Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
SC: the general surface water classification applied to coastal saline waters.
SE: the general surface water classification applied to saline waters of estuaries.
FW-2: the general surface water classification applied to those fresh water that are not designated as FW1 or pinelands waters.
10 Concentration in excess of NJDEP SWQC
(a): acute aquatic life portection criteria as a one-hour average.
(c): chronic aquatic life portection critera as a four-day average.
(h): noncarcinogenic effect-based human health criteria as a 30-day average with no frequency of exceedance at or above the design flows specified in section N.J.A.C 7:9b-1.5(c)2 and are based on a risk level of one-in-one-million.
(hc): carcinogenic effect-based human health criteria as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2 and are based on a risk level of on-n-one-million.
(hcc): toxic substances considered to be possible human carcinogens as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7.9B-1.5(c)2 and are based on a risk level of one-in-one hundred thousand.

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #5
SURFACE WATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	J20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
Volatile Organic Compounds (VOC), µg/l									
Benzene	71-43-2	ND	ND	ND	ND	ND	ND	0.150(hc)	71(hc)
Bromochloromethane	--	ND	ND	ND	ND	ND	ND	--	--
Bromoform	75-25-2	ND	ND	ND	ND	ND	ND	4.38(hc)	360(hc)
Bromomethane	74-83-9	ND	ND	ND	ND	ND	ND	48.4(h)	4000(h)
Bromodichloromethane	--	ND	ND	ND	ND	ND	ND	0.266(hc)	22(hc)
Carbon Disulfide	75-15-0	ND	ND	ND	ND	ND	ND	--	--
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	0.363(hc)	6.31(hc)
Chlorobenzene	108-90-7	ND	ND	ND	ND	ND	ND	22.0(h)	21000(h)
Chloroethane	75-00-3	ND	ND	ND	ND	ND	ND	--	--
Chloroform	67-66-3	ND	ND	ND	ND	ND	ND	5.67(hc)	470(hc)
Chloromethane	74-87-3	ND	ND	ND	ND	ND	ND	--	--
cis-1,2-Dichloroethene	156-59-2	ND	ND	ND	0.64	ND	ND	--	--
cis-1,3-Dichloropropene	10061-01-5	ND	ND	ND	ND	ND	ND	--	--
Di-isopropyl-ether	108-20-3	ND	ND	ND	ND	ND	ND	--	--
Dibromochloromethane	124-48-1	ND	ND	ND	ND	ND	ND	72.6(h)	--
Dichlorodifluoromethane	--	ND	ND	ND	ND	ND	ND	--	--
Ethylbenzene	100-41-4	ND	ND	ND	ND	ND	ND	3030(h)	27900(h)
Methyl tert-butyl ether (MTBE)	1634-04-4	ND	ND	ND	ND	ND	ND	--	--

Legend:

µg/l: micrograms per liter, ppb
SWQC Surface Water Quality Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
SC: the general surface water classification applied to coastal saline waters.
SE: the general surface water classification applied to saline waters of estuaries.
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10 Concentration in excess of NJDEP SWQC
(a): acute aquatic life portection criteria as a one-hour average.
(c): chronic aquatic life portection critera as a four-day average.
(h): noncarcinogenic effect-based human health criteria as a 30-day average with no frequency of exceedance at or above the design flows specified in section N.J.A.C 7:9b-1.5(c)2 and are based on a risk level of one-in-one-million.
(hc): carcinogenic effect-based human health criteria as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2 and are based on a risk level of on-n-one-million.
(hcc): toxic substances considered to be possible human carcinogens as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7.9B-1.5(c)2 and are based on a risk level of one-in-one hundred thousand.

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #5
SURFACE WATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	J20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
Volatile Organic Compounds (VOC), µg/l									
Methylene Chloride	75-09-2	ND	ND	ND	ND	ND	ND	2.49(hc)	1600(hc)
Styrene	100-42-5	ND	ND	ND	ND	ND	ND	--	--
Tertiary butyl alcohol (TBA)	75-65-0	ND	ND	ND	ND	ND	ND	--	--
Tetrachloroethene	127-18-4	ND	ND	ND	ND	ND	ND	0.388(hc)	4.29(hc)
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	--	ND	ND	ND	ND	ND	ND	0.000000013(hc)	0.000000014(hc)
Toluene	108-88-3	ND	6.3	ND	0.24	ND	ND	7440(h)	200000(h)
trans-1 ,2-Dichloroethene	156-60-5	ND	ND	ND	ND	ND	ND	592(h)	--
trans-1 ,3-Dichloropropene	10061-02-6	ND	ND	ND	ND	ND	ND	--	--
Trichloroethene	79-01-6	ND	ND	ND	0.66	ND	ND	1.09(hc)	81(hc)
Trichlorofluoromethane	--	ND	ND	ND	ND	ND	ND	--	--
Vinyl Acetate	108-05-4	ND	ND	ND	ND	ND	ND	--	--
Vinyl chloride	75-01-4	ND	ND	ND	ND	ND	ND	0.0830(hc)	525(hc)
Xylenes (Total)	1330-20-7	ND	ND	ND	ND	ND	ND	--	--
TIVOC	--	0	6.3	0	1.54	0	0	--	--
TVOC	--	0	0	0	5.8	0	0	--	--

Legend:

µg/l: micrograms per liter, ppb
SWQC Surface Water Quality Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
SC: the general surface water classification applied to coastal saline waters.
SE: the general surface water classification applied to saline waters of estuaries.
FW-2: the general surface water classification applied to those fresh water that are not designated as FW1 or pinelands waters.
10 Concentration in excess of NJDEP SWQC
(a): acute aquatic life portection criteria as a one-hour average.
(c): chronic aquatic life portection critera as a four-day average.
(h): noncarcinogenic effect-based human health criteria as a 30-day average with no frequency of exceedance at or above the design flows specified in section N.J.A.C 7:9b-1.5(c)2 and are based on a risk level of one-in-one-million.
(hc): carcinogenic effect-based human health criteria as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2 and are based on a risk level of on-n-one-million.
(hcc): toxic substances considered to be possible human carcinogens as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7.9B-1.5(c)2 and are based on a risk level of one-in-one hundred thousand.

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #5
SURFACE WATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	j20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
Semi-Volatile Organic Compounds (SVOC), µg/l									
1,2,4-Trichlorobenzene	120-82-1	ND	ND	ND	ND	ND	ND	30.6(h)	113(h)
1,2-Dichlorobenzene	95-50-1	ND	ND	ND	ND	ND	ND	2,520)h)	16,500(h)
1,3-Dichlorobenzene	541-73-1	ND	ND	ND	ND	ND	ND	--	--
1,4-Dichlorobenzene	106-46-7	ND	ND	ND	ND	ND	ND	--	--
1,2-Diphenylhydrazine	--	ND	ND	ND	ND	ND	ND	0.0405(hc)	0.541(hc)
2,4,5-Trichlorophenol	95-95-4	ND	ND	ND	ND	ND	ND	2580(h)	9790(h)
2,4,6-Trichlorophenol	88-06-2	ND	ND	ND	ND	ND	ND	2.14(hc)	6.53(hc)
2,4-Dichlorophenol	120-83-2	ND	ND	ND	ND	ND	ND	92.7(h)	794(h)
2,4-Dimethylphenol	105-67-9	ND	ND	ND	ND	ND	ND	--	--
2,4-Dinitrophenol	51-28-5	ND	ND	ND	ND	ND	ND	69.7(h)	14000(h)
2,4-Dinitrotoluene	121-14-2	ND	ND	ND	ND	ND	ND	0.11(hc)	9.1(hc)
2,6-Dinitrotoluene	606-20-2	ND	ND	ND	ND	ND	ND	--	--
2-Chloronapthalene	91-58-7	ND	ND	ND	ND	ND	ND	--	--
2-Chlorophenol	95-57-8	ND	ND	ND	ND	ND	ND	122(h)	402(h)
2-Methylnaphthalene	91-57-6	ND	ND	ND	ND	ND	ND	--	--
2-Methylphenol	95-48-7	ND	ND	ND	ND	ND	ND	--	--
2-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--
2-Nitrophenol	88-75-5	ND	ND	ND	ND	ND	ND	--	--
3&4-Methylphenol	--	ND	ND	ND	ND	ND	ND	--	--

Legend:

µg/l: micrograms per liter, ppb
SWQC Surface Water Quality Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
SC: the general surface water classification applied to coastal saline waters.
SE: the general surface water classification applied to saline waters of estuaries.
FW-2: the general surface water classification applied to those fresh water that are not designated as FW1 or pinelands waters.
10 Concentration in excess of NJDEP SWQC
(a): acute aquatic life portection criteria as a one-hour average
(c): chronic aquatic life portection critera as a four-day average.
(h): noncarcinogenic effect-based human health criteria as a 30-day average with no frequency of exceedance at or above the design flows specified in section N.J.A.C 7:9b-1.5(c)2 and are based on a risk level of one-in-one-million.
(hc): carcinogenic effect-based human health criteria as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2 and are based on a risk level of on-n-one-million.
(hcc): toxic substances considered to be possible human carcinogens as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2 and are based on a risk level of one-in-one hundred thousand.

PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

TABLE #5
SURFACE WATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	j20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
Semi-Volatile Organic Compounds (SVOC), µg/l									
3,3-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	0.0386(hc)	0.0767(hc)
3-Nitroaniline	--	ND	ND	ND	ND	ND	ND	--	--
4,6-Dinitro-o-cresol	--	ND	ND	ND	ND	ND	ND	13.4(h)	765(h)
4-Bromophenyl-phenylether	--	ND	ND	ND	ND	ND	ND	--	--
4-Chloro-3-methylphenol	59-50-7	ND	ND	ND	ND	ND	ND	--	--
4-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	--	--
4-Chlorophenyl-phenylether	7005-72-3	ND	ND	ND	ND	ND	ND	--	--
4-Nitroaniline	10061-02-6	ND	ND	ND	ND	ND	ND	--	--
4-Nitrophenol	100-02-7	ND	ND	ND	ND	ND	ND	--	--
Acenaphthene	83-32-9	ND	1.5	ND	ND	ND	ND	--	--
Acenaphthylene	71-55-6	ND	ND	ND	ND	ND	ND	--	--
Anthracene	120-12-7	ND	0.99	ND	0.4	ND	ND	9570(h)	108000(h)
Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	0.000118(hc)	0.000535(hc)
Benzo(a)anthracene	56-55-3	0.53	ND	ND	0.79	ND	ND	0.0028(hc)	0.031(hc)
Benzo(a)pyrene	50-32-8	0.58	ND	ND	1.1	ND	ND	0.0028(hc)	0.031(hc)
Benzo(b)fluoranthene	205-99-2	0.59	ND	ND	ND	ND	ND	0.0028(hc)	0.031(hc)
Benzo(g,h,i)perylene	191-24-2	0.42	ND	ND	0.84	ND	ND	--	--
Benzo(k)fluoranthene	207-08-9	0.48	ND	ND	ND	ND	ND	0.0028(hc)	0.031(hc)

Legend:

µg/l: micrograms per liter, ppb
SWQC Surface Water Quality Criteria
NA: Not Available
ND: Not Detected above Laboratory Reported Detection Limits
SC: the general surface water classification applied to coastal saline waters.
SE: the general surface water classification applied to saline waters of estuaries.
FW-2: the general surface water classification applied to those fresh water that are not designated as FW1 or pinelands waters.
10 Concentration in excess of NJDEP SWQC
(a): acute aquatic life portection criteria as a one-hour average.
(c): chronic aquatic life portection critera as a four-day average.
(h): noncarcinogenic effect-based human health criteria as a 30-day average with no frequency of exceedance at or above the design flows specified in section N.J.A.C 7:9b-1.5(c)2 and are based on a risk level of one-in-one-million.
(hc): carcinogenic effect-based human health criteria as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2 and are based on a risk level of on-n-one-million
(hcc): toxic substances considered to be possible human carcinogens as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7.9B-1.5(c)2 and are based on a risk level of one-in-one hundred thousand.

PMK Group
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TABLE #5
SURFACE WATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	j20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
Semi-Volatile Organic Compounds (SVOC), µg/l									
Benzoic Acid	65-85-0	ND	ND	ND	ND	ND	ND	--	--
Benzyl Alcohol	100-51-6	ND	ND	ND	ND	ND	ND	--	--
bis(2-Chloroethoxy) methane	111-91-1	ND	ND	ND	ND	ND	ND	--	--
bis(2-Chloroethyl)ether	111-44-4	ND	ND	ND	ND	ND	ND	0.0311(hc)	1.4(hc)
bis(2-Chloroisopropyl)ether	39638-32-9	ND	ND	ND	ND	ND	ND	1250(h)	170000(h)
bis-(2-Ethylhexyl)phthalate	117-81-7	14.7	2.3	ND	36	1.7	3.1	1.76(hc)	5.92(hc)
Butylbenzylphthalate	85-68-7	ND	3.6	ND	ND	ND	ND	239(h)	416(h)
Carbazole	--	ND	ND	ND	ND	ND	ND	--	--
Chrysene	218-01-9	0.6	ND	ND	1.1	ND	ND	0.0028(hc)	0.031(hc)
Di-n-butylphthalate	84-74-2	ND	ND	ND	5.8	ND	ND	3530(h)	15700(h)
Di-n-octylphthalate	75-65-0	ND	ND	ND	ND	ND	ND	--	--
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	ND	ND	0.0028(hc)	0.031 (hc)
Dibenzofuran	132-64-9	ND	ND	ND	ND	ND	ND	--	--
Diethylphthalate	84-66-2	ND	ND	ND	ND	ND	ND	21200(h)	111000 (h)
Dimethylphthalate	131-11-3	ND	ND	ND	ND	ND	ND	313000(h)	2900000 (h)
Fluoranthene	206-44-0	1.1	2	ND	1.8	ND	ND	310(h)	393 (h)
Fluorene	86-73-7	ND	1.1	ND	ND	ND	ND	1340(h)	--
Hexachlorobenzene	118-74-1	ND	ND	ND	ND	ND	ND	0.000748(hc)	0.000775 (hc)

Legend:

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TABLE #5
SURFACE WATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	J20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
Semi-Volatile Organic Compounds (SVOC), µg/l									
Hexochlorobutadiene	87-68-3	ND	ND	ND	ND	ND	ND	6.94(h)	--
Hexachlorocyclopentadiene	77-47-4	ND	ND	ND	ND	ND	ND	245(h)	17000 (h)
Hexachloroethane	67-72-1	ND	ND	ND	ND	ND	ND	2.73(h)	12.4 (h)
Indeno(1,2,3-cd)pyrene	193-39-5	0.37	ND	ND	ND	ND	ND	0.0028(hc)	0.031 (hc)
Isophorone	78-59-1	ND	ND	ND	ND	ND	ND	552(h)	--
N-Nitro-Di-n-propylamine	--	ND	ND	ND	ND	ND	ND	--	--
N-Nitrosodimethylamine	62-75-9	ND	ND	ND	ND	ND	ND	0.000686(hc)	8.1 (hc)
N-Nitrosodiphenylamine	86-30-6	ND	1.7	ND	4.2	ND	ND	4.95(hc)	16.2 (hc)
Naphthalene	91-20-3	ND	2.3	ND	ND	ND	ND	--	--
Nitrobenzene	98-95-3	ND	ND	ND	ND	ND	ND	16.0(h)	1900 (h)
Pentachlorophenol	87-86-5	ND	ND	ND	ND	ND	ND	$e^{(1.005(pH)-4.830)}$(a) $e^{(.005(pH)-5.290)}$(c) 0.282(hc)	13(a) 7.9(c) 8.2(hc)
Phenanthrene	85-01-8	ND	3.6	ND	1.4	ND	ND	--	--
Pyrene	129-00-0	1	1..6	ND	2.5	ND	ND	797(h)	8970(h)
Pyridine	--	ND	ND	ND	ND	ND	ND	--	--
TSVOC	--	20.37	19.09	0	55.83	4.7	3.1	--	--
TISVOC	--	607.1	38.8	0	604.3	5.3	0	--	--

Legend:

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PMK Group
CONSULTING & ENVIRONMENTAL ENGINEERS

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TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	j20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
PCBs, Pesticides, Phenol, µg/l									
Aldrin	309-00-2	ND	ND	ND	ND	ND	ND	3.0(a) 0.000135(hc)	1.3(a) 0.000144(hc)
alpha-BHC	319-84-6	ND	ND	ND	ND	ND	ND	0.00391(hc)	0.0131(hc)
beta-BHC	319-85-7	ND	ND	ND	ND	ND	ND	0.137(hcc)	0.460(hcc)
Chlordane	57-74-9	ND	ND	ND	ND	ND	ND	2.4(a) 0.0043(c) 0.000277(hc)	0.09(a) 0.0040(c) 0.000283(hc)
delta-BHC	--	ND	ND	ND	ND	ND	ND	--	--
Dieldrin	7440-48-4	ND	ND	ND	ND	ND	ND	2.5(a) 0.0019(c) 0.000135(hc)	0.71(a) 0.0019(c) 0.000144(hc)
Endosulfan 1	959-98-8	ND	ND	ND	ND	ND	ND	0.22(a) 0.056(c) 0.932(h)	0.034(a) 0.0087(c) 1.99(h)
Endosulfan II	7439-92-1	ND	ND	ND	ND	ND	ND	0.22(a) 0.056(c) 0.932(h)	0.034(a) 0.0087(c) 1.99(h)
Endosulfan sulfate	1031-07-8	ND	ND	ND	ND	ND	ND	0.93(h)	2.0(h)

Legend:
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CONSULTING & ENVIRONMENTAL ENGINEERS

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TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

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Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	j20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2006	1/20/2006	1/31/2006		
PCBs, Pesticides, Phenol, µg/l									
Endrin	79-20-9	ND	ND	ND	ND	ND	ND	0.18(a) 0.0023(c) 0.629(h)	0.037(a) 0.0023(c) 0.678(h)
Endrin aldehyde	91-58-7	ND	ND	ND	ND	ND	ND	0.76(h)	0.81(h)
Endrin ketone	--	ND	ND	ND	ND	ND	ND	--	--
gamma-BHC (Lindane)	88-75-5	ND	ND	ND	ND	ND	ND	2.0(a) 0.080(c)	0.16(a)
Heptachlor	76-44-8	ND	ND	ND	ND	ND	ND	0.52(a) 0.0038(c) 0.000208(hc)	0.053(a) 0.0036(c) 0.000214(hc)
Heptachlorepoxide	1024-57-3	ND	ND	ND	ND	ND	ND	0.52(a) 0.0038(c) 0.000103(hc)	0.053(a) 0.0036(c) 0.000106(hc)
Methoxychlor	72-43-5	ND	ND	ND	ND	ND	ND	0.03(c) 40(h)	0.03(c)

Legend:

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SURFACE WATER LABORATORY RESULTS
TREMLEY POINT ROAD CONNECTOR
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PMK GROUP PROJECT #046108

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Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	J20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
PCBs, Pesticides, Phenol, µg/l									
4,4-DDD	91-57-6	0.028	ND	ND	0.032	ND	ND	0.000832(hc)	0.000837(hc)
4,4-DDE	72-55-9	ND	ND	ND	ND	ND	ND	0.000588(hc)	0.000591(hc)
4,4-DDT	50-29-3	ND	ND	ND	ND	ND	ND	1.1(a) 0.0010(c) 0.000588(hc)	0.13(a) 0.0010(c) 0.000591(hc)
Toxaphene	71-55-6	ND	ND	ND	ND	ND	ND	0.73(a) 0.00029 (c) 0.000730(hc)	0.21(a) 0.0002 (c) 0.000747(hc)
Aroclor-1016	--	ND	ND	ND	ND	ND	ND	0.014(c) 0.000244(hc)	0.030(c) 0.000247(hc)
Aroclor-1221	--	ND	ND	ND	ND	ND	ND	0.014(c) 0.000244(hc)	0.030(c) 0.000247(hc)
Aroclor-1232	--	ND	ND	ND	ND	ND	ND	0.014(c) 0.000244(hc)	0.030(c) 0.000247(hc)
Aroclor-1242	--	ND	ND	ND	ND	ND	ND	0.014(c) 0.000244(hc)	0.030(c) 0.000247(hc)
Aroclor-1248	100-02-7	ND	ND	ND	ND	ND	ND	0.014(c) 0.000244(hc)	0.030(c) 0.000247(hc)
Aroclor-1254	132-64-9	ND	ND	ND	ND	ND	ND	0.014(c) 0.000244(hc)	0.030(c) 0.000247(hc)
Aroclor-1260	--	ND	ND	ND	ND	ND	ND	0.014(c) 0.000244(hc)	0.030(c) 0.000247(hc)
Aroclor-1262	--	ND	ND	ND	ND	ND	ND	--	--
Aroclor-1268	--	ND	ND	ND	ND	ND	ND	--	--
Phenol	--	ND	ND	ND	ND	ND	ND	20,900(h)	4,600,000(h)

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TREMLEY POINT ROAD CONNECTOR
CARTERET/LINDEN, NJ
PMK GROUP PROJECT #046108

Sample No.	CASRN #	SW-1	SW-2	SW-4	SW-CR24	Tub-W	TUB-2	SWQC All FW-2 (µg/l)	SWQC All SE and SC (µg/l)
Laboratory ID.#		J15259-1	J15662-1	J16093-1	J15960-1	j20915-5	J21673-2		
Date Collected		11/9/2005	11/14/2005	11/18/2005	11/17/2005	1/20/2006	1/31/2006		
Metals, µg/l									
Antimony	7440-36-0	14.7	ND	ND	ND	ND	ND	12.2(h)	4300(h)
Arsenic	7440-38-2	38.5	ND	ND	26.7	ND	4.3	0.0170(hc)	0.136(hc)
Barium	88-75-5	ND	ND	ND	ND	ND	ND	2000(h)	--
Beryllium	105-67-9	ND	ND	ND	1	ND	ND	--	--
Cadmium	7440-43-9	ND	ND	ND	ND	ND	ND	10(h)	--
Chromium	7440-47-3	161	14	ND	117	ND	ND	160(h)	3230(h)
Copper	7440-50-8	389	248	ND	285	40	ND	--	7.9(a) 5.6(c)
Lead	7439-92-1	344	29.6	5.4	250	27.8	ND	5(h)	--
Manganese	--	ND	ND	ND	ND	0.22	ND	--	100(h)
Mercury	7439-97-6	3.9	ND	ND	4.1	ND	ND	0.144(h)	0.146(h)
Nickel	1634-04-4	88.1	87.9	ND	41.8	ND	ND	516(h)	3,900(h)
Selenium	91-58-7	ND	ND	ND	ND	ND	ND	10(h)	--
Silver	7440-22-4	ND	ND	ND	ND	ND	ND	164(h)	--
Thallium	71-55-6	ND	ND	ND	ND	ND	ND	1.70(h)	6.22(h)
Zinc	7440-66-6	858	313	ND	332	49.8	26.7	--	--
Cyanide	57-12-5	1.5	0.023	ND	0.94	0.03	ND	22(a) 5.2(c) 768(h)	1.0(a) 1.0(c) 220000(h)

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Qualifier	Indication
U:	The analyte was analyzed for, but was not detected above ther reported sample quantitation limit.
J:	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
R:	the sample results are rejected due to serious deficiencies in analytical performance. Represents an unusable result in which the compound may or may not be present in the sample.
N:	The analysis indicates the presence of an analyte for which there is presumptive evidence to make "tentative identification:.
UJ:	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
NJ:	the analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents and approximate concentration.

046108

ENVIRONMENTAL SOIL AND GROUNDWATER SAMPLING REPORT

NEW JERSEY TURNPIKE AUTHORITY

Interchange 12 Improvements Project

Borough of Carteret, Middlesex County
and
The City of Linden, Union County, New Jersey

Prepared for:

New Jersey Turnpike Authority
P.O. Box 1121
New Brunswick, New Jersey

Volume I of III

December 2003

Prepared by:

Paulus, Sokolowski & Sartor, LLC
consulting engineers and environmental planners
A KEYSPAN BUSINESS SOLUTION
67A Mountain Boulevard Extension
Warren, New Jersey 07059

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Volume II of III

Appendix A	Laboratory Analytical Reports – Soil (B-5, B-7, B-8 & B-10)
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Appendix B	Laboratory Analytical Reports – Soil (B-4 & B-15)

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Appendix C	Laboratory Analytical Reports – Soil (B-9
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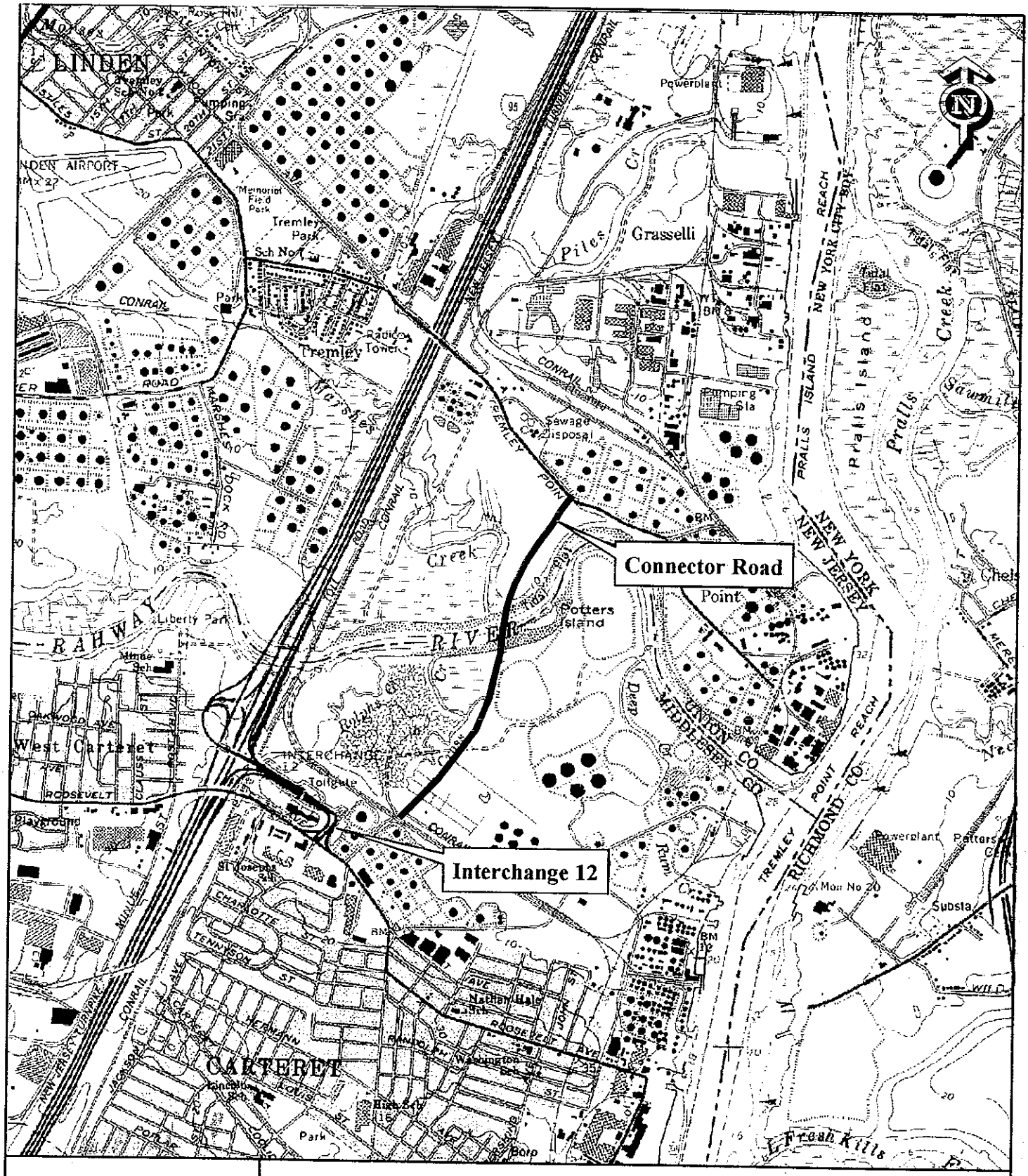
1.0 INTRODUCTION

On behalf of the New Jersey Turnpike Authority (Authority), Paulus, Sokolowski and Sartor, LLC (PS&S) conducted a limited site investigation consisting of the acquisition of soil and groundwater samples for environmental laboratory analysis for the Authority's Interchange 12 Improvements project located in the Borough of Carteret, Middlesex County and the City of Linden, Union County, New Jersey. The general location of the site is shown on Figure No. 1, Site Location Map.

This investigation was performed in conjunction with the preliminary geotechnical investigation performed for the above-referenced project. The purpose of this limited site investigation was to investigate the potential for subsurface environmental contamination within the vicinity of the Interchange 12 and along the proposed alignment for the Connector Road. This investigation was performed by collecting environmental soil samples from nine (9) of the proposed fifteen (15) geotechnical soil borings performed under the Authority's Contract OPS 1950. Groundwater samples were collected from two (2) of the nine (9) environmental soil-boring locations. All boring locations are shown on the Boring Location Plan, Plate Nos. 1 and 2, that was prepared by Edwards and Kelcey, Inc. (E&K).



Legend

Connector Road

SOURCE:
USGS Topographic Map,
7.5 Minute Series
Arthur Kill Quadrangle NY,NJ

USGS SITE LOCATION MAP
NEW JERSEY TURNPIKE ATHORITY INTERCHANGE 12 IMPROVEMENTS
BOROUGH OF CARTERET, MIDDLESEX COUNTY AND CITY OF LINDEN
UNION COUNTY, NEW JERSEY

Paulus, Sokolowski & Sartor, LLC
consulting engineers and environmental planners
A KEYSPAN BUSINESS SOLUTION

Drawn By: JJ	Scale: 1" = 2000'	Project No. 02595.001.023
Chk'd By: GK	Date: November 21, 2003	Figure No. 1

2.0 SITE DESCRIPTION

The Interchange 12 Improvements project consists of the redesign and construction of the Interchange 12 to improve the existing traffic congestion in the area, and design and construction of a Connector Road that would originate from Industrial Road in Carteret, traverse over the Rahway River and terminate at Tremley Point Road in Linden. The Connector Road would provide direct access from the New Jersey Turnpike's Interchange 12 to the Tremley Point area of the City of Linden, Union County, New Jersey. Interchange 12 is located at milepost (MP) 95.9 of the New Jersey Turnpike in the Borough of Carteret, Middlesex County.

Interchange 12 is bounded by the Turnpike and rail lines operated by Conrail Elizabethport and Perth Amboy Branch to the west and under a portion of the Interchange, Roosevelt Avenue to the south, petroleum storage tanks owned and operated by BP/Amoco to the east, and a railroad spur to the north.

Industrial Road is bounded to the north by rail lines operated by Conrail and chemical storage facilities operated by Kinder Morgan Inc. To the south are petroleum storage tanks owned and operated by BP/Amoco and Roosevelt Avenue. To the east is the Arthur Kill and to the west is Interchange 12.

Tremley Point Road is a privately maintained roadway that originates at the point where it crosses over the Turnpike at MP 97.2. To the west of this location, the road is known as Wood Avenue. Various petroleum bulk storage facilities and the Rahway River with its associated wetlands bound Tremley Point Road.

3.0 SOIL AND GROUNDWATER SAMPLING PROGRAM

A sampling and analysis program was conducted to identify the potential for the presence of contaminants in the near surface soils and groundwater at the project site. The preliminary geo-environmental boring program consisted of a total of sixteen (B-1 through B-16) soil borings for the project, with ten (10) borings located within the vicinity of Interchange 12 and six (6) borings located along the proposed Connector Road alignment. The boring locations are shown on the Boring Location Plan, Plate Nos. 1 and 2. The soil and groundwater sampling locations were based on the information obtained from the document review. Sampling locations were selected to assess areas judged to have a potential to contain contaminants.

One boring (B-12) along the Connector Road alignment was not performed due to site access constraints, and therefore, soil and groundwater samples were not obtained at this location. Also, boring B-11 was originally located in a wetland area, and was relocated to an upland area adjacent to the original location. The first attempt to perform boring B-11 was terminated after encountering a strong odor at a depth of about 15 feet below the ground surface, and was subsequently relocated a second time to complete the boring. In accordance with the requirements of BP/Amoco, boring B-16, which was performed within the containment area of the petroleum storage tank, was double-cased.

The Project Surveyor located the test borings in the field and determined the elevation of each boring. Prior to the field investigation, PS&S's drilling subcontractor contacted the statewide utility locator service. An independent utility locator was also employed to clear the boring locations of any underground utilities within the BP/Amoco petroleum storage tank areas. The test-boring subcontractor, Aquifer Drilling and Testing, Inc. (ADT) was retained directly by PS&S and performed the drilling and sampling for the test borings.

All borings were performed under the full-time observation of a PS&S geologist/engineer who maintained continuous logs of the explorations and monitored the sampling operations in order to obtain the desired subsurface information. All samples were classified in general accordance with the Unified Soil Classification System. Detailed descriptions of the subsurface conditions encountered in the borings are presented on the attached individual interpretative Boring Logs, Plate Nos. 3.1 through 3.15.

3.1 Soil Sampling Program

Soil samples for environmental laboratory analyses were obtained from a total of nine (9) soil borings: six (6) borings (B-4, B-5, B-7, B-8, B-9, and B-16) in the vicinity of the Interchange 12, and three (3) borings (B-10, B-11 and B-15) along the proposed Connector Road alignment. Soil samples for environmental analyses were not obtained from boring B-12 due to the cancellation of the boring.

All borings were performed using a truck-mounted drilling rig utilizing mud rotary drilling techniques to advance the boreholes. However, mud was utilized after environmental soil samples were collected. The soil samples were either obtained from geotechnical borings or from separate borings adjacent to geotechnical borings. Soil samples were obtained from each boring by the Standard Penetration Test (SPT) method in general accordance with the American Society of Testing and Materials (ASTM) D1586 procedures. All field sampling equipment were cleaned and decontaminated in accordance with the May 1992 New Jersey Department of Environmental Protection (NJDEP) Field Sampling Procedures Manual. Soil samples were obtained continuously from the ground surface to a depth of twelve (12) feet and at five-foot intervals thereafter to the termination depths of the borings. Soils contained in the split spoon sampler were field screened with a photo-ionization detector (PID). One sample was obtained from a six-inch interval within the 0 to 2 feet depth interval and was designated by the boring number appended by the letter "A". The second soil sample was obtained from the highest PID reading or the six-inch interval just above the groundwater interface and was designated by the boring number appended by the letter "B".

3.2 Groundwater Sampling Program

Groundwater samples were acquired from two (B-8 and B-11) of the nine (9) environmental soil-boring locations. A temporary piezometer was installed at boring location B-5, however, groundwater was not observed in the piezometer. Boring B-12 was not performed due to site constraints. In addition, BP/Amoco would not authorize the installation of any piezometers within their petroleum storage tank areas. Therefore, a temporary piezometer was not installed in boring B-16. Groundwater samples were obtained from two-inch diameter, temporary piezometers (Passively Placed Narrow Diameter Point) installed in the boreholes. The groundwater samples were collected, following installation, utilizing a three-quarter (3/4) inch outside diameter polyvinyl chloride (PVC) disposable bailer. Following collection of the groundwater samples, the temporary piezometers were left in place for 24 hours to measure shallow groundwater levels before being removed and the boreholes grouted.

3.3 Laboratory Analysis Program

Soil and groundwater samples were placed in laboratory-provided containers fitted with Teflon seals and placed in an iced cooler in conformance with the May 1992 NJDEP Field Sampling Procedures Manual. The analytical samples were relinquished for laboratory analysis, under standard chain-of-custody documentation, to PS&S's contract laboratory, Hampton-Clarke Veritech, Inc. (Veritech), an NJDEP-certified laboratory. The soil samples were analyzed for total petroleum hydrocarbons (TPHCs) and priority pollutants plus a forty-peak library search (PP+40). The groundwater samples were analyzed for PP+40, total dissolved solids (TDS) and chlorides. The soil samples obtained for the volatile organic fraction of the PP+40 analysis were collected utilizing the Methanol Preservation Procedure. A soil and groundwater sampling program is presented in Table No. 1.

TABLE NO. 1 : SOIL AND GROUNDWATER SAMPLING PROGRAM
NJTA INTERCHANGE 12 IMPROVEMENTS
CARTERET, MIDDLESEX COUNTY AND LINDEN, UNION COUNTY, NEW JERSEY

BORING NUMBER	BORING		TOTAL DRILLED DEPTH (ft)	PERMANENT PIEZOMETERS		ENVIRONMENTAL SOIL SAMPLING			ENVIRONMENTAL GROUNDWATER SAMPLING			
	STARTED	COMPLETED		DEPTH INSTALLED	GROUND WATER DEPTH (ft)	SAMPLING DATE	SAMPLING FROM	SAMPLING DEPTHS (ft)	TEMPORARY PIEZOMETER DEPTH (ft)	DATE INSTALLED	SAMPLING DATE	GROUND WATER DEPTH (ft)
BORINGS FOR INTERCHANGE 12												
B-1	04/03/03	04/16/03	53.0									
B-2	04/15/03	04/15/03	40.6									
B-3	04/15/03	04/29/03	100.0	11.0	4.7							
B-4	04/28/03	04/30/03	120.0			04/28/03	Geotechnical Boring	1-2, 4-5				
B-5	04/04/03	04/08/03	65.5			04/17/03	Separate Boring	1-2, 9-10	15.0	04/17/03	04/18/03	Dry
B-6	04/10/03	04/10/03	50.2									
B-7	04/10/03	04/11/03	46.0	11.0	6.1	04/17/03	Separate Boring	1-2, 5-6				
B-8	04/08/03	04/09/03	46.0			04/17/03	Separate Boring	1-2, 4-6	15.0	04/17/03	04/18/03	7.6
B-9	05/01/03	05/02/03	51.3			05/01/03	Geotechnical Boring	1-2, 3-4				
B-16	05/22/03	05/23/03	40.0			05/22/03	Geotechnical Boring	1-2, 3-4	Temp. piezometer not authorized by BP/Amoco			
BORINGS FOR CONNECTOR ROAD												
B-10	04/17/03	04/18/03	41.0	11.0	3.3	04/17/03	Separate Boring	1-2, 6-7				
B-11A	06/02/03	06/02/03	15.0			06/02/03	Geotechnical Boring	1-2, 3-4	Boring terminated after encountering strong odor			
B-11B	07/21/03	07/21/03	45.0						15.0	07/21/03	07/22/03	4.3
B-12	Boring not performed due to site constraints											
B-13	04/16/03	04/17/03	45.0									
B-14	04/17/03	04/18/03	45.0									
B-15	04/30/03	05/11/03	45.3			04/30/03	Geotechnical Boring	1-2, 8-9				

4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

The following QA/QC program was implemented at the subject site. The sampling was performed in accordance with NJDEP protocols. Prior to commencement of the sampling operations and between each analytical sampling interval, the sampling equipment was decontaminated using accepted NJDEP protocols. During the sampling operations, PS&S personnel wore disposable gloves that were changed following acquisition of each analytical sample to prevent cross-contamination between sampling locations. Sampling equipment was decontaminated in the following manner.

1. Thorough scrub and washing with non-phosphate detergent and tap water wash;
2. Tap water rinse;
3. Distilled/de-ionized water rinse;
4. 10% nitric acid rinse;
5. Distilled/de-ionized water rinse;
6. Acetone rinse;
7. Air dry, and;
8. Distilled/de-ionized water rinse.

QA/QC samples were prepared for each day of sampling in accordance with accepted NJDEP protocols. One field blank and one methanol trip blank were prepared for each day of soil and groundwater sampling. Field blanks were analyzed for the same parameters as the soil and groundwater samples collected that day. Methanol trip blanks were analyzed for VOC+10 parameters.

All analytical samples were placed in laboratory-provided glass containers fitted with Teflon seals, labeled, placed in an iced cooler, and relinquished to an NJDEP-certified laboratory accompanied by standard chain-of-custody documentation.

5.0 DISCUSSION OF LABORATORY ANALYTICAL RESULTS

5.1 Soil Sample Analytical Results

The laboratory analytical data package for soil samples is enclosed in Appendix A. The analytical results reported by the laboratory for the soil samples and associated Quality Assurance and Quality Control (QA/QC) samples obtained during the implementation of this sampling program are summarized in Table Nos. 2, 3, 4 and 5. Only those parameters reported to be present in the samples are summarized on these tables. The analytical results were compared to the NJDEP's "Residential Direct Contact Soil Cleanup Criteria" (RDCSCC), "Non-Residential Direct Contact Soil Cleanup Criteria" (NRDCSCC), and "Impact to Groundwater Soil Cleanup Criteria" (IGWSCC), revised June 1999, and is also included on Table Nos. 2, 3, 4 and 5. The NRDCSCC was used as the focus for reviewing the results, as the project will not include any residential components. However, in some cases, the NRDCSCC is the same as the RDCSCC and this is indicated on the summary tables.

5.1.1 Total Petroleum Hydrocarbons (TPHCs)

Within the vicinity of Interchange 12, TPHCs were reported in 10 of the 12 soil samples at concentrations ranging from 42 parts per million (ppm) to 6,500 ppm. TPHC was not detected in samples B-4B and B-16B. Along the Connector Road alignment, TPHCs were reported in 4 of the 6 soil samples at concentrations ranging from 51 ppm to 990 ppm. TPHC was not detected in samples B-15A and B-15B. These concentrations are significantly below the NJDEP Total Organic Contaminants Soil Cleanup Criteria of 10,000 ppm, which includes TPHCs (See Table No. 2).

TABLE NO. 2
NJTA - INTERCHANGE 12 IMPROVEMENTS
VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	B-5A	B-5B	B-7A	FB041703	B-7B	B-8A	**NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Impact to Groundwater Cleanup Criteria (ppm)**
Lab Sample ID No.	AB83133	AB83134	AB83136	AB83135	AB83137	AB83138			
Depth (ft)	1'-2'	9'-10'	1'-2'		5'-6'	1'-2'			
SampleType	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Date	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/17/2003			
Units	ppm	ppm	ppm	ppm	ppm	ppm			
VOLATILE ORGANIC COMPOUNDS									
Acetone	ND @ 2.0	ND @ 2.6	ND @ 2.3	ND @ 0.020	ND @ 2.2	ND @ 2.2	1000	1000	100
Chlorobenzene	ND @ 0.50	ND @ 0.49	ND @ 0.57	ND @ 0.005	ND @ 0.56	ND @ 0.54	37	680	1
Ethylebenzene	ND @ 0.10	ND @ 0.099	ND @ 0.11	ND @ 0.001	ND @ 0.11	ND @ 0.11	1000	1000	100
Methylene Chloride	ND @ 0.50	0.13 J	0.27 J	ND @ 0.005	ND @ 0.56	0.22 J	49	210	1
Toluene	ND @ 0.10	ND @ 0.099	ND @ 0.11	ND @ 0.001	ND @ 0.11	ND @ 0.11	1000	1000	500
M&p - Xylenes	ND @ 0.20	ND @ 0.20	ND @ 0.23	ND @ 0.002	ND @ 0.22	ND @ 0.22	*	*	*
O - Xylene	ND @ 0.10	ND @ 0.099	ND @ 0.11	ND @ 0.001	ND @ 0.11	ND @ 0.11	*	*	*
Total Xylenes	ND	ND	ND	ND	ND	ND	410	1000	67
Total Targeted VOC's	ND	0.13 J	0.27 J	ND	ND	0.22J	*	*	*
Total Targeted VOC's w/o Qualifiers	ND	ND	ND	ND	ND	ND	*	*	*
Total Non-Targeted VOC's	ND		J		ND	ND J	*	*	*
Total Petroleum Hydrocarbons	42	100	350	NA	410	6500	10,000	10,000	10,000

NOTES:
All results reported in Parts Per Million (PPM)
Tt - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 2
NJTA - INTERCHANGE 12 IMPROVEMENTS
VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	B-8B	B-10A	B-10B	TB041703	B-4A	B-4B	**NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Impact to Groundwater Cleanup Criteria (ppm)**
Lab Sample ID No.	AB83139	AB83140	AB83141	AB83142	AB83644	AB83645			
Depth (ft)	4'-6'	1'-2'	6'-7'		1'-2'	4'-5'			
SampleType	SOIL	SOIL	SOIL	Methanol	SOIL	SOIL			
Sample Date	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/28/2003	4/28/2003			
Units	PPM	PPM	PPM	PPM	PPM	PPM			
VOLATILE ORGANIC COMPOUNDS									
Acetone	ND @ 2.2	ND @ 2.3	ND @ 2.6	ND @ 2.0	ND @ 2.3	ND @ 2.3	1000	1000	100
Chlorobenzene	ND @ 0.56	ND @ 0.59	ND @ 0.65	ND @ 0.5	ND @ 0.58	ND @ 0.59	37	680	1
Ethylebenzene	ND @ 0.11	ND @ 0.12	ND @ 0.13	ND @ 0.1	ND @ 0.12	ND @ 0.12	1000	1000	100
Methylene Chloride	ND @ 0.56	0.12 J	ND @ 0.65	ND @ 0.5	ND @ 2.2	ND @ 2.2	49	210	1
Toluene	ND @ 0.11	ND @ 0.12	ND @ 0.13	ND @ 0.1	ND @ 0.12	ND @ 0.12	1000	1000	500
M&p - Xylenes	ND @ 0.22	ND @ 0.24	ND @ 0.26	ND @ 0.2	ND @ 0.23	ND @ 0.23	*	*	*
O - Xylene	ND @ 0.11	ND @ 0.12	ND @ 0.13	ND @ 0.1	ND @ 0.12	ND @ 0.12	*	*	*
Total Xylenes	ND	ND	ND	ND	ND	ND	410	1000	67
Total Targeted VOC's	ND	0.12 J	ND	ND	ND	ND	*	*	*
Total Targeted VOC's w/o Qualifiers	ND	ND	ND	ND	ND	ND	*	*	*
Total Non-Targeted VOC's	ND	ND	ND	ND	ND	ND	*	*	*
Total Petroleum Hydrocarbons	710	800	990	NA	45	ND @ 39	10,000	10,000	10,000

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 2
NJTA - INTERCHANGE 12 IMPROVEMENTS
VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	B-16A	B-16B	FB052203	TB052203	**NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Impact to Groundwater Cleanup Criteria (ppm)**
Lab Sample ID No.	AB85532	AB85533	AB85534	AB85535			
Depth (ft)	1'-2'	3'-4'					
SampleType	SOIL	SOIL	WATER	METHANOL			
Sample Date	5/22/2003	5/22/2003	5/22/2003	5/22/2003			
Units	PPM	PPM	PPM	PPM			
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND @ 2.3	ND @ 2.7	ND @ 0.02	ND @ 2.0	1000	1000	100
Chlorobenzene	ND @ 0.57	ND @ 0.66	ND @ 0.005	ND @ 0.50	37	680	1
Ethylebenzene	ND @ 0.11	ND @ 0.13	ND @ 0.001	ND @ 0.10	1000	1000	100
Methylene Chloride	ND @ 0.57	ND @ 0.66	ND @ 0.005	ND @ 0.50	49	210	1
Toluene	ND @ 0.11	ND @ 0.13	ND @ 0.001	ND @ 0.10	1000	1000	500
M&p - Xylenes	ND @ 0.23	ND @ 0.27	ND @ 0.002	ND @ 0.20	*	*	*
O - Xylene	ND @ 0.11	ND @ 0.13	ND @ 0.001	ND @ 0.10	*	*	*
Total Xylenes	ND	ND	ND	ND	410	1000	67
Total Targeted VOC's	ND	ND	ND	ND	*	*	*
Total Targeted VOC's w/o Qualifiers	ND	ND	ND	ND	*	*	*
Total Non-Targeted VOC's	ND	ND	ND	ND	*	*	*
Total Petroleum Hydrocarbons	160	ND @ 40	NA	NA	10,000	10,000	10,000

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 2
NJTA - INTERCHANGE 12 IMPROVEMENTS
VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	FB050103S	TB050103S	B-9A	B-9B	TB050103	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83902	AB83903	AB83904	AB83905	AB83906			
Depth (ft)			1'-2'	3'-4'				
SampleType	WATER	WATER	SOIL	SOIL	METHANOL			
Sample Date	5/1/2003	5/1/2003	5/1/2003	5/1/2003	5/1/2003			
Units	PPM	PPM	PPM	PPM	PPM			
VOLATILE ORGANIC COMPOUNDS								
Acetone	0.7	ND @ 0.02	ND @ 2.9	ND @ 2.4	ND @ 2.0	1000	1000	100
Chlorobenzene	ND @ 0.005	ND @ 0.005	ND @ 0.72	ND @ 0.59	ND @ 0.50	37	680	1
Ethylebenzene	ND @ 0.001	ND @ 0.001	ND @ 0.14	ND @ 0.12	ND @ 0.10	1000	1000	100
Methylene Chloride	ND @ 0.005	ND @ 0.005	ND @ 0.72	ND @ 0.59	ND @ 0.50	49	210	1
Toluene	ND @ 0.001	ND @ 0.001	0.22	ND @ 0.12	ND @ 0.10	1000	1000	500
M&p - Xylenes	ND @ 0.002	ND @ 0.002	0.31	0.19 J	ND @ 0.20	*	*	*
O - Xylene	ND @ 0.001	ND @ 0.001	ND @ 0.14	ND @ 0.12	ND @ 0.10	*	*	*
Total Xylenes	ND	ND	0.31	0.19 J	ND	410	1000	67
Total Targeted VOC's	0.7	ND	0.53	0.19 J	ND	*	*	*
Total Targeted VOC's w/o Qualifiers	0.7	ND	0.53	ND	ND	*	*	*
Total Non-Targeted VOC's	ND	ND	ND	ND	ND	*	*	*
Total Petroleum Hydrocarbons	NA	NA	1800	1700	NA	10,000	10,000	10,000

NOTES:
All results reported in Parts Per Million (PPM)
TT - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 2
NJTA - INTERCHANGE 12 IMPROVEMENTS
VOLATILE ORGANIC COMPOUNDS IN SOIL
JUNE 2003

Sample Number	TB	FB	B-11A	B-11B	**NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Impact to Groundwater Cleanup Criteria (ppm)**
Lab Sample ID No.	AB86071	AB86072	AB86073	AB86074			
Depth (ft)			1'-2'	3'-4'			
SampleType	METHANOL	WATER	SOIL	SOIL			
Sample Date	6/2/2003	6/2/2003	6/2/2003	6/2/2003			
Units	PPM	PPM	PPM	PPM			
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND @ 2.0	ND @ 0.02	ND @ 2.2	ND @ 2.4	1000	1000	100
Chlorobenzene	ND @ 0.50	ND @ 0.005	ND @ 0.55	ND @ 0.61	37	680	1
Ethylebenzene	ND @ 0.10	ND @ 0.001	ND @ 0.11	ND @ 0.12	1000	1000	100
Methylene Chloride	0.11	ND @ 0.005	0.21 J	0.12 J	49	210	1
Toluene	ND @ 0.10	ND @ 0.001	ND @ 0.11	0.15	1000	1000	500
M&p - Xylenes	ND @ 0.20	ND @ 0.002	ND @ 0.22	0.30	*	*	*
O - Xylene	ND @ 0.10	ND @ 0.001	ND @ 0.11	ND @ 0.12	*	*	*
Total Xylenes	ND	ND	ND	0.30	410	1000	67
Total Targeted VOC's	0.11 J	ND	0.21 J	0.57 J	*	*	*
Total Targeted VOC's w/o Qualifiers	ND	ND	ND	0.45	*	*	*
Total Non-Targeted VOC's	ND	ND	ND	ND	*	*	*
Total Petroleum Hydrocarbons	NA	NA	51	75	10,000	10,000	10,000

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 2
NJTA - INTERCHANGE 12 IMPROVEMENTS
VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	FB042803S	B-15A	B-15B	FB043003S	TB043003S	TB043003	**NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Impact to Groundwater Cleanup Criteria (ppm)**
Lab Sample ID No.	AB83646	AB83647	AB83648	AB83649	AB83650	AB83651			
Depth (ft)		1'-2'	8'-9'						
SampleType	SOIL	SOIL	SOIL	WATER	WATER	Methanol			
Sample Date	4/28/2003	4/30/2003	4/30/2003	4/30/2003	4/30/2003	4/30/2003			
Units	PPM	PPM	PPM	PPM	PPM	PPM			
VOLATILE ORGANIC COMPOUNDS									
Acetone	ND @ 0.005	ND @ 2.9	ND @ 2.5	45,000	ND @ 0.005	ND @ 2.0	1000	1000	100
Chlorobenzene	ND @ 0.005	ND @ 0.72	ND @ 0.62	ND @ 0.005	ND @ 0.005	ND @ 0.50	37	680	1
Ethylebenzene	ND @ 0.001	ND @ 0.14	ND @ 0.12	ND @ 0.001	ND @ 0.001	ND @ 0.10	1000	1000	100
Methylene Chloride	0.0012 J	ND @ 0.72	ND @ 0.62	1000	1100	ND @ 0.50	49	210	1
Toluene	ND @ 0.001	ND @ 0.14	ND @ 0.12	ND @ 0.001	ND @ 0.001	ND @ 0.10	1000	1000	500
M&p - Xylenes	ND @ 0.002	ND @ 0.29	ND @ 0.25	ND @ 0.002	ND @ 0.002	ND @ 0.20	*	*	*
O - Xylene	ND @ 0.001	ND @ 0.14	ND @ 0.12	ND @ 0.001	ND @ 0.001	ND @ 0.10	*	*	*
Total Xylenes	ND	ND	ND	ND	ND	ND	410	1000	67
Total Targeted VOC's	0.12 J	ND	ND	ND	ND	ND	*	*	*
Total Targeted VOC's w/o Qualifiers	ND	ND	ND	ND	ND	ND	*	*	*
Total Non-Targeted VOC's	ND	ND	ND	ND	ND	ND	*	*	*
Total Petroleum Hydrocarbons	NA	ND @ 44	ND @ 41	NA	NA	NA	10,000	10,000	10,000

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 3
NJTA - INTERCHANGE 12 IMPROVEMENTS
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	B-16A	B-16B	FB052203	TB052203	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB85532	AB85533	AB85534	AB85535			
Depth (ft)	1'-2'	3'-4'					
SampleType	SOIL	SOIL	WATER	METHANOL			
Sample Date	5/22/2003	5/22/2003	5/22/2003	5/22/2003			
Units	PPM	PPM	PPM	PPM			
SEMI-VOLATILE ORGANIC COMPOUNDS							
2-Methylnaphthalene	0.10 J	ND @ 0.58	NA	NA	*	*	*
Acenaphthene	ND @ 0.60	ND @ 0.58	NA	NA	3400	10000	100
Acenaphthylene	ND @ 0.60	ND @ 0.58	NA	NA	*	*	*
Anthracene	ND @ 0.60	ND @ 0.58	NA	NA	10000	10000	100
Benzo[a]anthracene	ND @ 0.60	ND @ 0.58	NA	NA	0.9	4	500
Benzo[a]pyrene	ND @ 0.60	ND @ 0.58	NA	NA	0.66	0.66	100
Benzo[b]fluoranthene	ND @ 0.60	ND @ 0.58	NA	NA	0.9	4	50
Benzo[g,h,I]perylene	ND @ 0.60	ND @ 0.58	NA	NA	*	*	*
Benzo[k]fluoranthene	ND @ 0.60	ND @ 0.58	NA	NA	0.9	4	500
Butylbenzylphalate	ND @ 0.60	ND @ 0.58	NA	NA	1100	10000	100
Bis(2-Ethylhexyl)phthalate	ND @ 0.60	ND @ 0.58	NA	NA	49	210	100
Carbazole	ND @ 0.60	ND @ 0.58	NA	NA	*	*	*
Chrysene	ND @ 0.60	ND @ 0.58	NA	NA	9	40	500
Dibenzo[a,h]Anthracene	ND @ 0.60	ND @ 0.58	NA	NA	0.66	0.66	100
Diethylphthalate	ND @ 0.60	0.064 J	NA	NA	10000	10000	50
Dibenzofuran	ND @ 0.60	ND @ 0.58	NA	NA	*	*	*
Di-n-butylphalate	ND @ 0.60	ND @ 0.58	NA	NA	5700	10000	100
Di-n-octylphthalate	ND @ 0.60	ND @ 0.58	NA	NA	1100	10000	100
Fluoranthene	ND @ 0.60	ND @ 0.58	NA	NA	2300	10000	100
Fluorene	0.11 J	ND @ 0.58	NA	NA	2300	10000	100
Indeno[1,2,3-cd]pyrene	ND @ 0.60	ND @ 0.58	NA	NA	0.9	4	500
Naphthalene	ND @ 0.60	ND @ 0.58	NA	NA	230	4200	100
Phenanthrene	0.12 J	ND @ 0.58	NA	NA	*		
Pyrene	ND @ 0.60	ND @ 0.58	NA	NA	1700	10000	100
Total Targeted BN's	0.33 J	0.064 J	NA	NA	*	*	*
Total Targeted BN's w/o Qualifiers	NA	ND	NA	NA	*	*	*
Total Non-Targeted BN's	NA	ND	NA	NA	*	*	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 3
NJTA - INTERCHANGE 12 IMPROVEMENTS
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	FB050103S	TB050103S	B-9A	B-9B	TB050103	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83902	AB83903	AB83904	AB83905	AB83906			
Depth (ft)			1'-2'	3'-4'				
SampleType	WATER	WATER	SOIL	SOIL	METHANOL			
Sample Date	5/1/2003	5/1/2003	5/1/2003	5/1/2003	5/1/2003			
Units	PPM	PPM	PPM	PPM	PPM			
SEMI-VOLATILE ORGANIC COMPOUNDS								
2-Methylnaphthalene	NA	NA	0.78	0.28 J	NA	*	*	*
Acenaphthene	NA	NA	0.13 J	0.067 J	NA	3400	10000	100
Acenaphthylene	NA	NA	ND @ 0.57	ND @ 0.57	NA	*	*	*
Anthracene	NA	NA	0.14 J	0.057 J	NA	10000	10000	100
Benzo[a]anthracene	NA	NA	0.26 J	0.12 J	NA	0.9	4	500
Benzo[a]pyrene	NA	NA	0.24 J	0.098 J	NA	0.66	0.66	100
Benzo[b]fluoranthene	NA	NA	0.33 J	0.15 J	NA	0.9	4	50
Benzo[g,h,I]perylene	NA	NA	0.071 J	ND @ 0.57	NA	*	*	*
Benzo[k]fluoranthene	NA	NA	0.13 J	0.061 J	NA	0.9	4	500
Butylbenzylphalate	NA	NA	ND @ 0.57	ND @ 0.57	NA	1100	10000	100
Bis(2-Ethylhexyl)phthalate	NA	NA	0.31 J	0.21 JB	NA	49	210	100
Carbazole	NA	NA	ND @ 0.57	ND @ 0.57	NA	*	*	*
Chrysene	NA	NA	0.30 J	0.12 J	NA	9	40	500
Dibenzo[a,h]Anthracene	NA	NA	ND @ 0.57	ND @ 0.57	NA	0.66	0.66	100
Diethylphthalate	NA	NA	ND @ 0.57	ND @ 0.57	NA	10000	10000	50
Dibenzofuran	NA	NA	0.11 J	ND @ 0.57	NA	*	*	*
Di-n-butylphalate	NA	NA	0.58 J	0.77 J	NA	5700	10000	100
Di-n-octylphthalate	NA	NA	ND @ 0.57	ND @ 0.57	NA	1100	10000	100
Fluoranthene	NA	NA	.64	0.27 J	NA	2300	10000	100
Fluorene	NA	NA	.22 J	0.11 J	NA	2300	10000	100
Indeno[1,2,3-cd]pyrene	NA	NA	.072 J	ND @ 0.57	NA	0.9	4	500
Naphthalene	NA	NA	.26 J	0.12 J	NA	230	4200	100
Phenanthrene	NA	NA	.74	0.29 J	NA	*		
Pyrene	NA	NA	.58	0.26 J	NA	1700	10000	100
Total Targeted BN's	NA	NA	5.631	2.29	NA	*	*	*
Total Targeted BN's w/o Qualifiers	NA	NA	3.00	ND	NA	*	*	*
Total Non-Targeted BN's	NA	NA	NA	NA	NA	*	*	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 3
NJTA - INTERCHANGE 12 IMPROVEMENTS
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	B-5A	B-5B	B-7A	FB041703	B-7B	B-8A	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83133	AB83134	AB83136	AB83135	AB83137	AB83138			
Depth (ft)	1'-2'	9'-10'	1'-2'		5'-6'	1'-2'			
SampleType	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Date	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/17/2003			
Units	ppm	ppm	ppm	ppm	ppm	ppm			
SEMI-VOLATILE ORGANIC COMPOUNDS									
2-Methylnaphthalene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	ND @ 0.37	ND @ 0.36	*	*	*
Acenaphthene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	0.045 J	ND @ 0.36	3400	10000	100
Acenaphthylene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	ND @ 0.37	ND @ 0.36	*	*	*
Anthracene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	0.11 J	ND @ 0.36	10000	10000	100
Benzo[a]anthracene	ND @ 0.35	ND @ 0.35	0.13 J	NA	0.32 J	ND @ 0.36	0.9	4	500
Benzo[a]pyrene	ND @ 0.35	ND @ 0.35	0.13	NA	0.27 J	ND @ 0.36	0.66	0.66	100
Benzo[b]fluoranthene	ND @ 0.35	ND @ 0.35	0.18	NA	0.32 J	ND @ 0.36	0.9	4	50
Benzo[g,h,I]perylene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	0.061 J	ND @ 0.36	*	*	*
Benzo[k]fluoranthene	ND @ 0.35	ND @ 0.35	0.062	NA	0.16 J	ND @ 0.36	0.9	4	500
Butylbenzylphalate	ND @ 0.35	ND @ 0.35	ND @ 0.37 J	NA	ND @ 0.37	ND @ 0.36	1100	10000	100
Bis(2-Ethylhexyl)phthalate	0.10 J	ND @ 0.35	0.13 J	NA	0.42	ND @ 0.36	49	210	100
Carbazole	ND @ 0.35	ND @ 0.35	ND @ 0.37 J	NA	ND @ 0.37	ND @ 0.36	*	*	*
Chrysene	ND @ 0.35	ND @ 0.35	0.13 J	NA	0.34 J	ND @ 0.36	9	40	500
Dibenzo[a,h]Anthracene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	ND @ 0.37	ND @ 0.36	0.66	0.66	100
Dibenzofuran	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	ND @ 0.37	ND @ 0.36	*	*	*
Di-n-butylphalate	0.052 JB	0.059 JB	0.094 JB	NA	ND @ 0.37	ND @ 0.36	5700	10000	100
Di-n-octylphthalate	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	ND @ 0.37	ND @ 0.36	1100	10000	100
Fluoranthene	ND @ 0.35	ND @ 0.35	0.17 J	NA	0.55	ND @ 0.36	2300	10000	100
Fluorene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	0.078 J	ND @ 0.36	2300	10000	100
Indeno[1,2,3-cd]pyrene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	0.055 J	ND @ 0.36	0.9	4	500
Naphthalene	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	ND @ 0.37	ND @ 0.36	230	4200	100
Phenanthrene	ND @ 0.35	ND @ 0.35	0.083 J	NA	0.47	ND @ 0.36	*		
Pyrene	ND @ 0.35	ND @ 0.35	0.24 J	NA	0.71	ND @ 0.36	1700	10000	100
Total Targeted BN's	0.152 JB	0.059 JB	1.349 JB	NA	3.909 J	ND	*	*	*
Total Targeted BN's w/o Qualifiers	ND	ND	ND	NA	2.15	ND	*	*	*
Total Non-Targeted BN's	ND	ND	ND	NA	ND	ND	*	*	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 3
NJTA - INTERCHANGE 12 IMPROVEMENTS
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	B-8B	B-10A	B-10B	TB041703	B-4A	B-4B	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83139	AB83140	AB83141	AB83142	AB83644	AB83645			
Depth (ft)	4'-6'	1'-2'	6'-7'		1'-2'	4'-5'			
SampleType	SOIL	SOIL	SOIL	Methanol	SOIL	SOIL			
Sample Date	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/28/2003	4/28/2003			
Units	PPM	PPM	PPM	PPM	PPM	PPM			
SEMI-VOLATILE ORGANIC COMPOUNDS									
2-Methylnaphthalene	0.079 J	ND @ 0.40	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	*	*	*
Acenaphthene	ND @ 0.39	0.14 J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	3400	10000	100
Acenaphthylene	ND @ 0.39	ND @ 0.40	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	*	*	*
Anthracene	ND @ 0.39	0.34 J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	10000	10000	100
Benzo[a]anthracene	ND @ 0.39	0.81	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	0.9	4	500
Benzo[a]pyrene	ND @ 0.39	0.65	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	0.66	0.66	100
Benzo[b]fluoranthene	ND @ 0.39	1.1	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	0.9	4	50
Benzo[g,h,I]perylene	ND @ 0.39	0.18 J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	*	*	*
Benzo[k]fluoranthene	ND @ 0.39	0.41	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	0.9	4	500
Butylbenzylphalate	ND @ 0.39	0.062 J	0.046 J	NA	ND @ 0.54	ND @ 0.57	1100	10000	100
Bis(2-Ethylhexyl)phthalate	0.13 J	0.48	0.32 J	NA	.074 J	0.52 J	49	210	100
Carbazole	ND @ 0.39	0.19J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	*	*	*
Chrysene	ND @ 0.39	0.84	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	9	40	500
Dibenzo[a,h]Anthracene	ND @ 0.39	0.068 J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	0.66	0.66	100
Dibenzofuran	ND @ 0.39	0.082 J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	*	*	*
Di-n-butylphalate	0.12 JB	0.12 JB	0.12 JB	NA	.059 J	.059 J	5700	10000	100
Di-n-octylphthalate	ND @ 0.39	ND @ 0.40	0.044 J	NA	ND @ 0.54	ND @ 0.57	1100	10000	100
Fluoranthene	0.064 J	1.9	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	2300	10000	100
Fluorene	ND @ 0.39	0.14 J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	2300	10000	100
Indeno[1,2,3-cd]pyrene	ND @ 0.39	0.21 J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	0.9	4	500
Naphthalene	ND @ 0.39	0.067 J	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	230	4200	100
Phenanthrene	0.070 J	1.5	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	*		
Pyrene	0.072 J	1.7	ND @ 0.44	NA	ND @ 0.54	ND @ 0.57	1700	10000	100
Total Targeted BN's	0.535 JB	10.989 JB	0.53 JB	NA	0.614 J	0.579 J	*	*	*
Total Targeted BN's w/o Qualifiers	ND	9.39	ND	NA	ND	ND	*	*	*
Total Non-Targeted BN's	ND	ND	ND	NA	ND	ND	*	*	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value

B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 3
NJTA - INTERCHANGE 12 IMPROVEMENTS
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
JUNE 2003

Sample Number	TB	FB	B-11A	B-11B	**NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Impact to Groundwater Cleanup Criteria (ppm)**
Lab Sample ID No.	AB86071	AB86072	AB86073	AB86074			
Depth (ft)			1'-2'				
SampleType	METHANOL	WATER	SOIL	SOIL			
Sample Date	6/2/2003	6/2/2003	6/2/2003	6/2/2003			
Units	PPM	PPM	PPM	PPM			
SEMI-VOLATILE ORGANIC COMPOUNDS							
2-Methylnaphthalene	NA	NA	ND @ 0.39	ND @ 0.44	*	*	*
Acenaphthene	NA	NA	ND @ 0.39	ND @ 0.44	3400	10000	100
Acenaphthylene	NA	NA	ND @ 0.39	ND @ 0.44	*	*	*
Anthracene	NA	NA	ND @ 0.39	ND @ 0.44	10000	10000	100
Benzo[a]anthracene	NA	NA	0.057 J	ND @ 0.44	0.9	4	500
Benzo[a]pyrene	NA	NA	0.058 J	ND @ 0.44	0.66	0.66	100
Benzo[b]fluoranthene	NA	NA	0.083 J	ND @ 0.44	0.9	4	50
Benzo[g,h,I]perylene	NA	NA	0.046 J	ND @ 0.44	*	*	*
Benzo[k]fluoranthene	NA	NA	ND @ 0.39	ND @ 0.44	0.9	4	500
Butylbenzylphalate	NA	NA	ND @ 0.39	ND @ 0.44	1100	10000	100
Bis(2-Ethylhexyl)phthalate	NA	NA	0.19 J	0.18 JB	49	210	100
Carbazole	NA	NA	ND @ 0.39	ND @ 0.44	*	*	*
Chrysene	NA	NA	0.071 J	ND @ 0.44	9	40	500
Dibenzo[a,h]Anthracene	NA	NA	ND @ 0.39	ND @ 0.44	0.66	0.66	100
Diethylphthalate	NA	NA	ND @ 0.39	ND @ 0.44	10000	10000	50
Dibenzofuran	NA	NA	ND @ 0.39	ND @ 0.44	*	*	*
Di-n-butylphalate	NA	NA	0.085 JB	0.13 JB	5700	10000	100
Di-n-octylphthalate	NA	NA	ND @ 0.39	ND @ 0.44	1100	10000	100
Fluoranthene	NA	NA	0.093 J	ND @ 0.44	2300	10000	100
Fluorene	NA	NA	ND @ 0.39	ND @ 0.44	2300	10000	100
Indeno[1,2,3-cd]pyrene	NA	NA	0.039 J	ND @ 0.44	0.9	4	500
Naphthalene	NA	NA	ND @ 0.39	ND @ 0.44	230	4200	100
Phenanthrene	NA	NA	0.056 J	ND @ 0.44	*		
Pyrene	NA	NA	0.11 J	ND @ 0.44	1700	10000	100
Total Targeted BN's	NA	NA	0.888	0.31 JB	*	*	*
Total Targeted BN's w/o Qualifiers	NA	NA	ND	ND	*	*	*
Total Non-Targeted BN's	NA	NA	NA	NA	*	*	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Found In Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 3
NJTA - INTERCHANGE 12 IMPROVEMENTS
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
APRIL/MAY 2003

Sample Number	FB042803S	B-15A	B-15B	FB043003S	TB043003S	TB043003	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83646	AB83647	AB83648	AB83649	AB83650	AB83651			
Depth (ft)		1'-2'	8'-9'						
SampleType	SOIL	SOIL	SOIL	WATER	WATER	Methanol			
Sample Date	4/28/2003	4/30/2003	4/30/2003	4/30/2003	4/30/2003	4/30/2003			
Units	PPM	PPM	PPM	PPM	PPM	PPM			
SEMI-VOLATILE ORGANIC COMPOUNDS									
2-Methylnaphthalene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	*	*	*
Acenaphthene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	3400	10000	100
Acenaphthylene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	*	*	*
Anthracene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	10000	10000	100
Benzo[a]anthracene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	0.9	4	500
Benzo[a]pyrene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	0.66	0.66	100
Benzo[b]fluoranthene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	0.9	4	50
Benzo[g,h,I]perylene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	*	*	*
Benzo[k]fluoranthene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	0.9	4	500
Butylbenzylphalate	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	1100	10000	100
Bis(2-Ethylhexyl)phthalate	NA	ND @ 0.65	0.095 J	NA	NA	NA	49	210	100
Carbazole	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	*	*	*
Chrysene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	9	40	500
Dibenzo[a,h]Anthracene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	0.66	0.66	100
Dibenzofuran	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	*	*	*
Di-n-butylphalate	NA	ND @ 0.65	0.070 JB	NA	NA	NA	5700	10000	100
Di-n-octylphthalate	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	1100	10000	100
Fluoranthene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	2300	10000	100
Fluorene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	2300	10000	100
Indeno[1,2,3-cd]pyrene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	0.9	4	500
Naphthalene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	230	4200	100
Phenanthrene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	*		
Pyrene	NA	ND @ 0.65	ND @ 0.61	NA	NA	NA	1700	10000	100
Total Targeted BN's	NA	ND	0.165 JB	NA	NA	NA	*	*	*
Total Targeted BN's w/o Qualifiers	NA	ND	ND	NA	NA	NA	*	*	*
Total Non-Targeted BN's	NA	ND	ND	NA	NA	NA	*	*	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 4
NJTA - INTERCHANGE 12 IMPROVEMENTS
PCB'S AND PESTICIDES IN SOIL
APRIL/MAY 2003

Sample Number	B-16A	B-16B	FB052203	TB052203	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB85532	AB85533	AB85534	AB85535			
Depth (ft)	1'-2'	3'-4'					
SampleType	SOIL	SOIL	WATER	METHANOL			
Sample Date	5/22/2003	5/22/2003	5/22/2003	5/22/2003			
Units	PPM	PPM	PPM	PPM			
PCB'S							
Aroclor - 1016	ND @ 0.020	ND @ 0.019	NA	NA	0.49	2	50
Aroclor - 1221	ND @ 0.020	ND @ 0.019	NA	NA	0.49	2	50
Aroclor - 1232	ND @ 0.020	ND @ 0.019	NA	NA	0.49	2	50
Aroclor - 1242	ND @ 0.020	ND @ 0.019	NA	NA	0.49	2	50
Aroclor - 1248	ND @ 0.020	ND @ 0.019	NA	NA	0.49	2	50
Aroclor - 1254	ND @ 0.020	ND @ 0.019	NA	NA	0.49	2	50
Aroclor - 1260	ND @ 0.020	ND @ 0.019	NA	NA	0.49	2	50
PESTICIDES							
Chlordane	ND @ 0.080	ND @ 0.078	NA	NA	*	*	
Endosulfan II	ND @ 0.040	ND @ 0.0039	NA	NA	*	*	
Endosulfan Sulfate	ND @ 0.040	ND @ 0.0039	NA	NA	*	*	
Dieldrin	ND @ 0.040	ND @ 0.0039	NA	NA	*	*	*
P,P' - DDD	ND @ 0.040	ND @ 0.0039	NA	NA	*	*	*
P,P' - DDE	ND @ 0.040	ND @ 0.0039	NA	NA	2	9	50
P,P' - DDT	ND @ 0.040	ND @ 0.0039	NA	NA	2	9	500

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Not Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 4
NJTA - INTERCHANGE 12 IMPROVEMENTS
PCB'S AND PESTICIDES IN SOIL
APRIL/MAY 2003

Sample Number	FB050103S	TB050103S	B-9A	B-9B	TB050103	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83902	AB83903	AB83904	AB83905	AB83906			
Depth (ft)			1'-2'	3'-4'				
SampleType	WATER	WATER	SOIL	SOIL	METHANOL			
Sample Date	5/1/2003	5/1/2003	5/1/2003	5/1/2003	5/1/2003			
Units	PPM	PPM	PPM	PPM	PPM			
PCB'S								
Aroclor - 1016	NA	NA	ND @ 0.029	ND @ 0.028	NA	0.49	2	50
Aroclor - 1221	NA	NA	ND @ 0.029	ND @ 0.028	NA	0.49	2	50
Aroclor - 1232	NA	NA	ND @ 0.029	ND @ 0.028	NA	0.49	2	50
Aroclor - 1242	NA	NA	ND @ 0.029	ND @ 0.028	NA	0.49	2	50
Aroclor - 1248	NA	NA	ND @ 0.029	ND @ 0.028	NA	0.49	2	50
Aroclor - 1254	NA	NA	ND @ 0.029	ND @ 0.028	NA	0.49	2	50
Aroclor - 1260	NA	NA	ND @ 0.029	ND @ 0.028	NA	0.49	2	50
PESTICIDES								
Chlordane	NA	NA	ND @ 0.011	ND @ 0.011	NA	*	*	
Endosulfan II	NA	NA	0.0079	ND @ 0.057	NA	*	*	
Endosulfan Sulfate	NA	NA	ND @ 0.057	ND @ 0.057	NA	*	*	
Dieldrin	NA	NA	ND @ 0.057	ND @ 0.057	NA	*	*	*
P,P' - DDD	NA	NA	0.012	0.018	NA	*	*	*
P,P' - DDE	NA	NA	ND @ 0.057	ND @ 0.057	NA	2	9	50
P,P' - DDT	NA	NA	0.017	0.011	NA	2	9	500

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Not Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 4
NJTA - INTERCHANGE 12 IMPROVEMENTS
PCB'S AND PESTICIDES IN SOIL
APRIL/MAY 2003

Sample Number	B-5A	B-5B	B-7A	FB041703	B-7B	B-8A	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83133	AB83134	AB83136	AB83135	AB83137	AB83138			
Depth (ft)	1'-2'	9'-10'	1'-2'		5'-6'	1'-2'			
SampleType	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Date	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/17/2003			
Units	ppm	ppm	ppm	ppm	ppm	ppm			
PCB'S									
Aroclor - 1016	ND @ 0.027	ND @ 0.027	ND @ 0.028	NA	ND @ 0.028	ND @ 0.027	0.49	2	50
Aroclor - 1221	ND @ 0.027	ND @ 0.027	ND @ 0.028	NA	ND @ 0.028	ND @ 0.027	0.49	2	50
Aroclor - 1232	ND @ 0.027	ND @ 0.027	ND @ 0.028	NA	ND @ 0.028	ND @ 0.027	0.49	2	50
Aroclor - 1242	ND @ 0.027	ND @ 0.027	ND @ 0.028	NA	ND @ 0.028	ND @ 0.027	0.49	2	50
Aroclor - 1248	ND @ 0.027	ND @ 0.027	ND @ 0.028	NA	ND @ 0.028	ND @ 0.027	0.49	2	50
Aroclor - 1254	ND @ 0.027	ND @ 0.027	ND @ 0.028	NA	ND @ 0.028	ND @ 0.027	0.49	2	50
Aroclor - 1260	ND @ 0.027	ND @ 0.027	ND @ 0.028	NA	ND @ 0.028	ND @ 0.027	0.49	2	50
PESTICIDES									
Chlordane	ND @ 0.011	ND @ 0.011	ND @ 0.011	NA	ND @ 0.022	ND @ 0.011	*	*	*
Endosulfan Sulfate	ND @ 0.0053	ND @ 0.0053	ND @ 0.0056	NA	ND @ 0.011	ND @ 0.0054	*	*	*
Dieldrin	ND @ 0.0053	ND @ 0.0053	ND @ 0.0056	NA	ND @ 0.011	ND @ 0.0054			
P,P' - DDD	ND @ 0.0053	ND @ 0.0053	ND @ 0.0056	NA	ND @ 0.011	ND @ 0.0054			
P,P' - DDE	ND @ 0.0053	ND @ 0.0053	ND @ 0.0056	NA	ND @ 0.011	ND @ 0.0054	2	9	50
P,P' - DDT	ND @ 0.0053	ND @ 0.0053	0.011	NA	ND @ 0.011	ND @ 0.0054	2	9	500

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 4
NJTA - INTERCHANGE 12 IMPROVEMENTS
PCB'S AND PESTICIDES IN SOIL
APRIL/MAY 2003

Sample Number	B-8B	B-10A	B-10B	TB041703	B-4A	B-4B	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83139	AB83140	AB83141	AB83142	AB83644	AB83645			
Depth (ft)	4'-6'	1'-2'	6'-7'		1'-2'	4'-5'			
SampleType	SOIL	SOIL	SOIL	Methanol	SOIL	SOIL			
Sample Date	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/28/2003	4/28/2003			
Units	PPM	PPM	PPM	PPM	PPM	PPM			
PCB'S									
Aroclor - 1016	ND @ 0.029	ND @ 0.030	ND @ 0.033	NA	ND @ 0.027	ND @ 0.029	0.49	2	50
Aroclor - 1221	ND @ 0.029	ND @ 0.030	ND @ 0.033	NA	ND @ 0.027	ND @ 0.029	0.49	2	50
Aroclor - 1232	ND @ 0.029	ND @ 0.030	ND @ 0.033	NA	ND @ 0.027	ND @ 0.029	0.49	2	50
Aroclor - 1242	ND @ 0.029	ND @ 0.030	ND @ 0.033	NA	ND @ 0.027	ND @ 0.029	0.49	2	50
Aroclor - 1248	ND @ 0.029	ND @ 0.030	ND @ 0.033	NA	ND @ 0.027	ND @ 0.029	0.49	2	50
Aroclor - 1254	ND @ 0.029	ND @ 0.030	ND @ 0.033	NA	ND @ 0.027	ND @ 0.029	0.49	2	50
Aroclor - 1260	ND @ 0.029	0.13	ND @ 0.033	NA	ND @ 0.027	ND @ 0.029	0.49	2	50
PESTICIDES									
Chlordane	0.018	0.16	ND @ 0.013	NA	ND @ 0.011	ND @ 0.011			
Endosulfan Sulfate	ND @ 0.0058	ND @ 0.012	ND @ 0.0067	NA	ND @ 0.0054	ND @ 0.0057			
Dieldrin	ND @ 0.0058	0.016	ND @ 0.0067	NA	ND @ 0.0054	ND @ 0.0057	*	*	*
P,P' - DDD	0.021	ND @ 0.012	ND @ 0.0067	NA	ND @ 0.0054	ND @ 0.0057	*	*	*
P,P' - DDE	ND @ 0.0058	ND @ 0.012	ND @ 0.0067	NA	ND @ 0.0054	ND @ 0.0057	2	9	50
P,P' - DDT	ND @ 0.0058	0.020	ND @ 0.0067	NA	ND @ 0.0054	ND @ 0.0057	2	9	500

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 4
NJTA - INTERCHA[illegible]PROVEMENTS
PCB'S AND P[illegible] IN SOIL
JUNE 2003

Sample Number	TB	FB	B-11A	B-11B	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB86071	AB86072	AB86073	AB86074			
Depth (ft)			1'-2'	3'-4'			
SampleType	METHANOL	WATER	SOIL	SOIL			
Sample Date	6/2/2003	6/2/2003	6/2/2003	6/2/2003			
Units	PPM	PPM	PPM	PPM			
PCB'S							
Aroclor - 1016	NA	NA	ND @ 0.029	ND @ 0.033	0.49	2	50
Aroclor - 1221	NA	NA	ND @ 0.029	ND @ 0.033	0.49	2	50
Aroclor - 1232	NA	NA	ND @ 0.029	ND @ 0.033	0.49	2	50
Aroclor - 1242	NA	NA	ND @ 0.029	ND @ 0.033	0.49	2	50
Aroclor - 1248	NA	NA	ND @ 0.029	ND @ 0.033	0.49	2	50
Aroclor - 1254	NA	NA	0.24	ND @ 0.033	0.49	2	50
Aroclor - 1260	NA	NA	ND @ 0.029	ND @ 0.033	0.49	2	50
PESTICIDES							
Chlordane	NA	NA	0.13	ND @ 0.013	*	*	*
Endosulfan II	NA	NA	ND @ 0.0058	ND @ 0.0067	*	*	*
Endosulfan Sulfate	NA	NA	ND @ 0.0058	ND @ 0.0067	*	*	*
Endrin Aldehyde	NA	NA	0.023	ND @ 0.0067	*	*	*
Dieldrin	NA	NA	0.013	ND @ 0.0067	*	*	*
P,P' - DDD	NA	NA	0.014	0.024	*	*	*
P,P' - DDE	NA	NA	0.012	ND @ 0.0067	2	9	50
P,P' - DDT	NA	NA	0.017	0.014	2	9	500

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 4
NJTA - INTERCHANGE 12 IMPROVEMENTS
PCB'S AND PESTICIDES IN SOIL
APRIL/MAY 2003

Sample Number	FB042803S	B-15A	B-15B	FB043003S	TB043003S	TB043003	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83646	AB83647	AB83648	AB83649	AB83650	AB83651			
Depth (ft)		1'-2'	8'-9'						
SampleType	SOIL	SOIL	SOIL	WATER	WATER	Methanol			
Sample Date	4/28/2003	4/30/2003	4/30/2003	4/30/2003	4/30/2003	4/30/2003			
Units	PPM	PPM	PPM	PPM	PPM	PPM			
PCB'S									
Aroclor - 1016	NA	ND @ 0.032	ND @ 0.030	NA	NA	NA	0.49	2	50
Aroclor - 1221	NA	ND @ 0.032	ND @ 0.030	NA	NA	NA	0.49	2	50
Aroclor - 1232	NA	ND @ 0.032	ND @ 0.030	NA	NA	NA	0.49	2	50
Aroclor - 1242	NA	ND @ 0.032	ND @ 0.030	NA	NA	NA	0.49	2	50
Aroclor - 1248	NA	ND @ 0.032	ND @ 0.030	NA	NA	NA	0.49	2	50
Aroclor - 1254	NA	ND @ 0.032	ND @ 0.030	NA	NA	NA	0.49	2	50
Aroclor - 1260	NA	ND @ 0.032	ND @ 0.030	NA	NA	NA	0.49	2	50
PESTICIDES									
Chlordane	NA	ND @ 0.013	ND @ 0.012	NA	NA	NA			
Endosulfan Sulfate	NA	ND @ 0.0065	ND @ 0.0061	NA	NA	NA			
Dieldrin	NA	ND @ 0.0065	ND @ 0.0061	NA	NA	NA	*	*	*
P,P' - DDD	NA	ND @ 0.0065	ND @ 0.0061	NA	NA	NA	*	*	*
P,P' - DDE	NA	ND @ 0.0065	ND @ 0.0061	NA	NA	NA	2	9	50
P,P' - DDT	NA	ND @ 0.0065	ND @ 0.0061	NA	NA	NA	2	9	500

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 5
NJTA - INTERCHANGE 12 IMPROVEMENTS
PRIORITY POLLUTANT METALS, CYANIDE AND PHENOL IN SOIL
APRIL - MAY 2003

Sample Number	B-5A	B-5B	B-7A	FB041703	B-7B	B-8A	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83133	AB83134	AB83136	AB83135	AB83137	AB83138			
Depth (ft)	1'-2'	9'-10'	1'-2'		5'-6'	1'-2'			
SampleType	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Date	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/17/2003			
Units	ppm	ppm	ppm	ppm	ppm	ppm			
PRIORITY POLLUTANT METALS									
Antimony	ND @ 2.1	ND @ 2.1	2.9	NA	5.2	ND @ 2.2	14	340	*
Arsenic	ND @ 2.1	ND @ 2.1	8.2	NA	3.9	5.1	20	20	*
Barium	30	200	130	NA	120	62	700	47000	*
Beryllium	ND @ 0.64	ND @ 0.64	1.6	NA	3.5	0.77	2	2	*
Cadmium	ND @ 0.64	ND @ 0.64	ND @ 0.67	NA	ND @ 0.67	ND @ 0.65	39	100	*
Chromium	5.7	ND @ 5.3	36	NA	68	22	120000		*
Copper	ND @ 5.3	ND @ 5.3	260	NA	740	15	600	600	*
Lead	ND @ 5.3	ND @ 5.3	170	NA	5.3	13	400	600	*
Mercury	ND @ 0.089	ND @ 0.089	ND @ 0.093	NA	ND @ 0.093	ND @ 0.0.91	14	270	*
Nickel	ND @ 5.3	ND @ 5.3	88	NA	340	23	250	2400	*
Selenium	ND @ 1.9	ND @ 1.9	2.1	NA	3.6	ND @ 2.0	63	3100	*
Silver	ND @ 2.7	ND @ 2.7	ND @ 2.8	NA	ND @ 2.8	ND @ 2.7	110	4100	*
Thallium	ND @ 1.3	1.7	ND @ 1.3	NA	ND @ 1.3	ND @ 1.3	2	2	*
Zinc	12	12	800	NA	3000	66	1500	1500	*
CYANIDE and PHENOL									
Cyanide	ND @ 0.26	ND @ 0.26	ND @ 0.28	NA	ND @ 0.28	ND @ 0.27	1100	21000	*
Phenol	ND @ 0.35	ND @ 0.35	ND @ 0.37	NA	ND @ 0.37	ND @ 0.36	10000	10000	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 5
NJTA - INTERCHANGE 12 IMPROVEMENTS
PRIORITY POLLUTANT METALS, CYANIDE AND PHENOL IN SOIL
APRIL/MAY 2003

Sample Number	B-8B	B-10A	B-10B	TB041703	B-4A	B-4B	**NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)**	**NJDEP Impact to Groundwater Cleanup Criteria (ppm)**
Lab Sample ID No.	AB83139	AB83140	AB83141	AB83142	AB83644	AB83645			
Depth (ft)	4'-6'	1'-2'	6'-7'		1'-2'	4'-5'			
SampleType	SOIL	SOIL	SOIL	Methanol	SOIL	SOIL			
Sample Date	4/17/2003	4/17/2003	4/17/2003	4/17/2003	4/28/2003	4/28/2003			
Units	PPM	PPM	PPM	PPM	PPM	PPM			
PRIORITY POLLUTANT METALS									
Antimony	ND @ 2.3	ND @ 2.4	ND @ 2.7	NA	ND @ 2.2	ND @ 2.3	14	340	*
Arsenic	4.5	6.5	4.7	NA	ND @ 2.2	ND @ 2.3	20	20	*
Barium	160	200	54	NA	ND @ 11	80	700	47000	*
Beryllium	ND @ 0.70	0.98	ND @ 0.80	NA	ND @ 0.65	0.84	2	2	*
Cadmium	ND @ 0.70	ND @ 0.72	ND @ 0.80	NA	ND @ 0.65	ND @ 0.69	39	100	*
Chromium	19	41	22	NA	ND @ 5.4	12	120000		*
Copper	59	250	11	NA	6.8	ND @ 5.7	600	600	*
Lead	37	310	12	NA	ND @	7.4	400	600	*
Mercury	ND @ 0.097	0.32	ND @ 0.11	NA	ND @ 0.096	ND @ 0.096	14	270	*
Nickel	10	19	14	NA	ND @ 5.4	7.9	250	2400	*
Selenium	ND @ 2.1	ND @ 2.2	2.6	NA	ND @ 2.0	ND @ 2.1	63	3100	*
Silver	ND @ 2.9	ND @ 3.0	ND @ 3.3	NA	ND @ 2.7	ND @ 2.9	110	4100	*
Thallium	ND @ 1.4	ND @ 1.4	ND @ 1.6	NA	ND @ 1.3	ND @ 1.4	2	2	*
Zinc	160	220	39	NA	ND @ 11	13	1500	1500	*
CYANIDE and PHENOL									
Cyanide	0.76	ND @ 0.3	ND @ 0.33	NA	ND @ 0.29	ND @ 0.29	1100	21000	*
Phenol	ND @ 0.39	ND @ 0.40	ND @ 0.44	NA	ND @ 1.4	ND @ 0.29	10000	10000	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 5
NJTA - INTERCHANGE 12 IMPROVEMENTS
PRIORITY POLLUTANT METALS, CYANIDE AND PHENOL IN SOIL
APRIL/MAY 2003

Sample Number	FB050103S	TB050103S	B-9A	B-9B	TB050103	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83902	AB83903	AB83904	AB83905	AB83906			
Depth (ft)			1'-2'	3'-4'				
SampleType	WATER	WATER	SOIL	SOIL	METHANOL			
Sample Date	5/1/2003	5/1/2003	5/1/2003	5/1/2003	5/1/2003			
Units	PPM	PPM	PPM	PPM	PPM			
PRIORITY POLLUTANT METALS								
Antimony	NA	NA	88	14	NA	14	340	*
Arsenic	NA	NA	8	7.6	NA	20	20	*
Barium	NA	NA	180	110	NA	700	47000	*
Beryllium	NA	NA	ND @ 0.69	0.79	NA	2	2	*
Cadmium	NA	NA	ND @ 0.69	ND @ 0.68	NA	39	100	*
Chromium	NA	NA	36	31	NA	120000		*
Copper	NA	NA	210	160	NA	600	600	*
Lead	NA	NA	130	120	NA	400	600	*
Mercury	NA	NA	ND @ 0.096	ND @ 0.095	NA	14	270	*
Nickel	NA	NA	43	48	NA	250	2400	*
Selenium	NA	NA	2.8	2.3	NA	63	3100	*
Silver	NA	NA	ND @ 2.9	ND @ 2.8	NA	110	4100	*
Thallium	NA	NA	ND @ 1.4	ND @ 1.4	NA	2	2	*
Zinc	NA	NA	610	330	NA	1500	1500	*
CYANIDE and PHENOL								
Cyanide	NA	NA	ND @ 0.29	ND @ 0.28	NA	1100	21000	*
Phenol	NA	NA	ND @ 1.4	ND @ 1.4	NA	10000	10000	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TABLE NO. 5
NJTA - INTERCHA[illegible]PROVEMENTS
PRIORITY POLLUTANT META[illegible]NIDE AND PHENOL IN SOIL
APRIL/MAY 2003

Sample Number	B-16A	B-16B	FB052203	TB052203	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB85532	AB85533	AB85534	AB85535			
Depth (ft)	1'-2'	3'-4'					
SampleType	SOIL	SOIL	WATER	METHANOL			
Sample Date	5/22/2003	5/22/2003	5/22/2003	5/22/2003			
Units	PPM	PPM	PPM	PPM			
PRIORITY POLLUTANT METALS							
Antimony	ND @ 2.4	ND @ 2.3	NA	NA	14	340	*
Arsenic	5.5	5.7	NA	NA	20	20	*
Barium	130	290	NA	NA	700	47000	*
Beryllium	ND @ 0.72	ND @ 0.70	NA	NA	2	2	*
Cadmium	ND @ 0.72	ND @ 0.70	NA	NA	39	100	*
Chromium	17	22	NA	NA	120000		*
Copper	42	13	NA	NA	600	600	*
Lead	24	11	NA	NA	400	600	*
Mercury	ND @ 0.10	ND @ 0.097	NA	NA	14	270	*
Nickel	11	24	NA	NA	250	2400	*
Selenium	ND @ 2.2	ND @ 2.1	NA	NA	63	3100	*
Silver	ND @ 3.0	ND @ 2.9	NA	NA	110	4100	*
Thallium	ND @ 1.4	ND @ 1.4	NA	NA	2	2	*
Zinc	56	45	NA	NA	1500	1500	*
CYANIDE and PHENOL							
Cyanide	ND @ 0.30	ND @ 0.29	NA	NA	1100	21000	*
Phenol	ND @ 1.5	ND @ 1.5	NA	NA	10000	10000	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

TAJ

NJTA - INTERCHAN PROVEMENTS

PRIORITY POLLUTANT METALS, CYANIDE AND PHENOL IN SOIL

JUNE 2003

Sample Number	TB	FB	B-11A	B-11B	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB86071	AB86072	AB86073	AB86074			
Depth (ft)			1'-2'	3'-4'			
SampleType	METHANOL	WATER	SOIL	SOIL			
Sample Date	6/2/2003	6/2/2003	6/2/2003	6/2/2003			
Units	PPM	PPM	PPM	PPM			
PRIORITY POLLUTANT METALS							
Antimony	NA	NA	3.8	3.6	14	340	*
Arsenic	NA	NA	15	17	20	20	*
Barium	NA	NA	350	240	700	47000	*
Beryllium	NA	NA	0.94	ND @ 0.80	2	2	*
Cadmium	NA	NA	0.85	1.9	39	100	*
Chromium	NA	NA	22	18	120000		*
Copper	NA	NA	100	140	600	600	*
Lead	NA	NA	180	170	400	600	*
Mercury	NA	NA	0.21	ND @ 0.11	14	270	*
Nickel	NA	NA	23	20	250	2400	*
Selenium	NA	NA	2.4	2.6	63	3100	*
Silver	NA	NA	ND @ 2.9	ND @ 3.3	110	4100	*
Thallium	NA	NA	ND @ 1.4	ND @ 1.6	2	2	*
Zinc	NA	NA	160	220	1500	1500	*
CYANIDE and PHENOL							
Cyanide	NA	NA	ND @ 0.29	ND @ 0.233	1100	21000	*
Phenol	NA	NA	ND @ 1.5	ND @ 1.7	10000	10000	*

NOTES:

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Non Detected at Method Detection Limit

J - Estimated Value

B - Compound Ground IN Associated Lab Blank

* - No Current Cleanup Criteria

NA - Not Analyzed

TABLE NO. 5
NJTA - INTERCHANGE 12 IMPROVEMENTS
PRIORITY POLLUTANT METALS, CYANIDE AND PHENOL IN SOIL
APRIL/MAY 2003

Sample Number	FB042803S	B-15A	B-15B	FB043003S	TB043003S	TB043003	NJDEP Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (ppm)	NJDEP Impact to Groundwater Cleanup Criteria (ppm)
Lab Sample ID No.	AB83646	AB83647	AB83648	AB83649	AB83650	AB83651			
Depth (ft)		1'-2'	8'-9'						
SampleType	SOIL	SOIL	SOIL	WATER	WATER	Methanol			
Sample Date	4/28/2003	4/30/2003	4/30/2003	4/30/2003	4/30/2003	4/30/2003			
Units	PPM	PPM	PPM	PPM	PPM	PPM			
PRIORITY POLLUTANT METALS									
Antimony	NA	ND @ 2.3	ND @ 2.4	NA	NA	NA	14	340	*
Arsenic	NA	4.0	3.9	NA	NA	NA	20	20	*
Barium	NA	55	140	NA	NA	NA	700	47000	*
Beryllium	NA	0.79	0.95	NA	NA	NA	2	2	*
Cadmium	NA	ND @ 0.78	ND @ 0.78	NA	NA	NA	39	100	*
Chromium	NA	19	21	NA	NA	NA	120000		*
Copper	NA	13	16	NA	NA	NA	600	600	*
Lead	NA	22	12	NA	NA	NA	400	600	*
Mercury	NA	ND @ 11	ND @ 0.10	NA	NA	NA	14	270	*
Nickel	NA	16	24	NA	NA	NA	250	2400	*
Selenium	NA	ND @ 2.3	ND @ 2.2	NA	NA	NA	63	3100	*
Silver	NA	ND @ 3.2	ND @ 3.0	NA	NA	NA	110	4100	*
Thallium	NA	ND @ 1.6	ND @ 1.5	NA	NA	NA	2	2	*
Zinc	NA	46	53	NA	NA	NA	1500	1500	*
CYANIDE and PHENOL									
Cyanide	NA	ND @ 0.32	ND @ 0.3	NA	NA	NA	1100	21000	*
Phenol	NA	ND @ 1.6	ND @ 1.5	NA	NA	NA	10000	10000	*

NOTES:
All results reported in Parts Per Million (PPM)
TI - Tentatively Identified
ND - Non Detected at Method Detection Limit
J - Estimated Value
B - Compound Ground IN Associated Lab Blank
* - No Current Cleanup Criteria
NA - Not Analyzed

5.1.2 Volatile Organic Compounds (VOCs)

Within the vicinity of the Interchange 12, five (B-5B, B-7A, B-8A, B-9A and B-9B) of the 12 analytical samples were reported to contain VOCs. Methylene chloride (estimated values) was detected in samples B-5B, B-7A, B-8A. Also, toluene was detected in sample B-9A and xylene was detected in samples B-9A and B-9B. Along the Connector Road, three (B-10A, B-11A and B-11B) of the six (6) analytical samples were reported to contain VOCs. Methylene chloride (estimated values) was detected in samples B-10A, B-11A and B-11B. Tolune and xylene were detected in sample B-11B. The detected VOCs were reported at concentrations significantly below their respective NJDEP Soil Cleanup Criteria (see Table No. 2).

5.1.3 Semi-Volatile Organic Compounds

Within the vicinity of Interchange 12, semi-volatile organic compounds (base neutral/acid extractable (BNA) compounds) were reported to be present in 11 of the 12 soil samples. Along the Connector Road, semi-volatile organic compounds were reported to be present in 5 of the 6 soil samples. Except for Benzo[b]fluoranthene in sample B-10A at concentration of 1.1 ppm (RDCSCC of 0.9 ppm and NRDCSCC of 4 ppm), the semi-volatile compounds were detected in the samples at concentrations below their NJDEP Soil Cleanup Criteria (see Table No. 3 and Figure No. 2).

5.1.4 Pesticides/Polychlorinated Biphenyls (PCBs)

Polychlorinated biphenyls (PCBs) were not detected in the 12 samples obtained from the borings within the vicinity of the Interchange 12. However, PCBs were reported in two (B-10A and B-11A) of the six (6) samples obtained from borings along the Connector Road alignment. In sample B-10A, the reported concentration of Aroclor-1260 was 0.13 ppm, and the reported concentration of

Aroclor-1254 in sample B-11A was 0.24 ppm. All concentrations were significantly below their respective NJDEP Soil Cleanup Criteria (See Table No. 4).

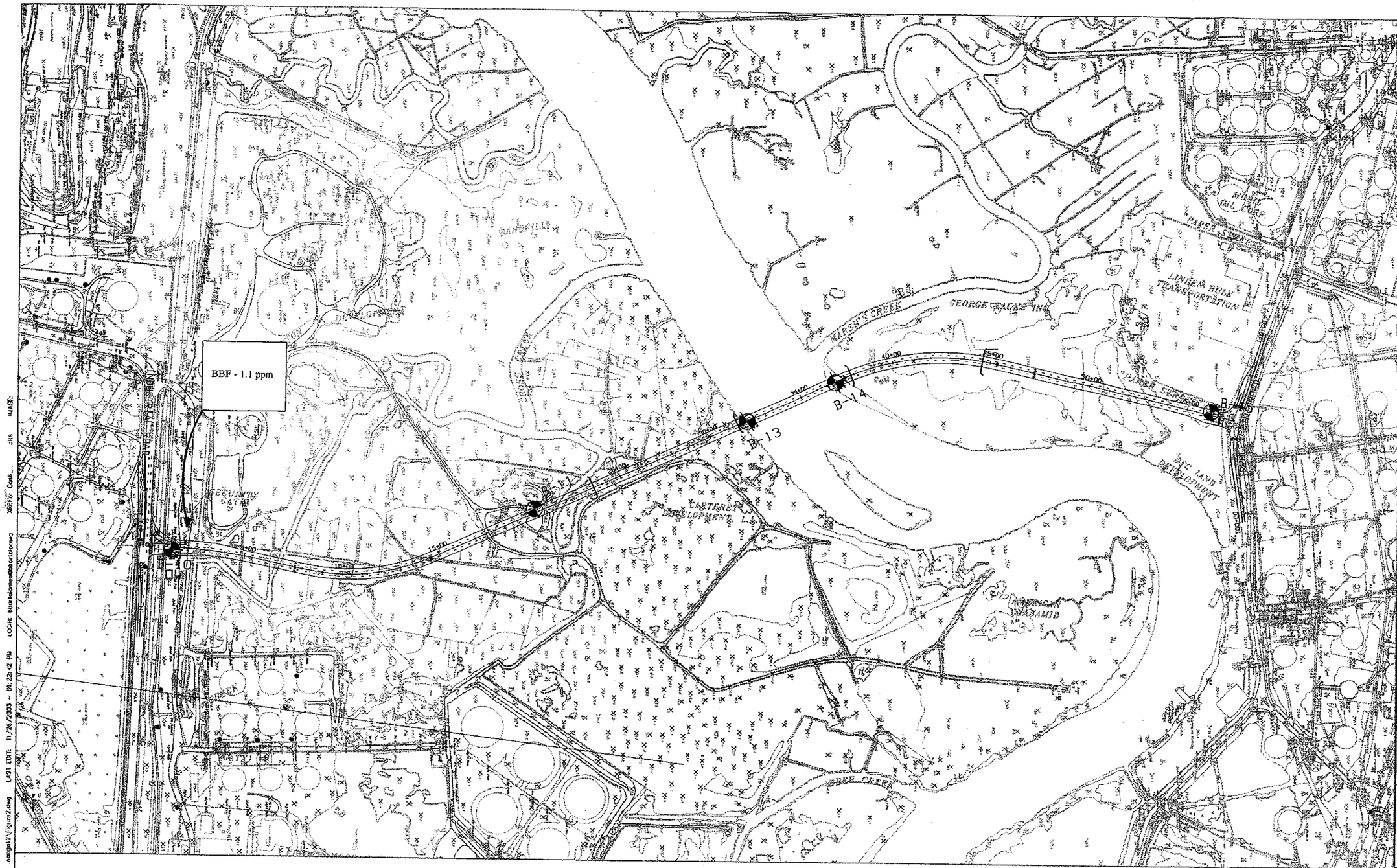
Within the vicinity of the Interchange 12, pesticides were reported in four (B-7A, B-8B, B-9A and B-9B) of the 12 samples. Along the Connector Road alignment, pesticides were reported in three (B-10A, B-11A and B-11B) of the six (6) samples. All concentrations were below their respective NJDEP Soil Cleanup Criteria (See Table No. 4).

5.1.5 Priority Pollutant Metals (PP Metals)

Silver was the only priority pollutant metal (PP Metal) reported as "not-detected" (ND) in the 18 soil samples collected from the project site. With the exception of beryllium, copper and zinc, other PP Metals concentrations in the soil samples collected from the borings within the vicinity of the Interchange 12 and along the Connector Road were below their respective NRDCSCC (See Table No. 5). Within the vicinity of Interchange 12, beryllium, copper and zinc were reported in sample B-7B above their respective NRDCSCC at concentrations of 3.5 ppm, 740 ppm, and 3,000 ppm, respectively, and are shown in Figure No. 3.

Within the vicinity of Interchange 12, cyanide was detected in sample B-8B at a concentration of 0.76 ppm, which is significantly below the NJDEP Soil Cleanup Criteria (See Table No. 5).

Phenol was not detected in any soil samples collected from the project site (See Table No. 5).



REVISIONS/ISSUES		
NO.	DATE	DESCRIPTION

BBF – BENZO (B) FLUORANTHENE

NJDEP

RDCSCC – 0.9 ppm
NRDCSCC – 4 ppm

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PAULUS SOKOLOWSKI and SARTOR, LLC.
CONSULTING ENGINEERS
67A MOUNTAIN BOULEVARD EXTENSION
P.O. BOX 4039
WARREN, NEW JERSEY 07059
PHONE: (732) 560-9700
FAX: (732) 560-9768

PROJECT

NEW JERSEY TURNPIKE AUTHORITY
INTERCHANGE 12 IMPROVEMENTS PROJECTS
BOROUGH OF CATERET, MIDDLESEX COUNTY
&
THE CITY OF LINDEN, UNION COUNTY
NEW JERSEY

SHEET TITLE

SEMI- VOLATILE ORGANIC COMPOUND ABOVE NJDEP RDCSCC

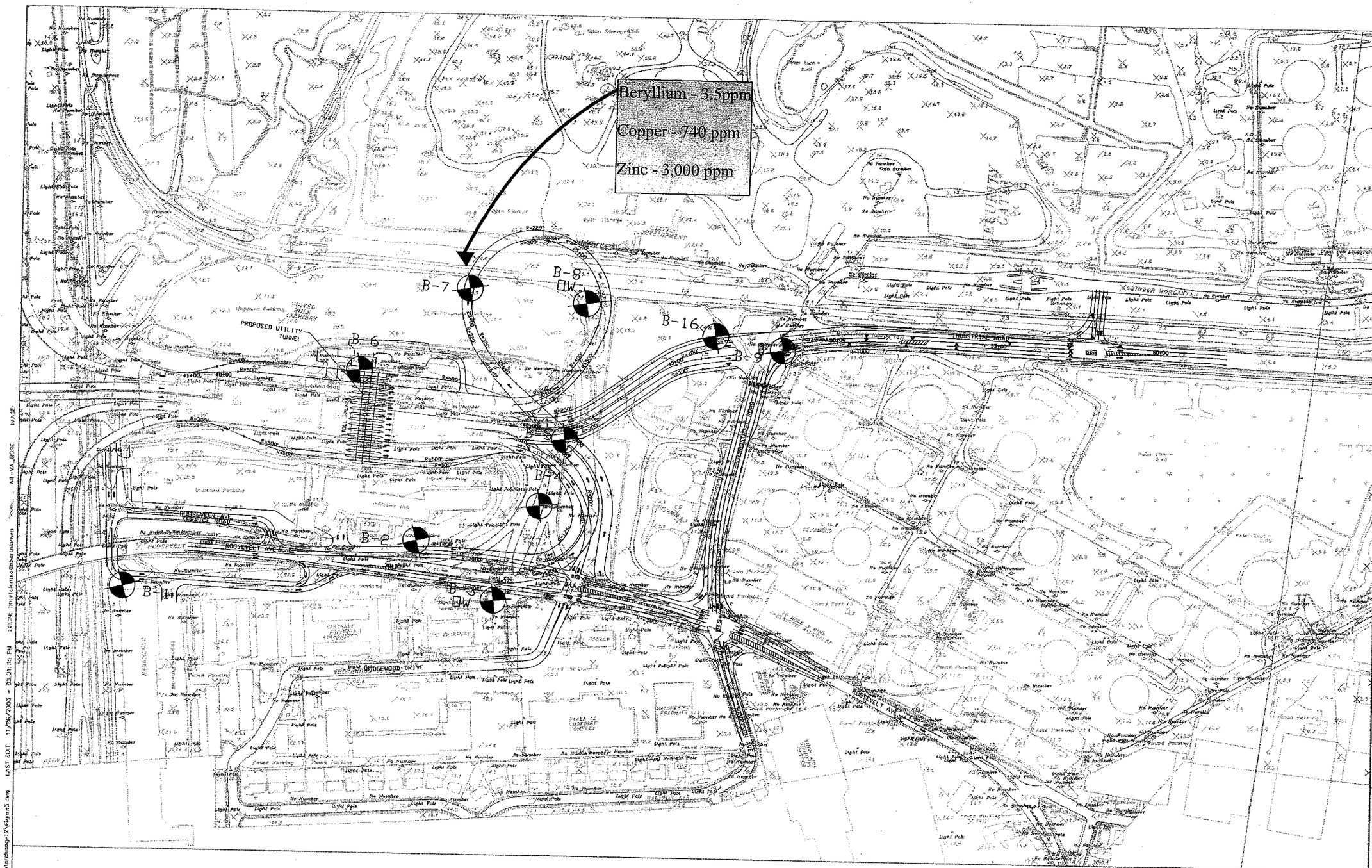
BORING DATA:

BORING	OBSERVATION WELL	LOCATION	APPROX. STATION
B-10	X	CONNECTOR ROAD	1+40
B-11		CONNECTOR ROAD	18+10
B-12		CONNECTOR ROAD	25+20
B-13		CONNECTOR ROAD	32+00
B-14		CONNECTOR ROAD	37+00
B-15		CONNECTOR ROAD	56+28 LT. 15'

BORING PROGRAM:

1. BORINGS SHALL BE CONTINUOUSLY SAMPLED THROUGH THE FILL AND ORGANICS AND SAMPLED AT 5-FOOT INTERVALS THEREAFTER. BORINGS SHALL BE TERMINATED 5 FEET INTO ROCK. ROCK SHALL BE CORED WITH AN NX SIZE CORE BARREL.
2. THE CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITTING PRIOR TO DRILLING BORINGS.
3. OBSERVATION WELLS SHALL BE INSTALLED IN SELECTED BORINGS (DESIGNATED OW) TO MEASURE THE FLUCTUATION IN GROUNDWATER LEVEL.
4. ONE UNDISTURBED SAMPLE OF ORGANIC DEPOSITS SHALL BE OBTAINED FROM EACH BORING.

DATE 11-26-03	JOB NO. 02595.001.023
SCALE 1" = 500'	
DRAWN BB	SHEET NO. Figure # 2
CHKD.	



BORING	OBSERVATION WELL	LOCATION	APPROX. STATION
B-1		SERVICE ROAD	
B-2	X	RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	30+40 LT. 90'
B-3		RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	33+30 RT. 55'
B-4		RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	25+25 RT. 5'
B-5		LOOP RAMP	15+40 LT. 35'
B-6		TOLL PLAZA/RAMP WITH 200' RADIUS	25+70 RT. 25'
B-7		LOOP RAMP	21+00 LT. 15'
B-8	X	LOOP RAMP	26+70 RT. 40'
B-16		RAMP TO/FROM INDUSTRIAL RD. TO TOLL PLAZA	26+80 RT. 5'
B-9		RAMP TO/FROM INDUSTRIAL RD. TO TOLL PLAZA	29+00 RT. 45'

BORING PROGRAM:

1. BORINGS SHALL BE CONTINUOUSLY SAMPLED THROUGH THE FILL AND ORGANICS AND SAMPLED AT 5-FOOT INTERVALS THEREAFTER. BORINGS SHALL BE TERMINATED 5 FEET INTO ROCK. ROCK SHALL BE CORED WITH AN NX SIZE CORE BARREL.
2. THE CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITTING PRIOR TO DRILLING BORINGS.
3. OBSERVATION WELLS SHALL BE INSTALLED IN SELECTED BORINGS (DESIGNATED ON) TO MEASURE THE FLUCTUATION IN GROUNDWATER LEVEL.
4. ONE UNDISTURBED SAMPLE OF ORGANIC DEPOSITS SHALL BE OBTAINED FROM EACH BORING

REVISIONS/ISSUES

NO.	DATE	DESCRIPTION

NJDEP NRDCSCC/RDCSCC

Beryllium – 2 ppm
Copper – 600 ppm
Zinc – 150 ppm

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PAULUS SOKOLOWSKI and SARTOR, LLC.
CONSULTING ENGINEERS
67A MOUNTAIN BOULEVARD EXTENSION
P.O. BOX 4039
WARREN, NEW JERSEY 07059
PHONE: (732) 560-9700
FAX: (732) 560-9768

PROJECT

NEW JERSEY TURNPIKE AUTHORITY
INTERCHANGE 12 IMPROVEMENTS PROJECTS
BOROUGH OF CATERET, MIDDLESEX COUNTY
&
THE CITY OF LINDEN, UNION COUNTY
NEW JERSEY

SHEET TITLE

PRIORITY POLLUTANT METALS
ABOVE NJDEP NRDCSCC

DATE 11-21-03	JOB NO. 02595.001.023
SCALE 1" = 300'	
DRAWN BB	SHEET NO. FIGURE # 3
CHKD. CK	

PROJECT: FILE NAME: J:\02595\001\03_Interchange12\Figure3.dwg LAST EDIT: 11/26/2003 - 03:21:51 PM LTSCALE: Interlocomestration(Interval) ALL-VIA_BORE NAVGE

5.2 Groundwater Sample Analytical Results

The laboratory analytical results for groundwater samples are enclosed in Appendix B. Summaries of the analytical results reported by the laboratory for the two (2) groundwater samples and associated QA/QC samples obtained during this groundwater-sampling program are presented in Table Nos. 6, 7, 8 and 9. Only those parameters reported to be present in the samples are presented on these tables. The analytical results were compared to the "Higher of the PQLs and Ground Water Quality Criteria for Class IIA Ground Water" (GWQC) contained in N.J.A.C. 7:9-6, Ground Water Quality Standards and the Interim Specific GWQC that are also included on the summary tables.

5.2.1 Volatile Organic Compounds (VOCs)

The volatile organic compounds (VOCs) were not detected in the groundwater sample obtained from boring B-8 within the vicinity of Interchange 12. Along the Connector Road alignment, Acetone and Methylene Chloride were not detected in the groundwater sample obtained from boring B-11, however, other VOCs were detected in the groundwater sample at concentrations below their respective GWQC (see Table No. 6).

5.2.2 Semi-Volatile Organic Compounds

The semi-volatile organic compounds were not detected in the groundwater sample obtained from boring B-8 within the vicinity of Interchange 12. In the groundwater sample obtained from boring B-11 along the Connector Road alignment, the concentrations of 2-Methylphenol, 3&4-Methylphenol and Butybenzylphthalate were reported at 1,100, 61, and 85 µg/l, respectively, which exceeded their respective GWQC (see Table No. 7 and Figure No. 4).

TABLE NO. 6
NJTA - INTERCHANGE 12 IMPROVEMENTS
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
APRIL, MAY and JULY 2003

Sample Number	TW-8	FB041803W	TW041803W	B11GW	TB07222003	Higher of PQLs and Groundwater Quality Criteria UG/L
Lab Sample Number	AB83144	AB83143	AB83145	AB89830	AB89831	
Sampling Date	4/18/2003	4/18/2003	4/18/2003	7/22/2003	7/22/2003	
Units	UG/L	UG/L	UG/L	UG/L	UG/L	
VOLATILE ORGANIC COMPOUNDS						
Acetone	ND @ 2.1	18	ND @ 2.1	ND @ 62	ND @ 12	700
Benzene	ND @ 0.20	ND @ 0.20	ND @ 0.20	21	ND @ 0.56	
Carbon disulfide	ND @ 0.22	ND @ 0.22	ND @ 0.22	170	ND @ 0.89	
Chloroform	ND @ 0.18	ND @ 0.18	ND @ 0.18	8.9	ND @ 0.49	
Ethylbenzene	ND @ 0.35	ND @ 0.35	ND @ 0.35	7.4	ND @ 0.52	
Methylene Chloride	ND @ 0.25	ND @ 0.25	1.2	ND @ 3.7	ND @ 0.74	2
Toluene	ND @ 0.19	ND @ 0.19	ND @ 0.19	580	ND @ 0.54	1000
M&p - Xylenes	ND @ 0.39	ND @ 0.39	ND @ 0.39	15	ND @ 0.99	*
O - Xylene	ND @ 0.23	ND @ 0.23	ND @ 0.23	5.0	ND @ 0.52	*
Total Xylenes	ND	ND	ND	12.4	ND	40
Total VOC's	ND	18	1.2	807.3	ND	
Total VOC's w/o Qualifiers	ND	18	1.2	807.3	ND	
Total Non-Targeted VOC's	ND	ND	ND	ND	ND	

NOTES:
U - Designates parameter was below the minimum detection limit
J - Estimated value
DRY - Designates well was dry and no sample obtained
NSProd - Designates well was not sampled due to presence of free floating product
* - Designates no criteria exists
(1) NJDEP interim specific groundwater quality criteria 7/18/94 and 2/5/97 (ISGQS)

TABLE NO. 7
NJTA - INTERCHANGE 12 IMPROVEMENTS
SEMI-VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
APRIL, MAY and JULY 2003

Sample Number	TW-8	FB041803W	TW041803W	B11GW	TB07222003	Higher of PQLs and Groundwater Quality Criteria
Lab Sample ID Number	AB83144	AB83143	AB83145	AB89830	AB89831	
Sampling Date	4/18/2003	4/18/2003	4/18/2003	7/22/2003	7/22/2003	
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
SEMI-VOLATILE ORGANIC COMPOUNDS						
2-Methylphenol	ND @ 1.8	ND @ 0.98	NA	1100	NA	5 (1)
3&4-Methylphenol	ND @ 1.6	ND @ 0.89	NA	61	NA	5 (1)
Acenaphthylene	ND @ 0.27	ND @ 0.15	NA	ND @ 1.5	NA	5 (1)
Anthracene	ND @ 0.31	ND @ 0.17	NA	ND @ 1.7	NA	2000
Benzo[a]anthracene	ND @ 0.62	ND @ 0.34	NA	ND @ 3.4	NA	5 (1)
Benzo[a]pyrene	ND @ 0.35	ND @ 0.19	NA	ND @ 1.9	NA	5 (1)
Benzo[b]fluoranthene	ND @ 0.27	ND @ 0.15	NA	ND @ 1.5	NA	5 (1)
Benzo[g,h,i]perylene	ND @ 0.42	ND @ 0.23	NA	ND @ 2.3	NA	5 (1)
Benzo[k]fluoranthene	ND @ 0.35	ND @ 0.19	NA	ND @ 1.9	NA	5 (1)
Bis(2-Ethylhexyl)phthalate	ND @ 1.7	1.0	NA	ND @ 9.3	NA	30
Butybenzylphthalate	ND @ 0.80	ND @ 0.44	NA	85	NA	5 (1)
Chrysene	ND @ 0.31	ND @ 0.17	NA	ND @ 1.7	NA	5 (1)
Dibenzofuran	ND @ 3.1	ND @ 1.7	NA	ND @ 17	NA	5 (1)
Di-n-butylphalate	ND @ 1.1	ND @ 0.59	NA	ND @ 5.9	NA	900
Fluoranthene	ND @ 0.45	ND @ 0.25	NA	ND @ 2.5	NA	300
Fluorene	ND @ 0.35	1.5	NA	ND @ 1.9	NA	300
Indeno[1,2,3-cd]pyrene	ND @ 0.40	ND @ 0.22	NA	ND @ 2.2	NA	5 (1)
Naphthalene	ND @ 0.31	ND @ 0.17	NA	ND @ 1.7	NA	5 (1)
Phenanthrene	ND @ 0.38	ND @ 0.21	NA	ND @ 2.1	NA	5 (1)
Pyrene	ND @ 0.55	ND @ 0.30	NA	ND @ 3.0	NA	200
Total Target BNs	ND	2.5	NA	1246.00	NA	500 (1)
Total Target BNs w/o qualifers	ND	2.5	NA	1246.00	NA	500 (1)
Total Non-Target BNs	ND	ND	NA	ND	NA	500 (1)

NOTES:
U - Designates parameter was below the minimum detection limit
J - Estimated value
DRY - Designates well was dry and no sample obtained
NSProd - Designates well was not sampled due to presence of free floating product
* - Designates no criteria exists
(1) NJDEP interim specific groundwater quality criteria 7/18/94 and 2/5/97 (ISGQS)

TABLE NO. 8
NJTA - INTERCHANGE 12 IMPROVEMENTS
PCB'S AND PESTICIDES IN GROUNDWATER
APRIL,MAY and JULY 2003

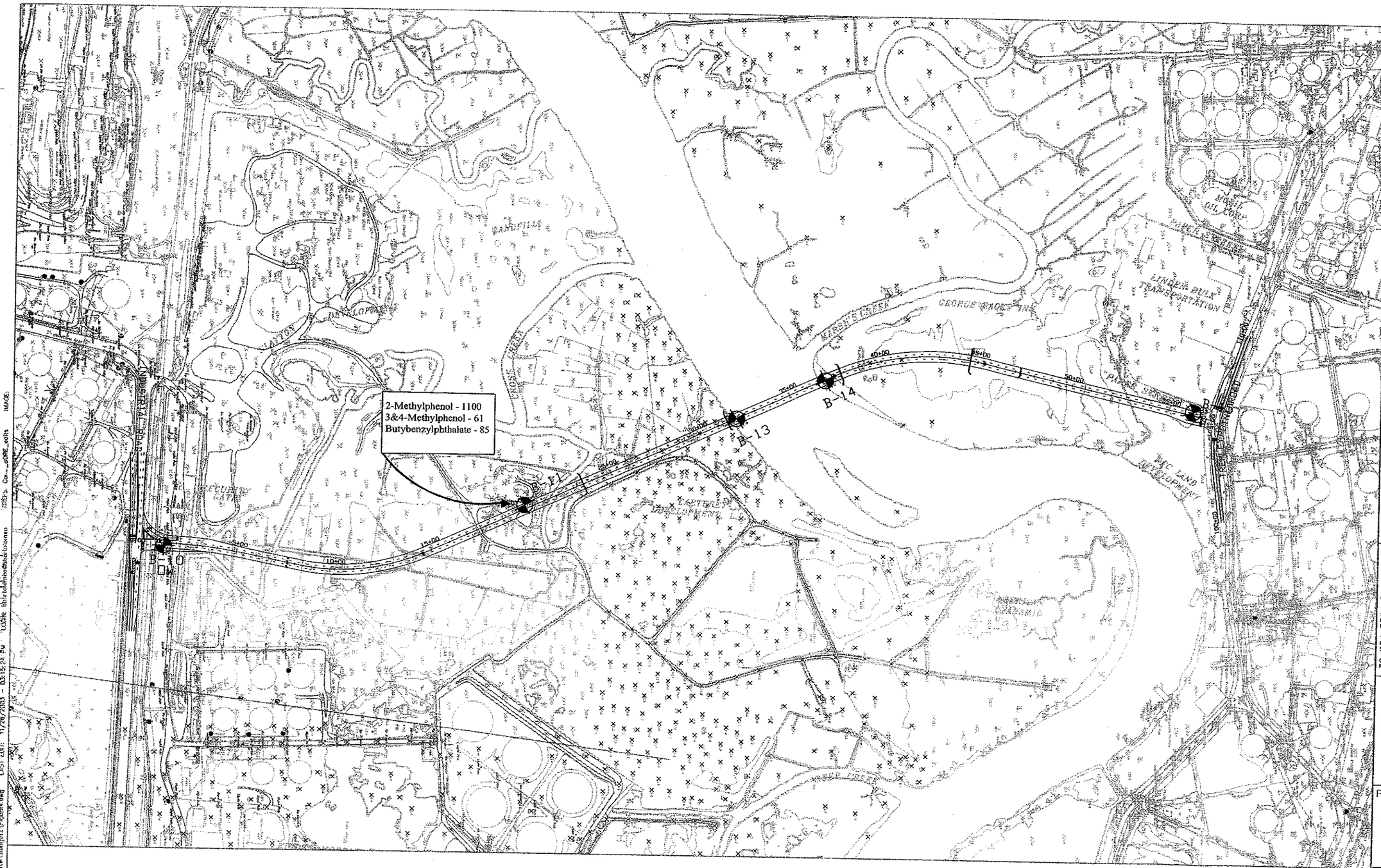
Sample Number	TW-8	FB041803W	TW041803W	B11GW	TB07222003	Higher of PQLs and Groundwater Quality Criteria UG/L
Lab Sample ID Number	AB83144	AB83143	AB83145	AB89830	AB89831	
Sampling Date	4/18/2003	4/18/2003	4/18/2003	7/22/2003	7/22/2003	
Units	UG/L	UG/L	UG/L	UG/L	UG/L	
PCBs						
Aroclor - 1016	ND @ 0.83	ND @ 0.50	NA	ND @ 0.50	NA	0.5
Aroclor - 1221	ND @ 0.83	ND @ 0.50	NA	ND @ 0.50	NA	0.5
Aroclor - 1232	ND @ 0.83	ND @ 0.50	NA	ND @ 0.50	NA	0.5
Aroclor - 1242	ND @ 0.83	ND @ 0.50	NA	ND @ 0.50	NA	0.5
Aroclor - 1248	ND @ 0.83	ND @ 0.50	NA	ND @ 0.50	NA	0.5
Aroclor - 1254	ND @ 0.83	ND @ 0.50	NA	ND @ 0.50	NA	0.5
Aroclor - 1260	ND @ 0.83	ND @ 0.50	NA	ND @ 0.50	NA	0.5
PESTICIDES						
Alpha - BHC	ND @ 0.033	ND @ 0.020	NA	ND @ 0.020	NA	0.02
Dieldrin	ND @ 0.033	ND @ 0.020	NA	ND @ 0.020	NA	0.03
P,P' - DDE	ND @ 0.033	ND @ 0.020	NA	ND @ 0.020	NA	0.1
P,P' - DDT	ND @ 0.033	ND @ 0.020	NA	ND @ 0.020	NA	0.1

NOTES:
U - Designates parameter was below the minimum detection limit
J - Estimated value
DRY - Designates well was dry and no sample obtained
NSProd - Designates well was not sampled due to presence of free floating product
* - Designates no criteria exists
(1) NJDEP interim specific groundwater quality criteria 7/18/94 and 2/5/97 (ISGQS)

TABLE NO. 9
NJTA - INTERCHANGE 12 IMPROVEMENTS
PRIORITY POLLUTANT METALS, CYANIDE AND PHENOL IN GROUNDWATER
APRIL, MAY and JULY 2003

Sample Number	TW-8	FB041803W	TW041803W	B11GW	TB07222003	Higher of PQLs and Groundwater Quality Criteria UG/L
Lab Sample Number	AB83144	AB83143	AB83145	AB89830	AB89831	
Sampling Date	4/18/2003	4/18/2003	4/18/2003	7/22/2003	7/22/2003	
Units	UG/L	UG/L	UG/L	UG/L	UG/L	
PRIORITY POLLUTANT METALS						
Antimony	16	ND @ 7.5	NA	ND @ 7.5	NA	20
Arsenic	21	ND @ 4.0	NA	790	NA	8
Barium	6100	ND @ 25	NA	2100	NA	2000
Beryllium	27	ND @ 4.0	NA	26	NA	20
Cadmium	12	ND @ 2.0	NA	16	NA	4
Chromium	120	ND @ 25	NA	270	NA	100
Copper	2100	ND @ 25	NA	1100	NA	1000
Lead	1100	ND @ 5.0	NA	2700	NA	10
Mercury	4.2	ND @ 0.20	NA	8.4	NA	2
Nickel	300	ND @ 10	NA	480	NA	100
Selenium	ND @ 25	ND @ 25	NA	ND @ 25	NA	50
Silver	ND @ 10	ND @ 10	NA	ND @ 10	NA	5 (1)
Thallium	8.8	ND @ 5.0	NA	ND @ 5.0	NA	10
Zinc	4000	ND @ 25	NA	2600	NA	5000
Cyanide	ND @ 0.01	ND @ 0.01	NA	0.38	NA	200
Phenol	0.052	ND @ 0.05	NA	20	NA	
Chloride	120	ND @ 1	NA	210	NA	
Total Disolved Solids	790	ND @ 10	NA	1000	NA	4000

NOTES:
U - Designates parameter was below the minimum detection limit
J - Estimated value
DRY - Designates well was dry and no sample obtained
NSProd - Designates well was not sampled due to presence of free floating product
* - Designates no criteria exists
(1) NJDEP interim specific groundwater quality criteria 7/18/94 and 2/5/97 (ISGQS)



REVISIONS/ISSUES

NO.	DATE	DESCRIPTION

NJDEP GWQC

2-Methylphenol – 5
3&4-Methylphenol – 5
Butybenzylphthalate – 5

(All units are in µg/l)

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PAULUS SOKOLOWSKI and SARTOR, LLC.
CONSULTING ENGINEERS
67A MOUNTAIN BOULEVARD EXTENSION
P.O. BOX 4039
WARREN, NEW JERSEY 07059
PHONE: (732) 560-9700
FAX: (732) 560-9768

PROJECT

NEW JERSEY TURNPIKE AUTHORITY
INTERCHANGE 12 IMPROVEMENTS PROJECTS
BOROUGH OF CATERET, MIDDLESEX COUNTY
&
THE CITY OF LINDEN, UNION COUNTY
NEW JERSEY

SHEET TITLE

SEMI-VLOATILE ORGANIC COMPOUNDS ABOVE NJDEP GWQC

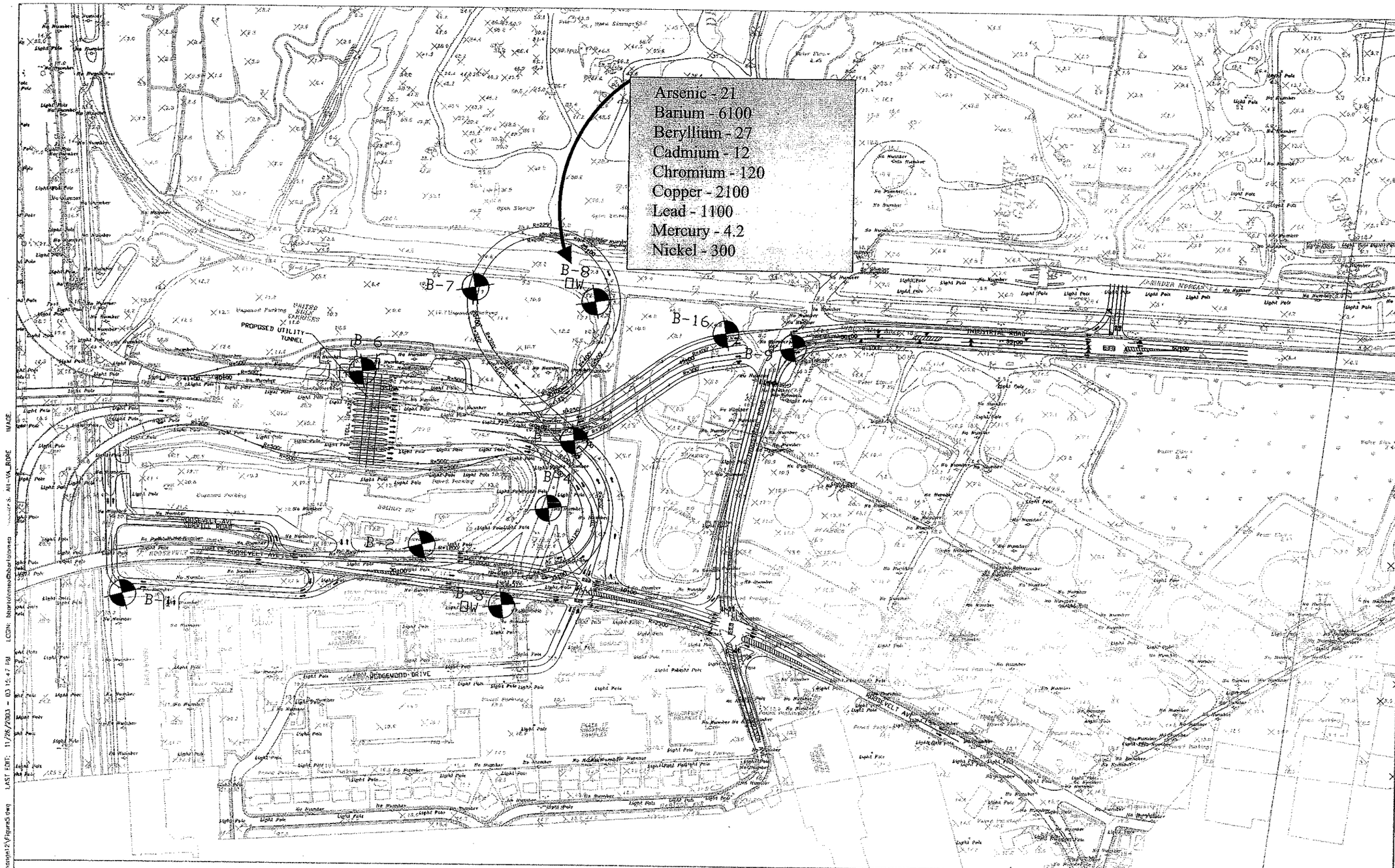
DATE 11-26-03	JOB NO. 02595.001.023
SCALE 1" = 500'	
DRAWN BB	SHEET NO. Figure # 4
CHKD. GK	

BORING DATA:

BORING	OBSERVATION WELL	LOCATION	APPROX. STATION
B-10	X	CONNECTOR ROAD	1+40
B-11		CONNECTOR ROAD	18+10
B-12		CONNECTOR ROAD	25+20
B-13		CONNECTOR ROAD	32+00
B-14		CONNECTOR ROAD	37+00
B-15		CONNECTOR ROAD	56+28 LT. 15'

BORING PROGRAM:

1. BORINGS SHALL BE CONTINUOUSLY SAMPLED THROUGH THE FILL AND ORGANICS AND SAMPLED AT 5-FOOT INTERVALS THERE-AFTER. BORINGS SHALL BE TERMINATED 5 FEET INTO ROCK. ROCK SHALL BE CORED WITH AN NX SIZE CORE BARREL.
2. THE CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITTING PRIOR TO DRILLING BORINGS.
3. OBSERVATION WELLS SHALL BE INSTALLED IN SELECTED BORINGS (DESIGNATED OW) TO MEASURE THE FLUCTUATION IN GROUNDWATER LEVEL.
4. ONE UNDISTURBED SAMPLE OF ORGANIC DEPOSITS SHALL BE OBTAINED FROM EACH BORING.



BORING	OBSERVATION WELL	LOCATION	APPROX. STATION
B-1		SERVICE ROAD	
B-2		RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	30+40 LT. 90'
B-3	X	RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	33+30 RT. 55'
B-4		RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	35+25 RT. 5'
B-5		LOOP RAMP	15+40 LT. 35'
B-6		TOLL PLAZA/RAMP WITH 200' RADIUS	35+70 RT. 25'
B-7		LOOP RAMP	21+00 LT. 15'
B-8	X	LOOP RAMP	26+70 RT. 40'
B-16		RAMP TO/FROM INDUSTRIAL RD. TO TOLL PLAZA	26+80 RT. 5'
B-9		RAMP TO/FROM INDUSTRIAL RD. TO TOLL PLAZA	29+00 RT. 45'

BORING PROGRAM:

1. BORINGS SHALL BE CONTINUOUSLY SAMPLED THROUGH THE FILL AND ORGANICS AND SAMPLED AT 5-FOOT INTERVALS THEREAFTER. BORINGS SHALL BE TERMINATED 5 FEET INTO ROCK. ROCK SHALL BE CORED WITH AN NX SIZE CORE BARREL.
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4. ONE UNDISTURBED SAMPLE OF ORGANIC DEPOSITS SHALL BE OBTAINED FROM EACH BORING.

REVISIONS/ISSUES

NO.	DATE	DESCRIPTION

NJDEP GWQC

Arsenic – 8
Barium – 2,000
Beryllium – 20
Cadmium – 4
Chromium – 100
Copper – 1000
Lead – 10
Mercury – 2
Nickel – 100

(All units are in µg/l)

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PROJECT

NEW JERSEY TURNPIKE AUTHORITY
INTERCHANGE 12 IMPROVEMENTS PROJECTS
BOROUGH OF CATERET, MIDDLESEX COUNTY
&
THE CITY OF LINDEN, UNION COUNTY
NEW JERSEY

SHEET TITLE

PRIORITY POLLUTANT METALS
ABOVE NJDEP GWQC

DATE 11-21-03	JOB NO. 02595.001.023
SCALE 1" = 300'	
DRAWN BB	SHEET NO. FIGURE # 5
CHKD. GK	

PROJECT: FILE NAME: r:\3950\n.s.a_interchange12\Figure5.dwg LAST EDIT: 11/26/2003 - 03:16:47 PM LCDW: bburgdorf:mwdbburgdorf.pmcfg layout:5: ANSI-VA_BORE IMAGE:

5.2.3 Pesticides / Polychlorinated Biphenyls (PCBs)

Pesticides and PCBs were not detected in the two (2) groundwater samples collected from the project site (See Table No. 8).

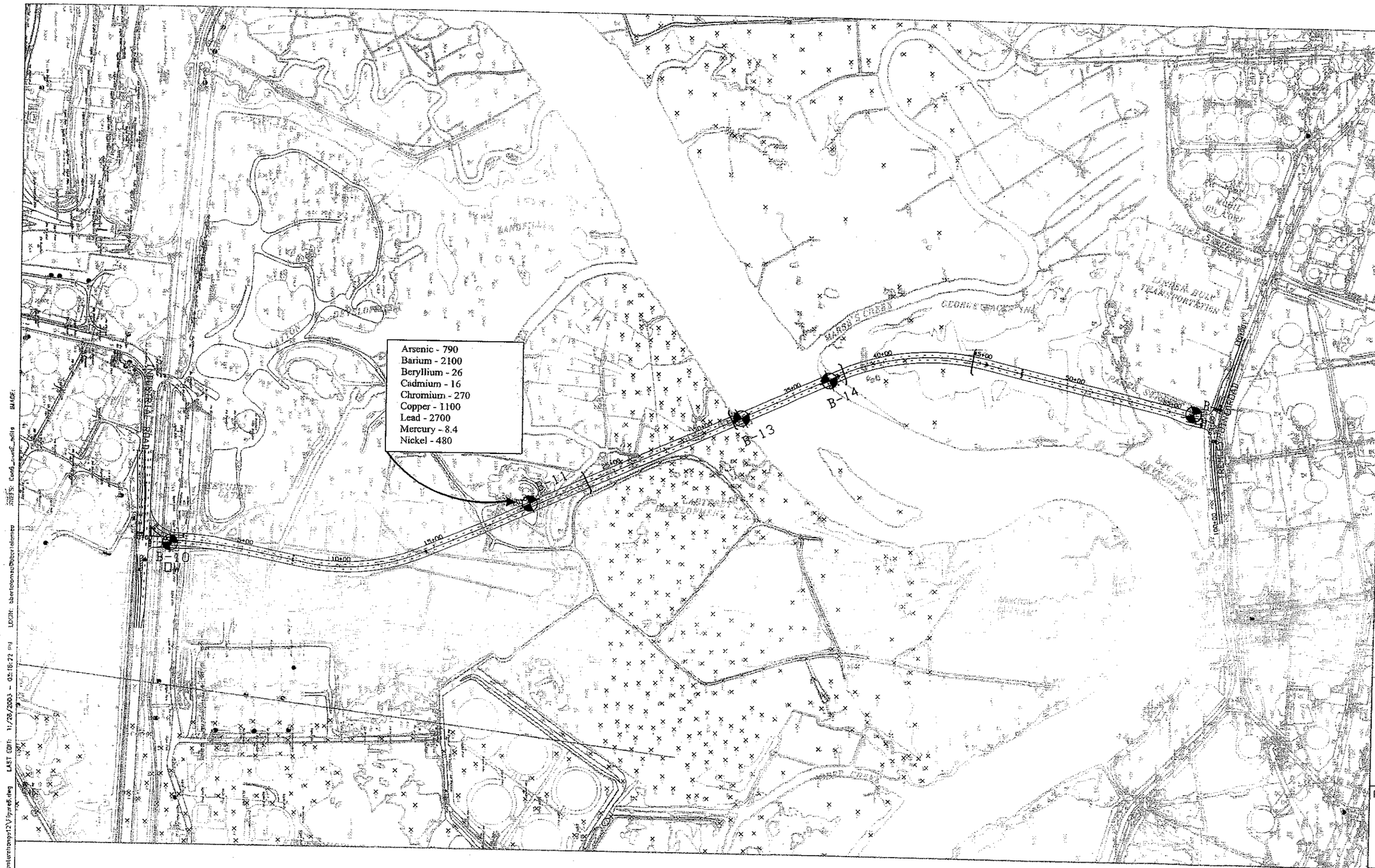
5.2.4 Priority Pollutant Metals (PP Metals)

Of the two (2) groundwater samples for PP Metals, only selenium and silver were reported as not detected in both samples. Arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, and nickel were all reported above GWQC in both groundwater samples (See Table No. 9 and Figure Nos. 5 and 6). Antimony, thallium and zinc were detected in the groundwater sample obtained from boring B-8 at concentrations below their respective GWQC. Also, zinc was detected in the groundwater sample obtained from boring B-11 at concentration below its GWQC.

Cyanide was not detected in boring B-8 groundwater sample, however, it was detected in the boring B-11 groundwater sample at concentration 0.38 μg/l, which is well below its GWQC (See Table No. 9).

Phenol was detected in the groundwater samples collected from borings B-8 and B-11 at concentrations 0.052 and 20 μg/l, respectively (See Table No. 9). Please note that there is no groundwater quality criterion established for Phenol.

Chloride was detected in the groundwater samples collected from borings B-8 and B-11 at concentrations 120 and 210 μg/l, respectively (See Table No. 9). Also, there is no groundwater quality criterion established for Chloride.



REVISIONS/ISSUES

NO.	DATE	DESCRIPTION

NJDEP GWQC

Arsenic - 8
Barium - 2,000
Beryllium - 20
Cadmium - 4
Chromium - 100
Copper - 1000
Lead - 10
Mercury - 2
Nickel - 100

(All units are in µg/l)

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NEW JERSEY TURNPIKE AUTHORITY
INTERCHANGE 12 IMPROVEMENTS PROJECTS
BOROUGH OF CATERET, MIDDLESEX COUNTY
&
THE CITY OF LINDEN, UNION COUNTY
NEW JERSEY

SHEET TITLE

PRIORITY POLLUTANT METALS
ABOVE NJDEP GWQC

DATE 11-26-03	JOB NO. 02595.001.023
SCALE 1" = 500'	
DRAWN BB	SHEET NO. Figure # 6
CHKD	

BORING DATA:

BORING	OBSERVATION WELL	LOCATION	APPROX. STATION
B-10	X	CONNECTOR ROAD	1+40
B-11		CONNECTOR ROAD	18+10
B-12		CONNECTOR ROAD	25+20
B-13		CONNECTOR ROAD	32+00
B-14		CONNECTOR ROAD	37+00
B-15		CONNECTOR ROAD	56+28 LT. 15'

BORING PROGRAM:

1. BORINGS SHALL BE CONTINUOUSLY SAMPLED THROUGH THE FILL AND ORGANICS AND SAMPLED AT 5-FOOT INTERVALS THERE-AFTER. BORINGS SHALL BE TERMINATED 5 FEET INTO ROCK. ROCK SHALL BE CORED WITH AN NX SIZE CORE BARREL.
2. THE CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITTING PRIOR TO DRILLING BORINGS.
3. OBSERVATION WELLS SHALL BE INSTALLED IN SELECTED BORINGS (DESIGNATED DW) TO MEASURE THE FLUCTUATION IN GROUNDWATER LEVEL.
4. ONE UNDISTURBED SAMPLE OF ORGANIC DEPOSITS SHALL BE OBTAINED FROM EACH BORING.

PROJECT: FILE NAME: M:\02595001023_interchange12\Figure6.dwg LAST EDIT: 11/26/2003 - 03:18:22 PM LOGIN: bbertolomeo@bbertolomeo.tmp BASE: 2595S_Cont_Base_Cont_Note

Also, total dissolved solids were present in borings B-8 and B-11 groundwater samples at concentrations 790 and 1,000 μg/l, respectively, which are below their GWQC (See Table No. 9).

6.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the soil and groundwater sampling program generally indicated presence of non-significant contamination at the project site. Of the 15 borings performed at the site, the first attempt to perform boring B-11 along the Connector Road was terminated due to environmental concerns. During the first attempt for B-11, a strong odor was emanating from the borehole when the boring was drilled to a depth of about 15 feet below the ground surface. The boring was vented for almost four hours, however the stench continued to be very strong. Subsequently, the boring was sealed by pumping bentonite-grout into the borehole. Based on the environmental test results on soil samples collected from boring B-11, it is possible that the odor may be the result of the combinations of trace amount of contaminants detected in the boring.

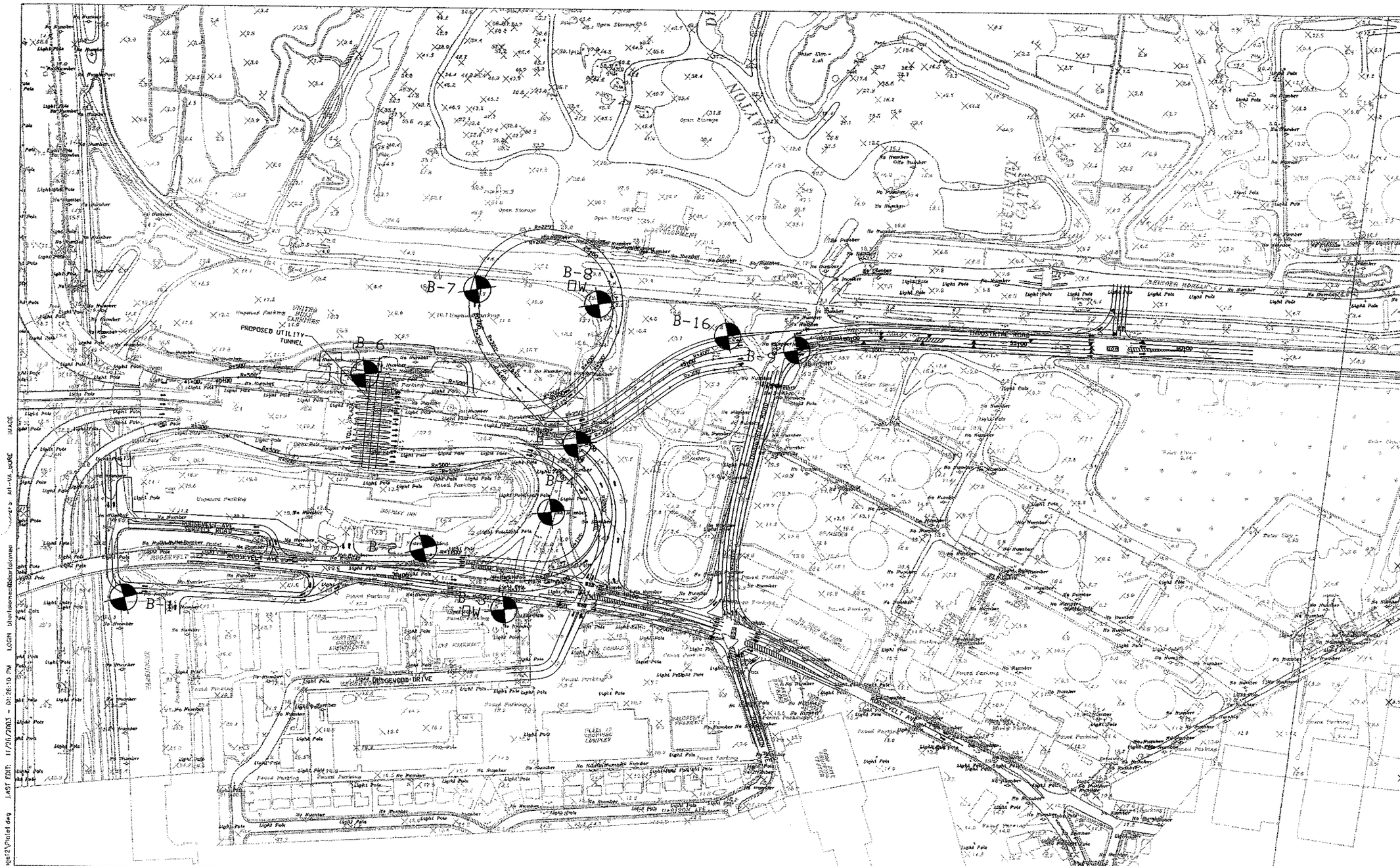
Within the vicinity of the Interchange 12, twelve soil samples were collected for environmental testing purposes from six boring (B-4, B-5, B-7, B-8, B-9, and B-16) locations. In general, TPHC, VOCs, SVOCs, pesticides, and PP Metals were detected in the soil samples at concentrations below their respective Soil Cleanup Criteria, except for beryllium, copper and zinc in soil sample B-7B, which exceeded their respective Soil Cleanup Criteria. PCBs and Phenol were not detected in the soil samples within the vicinity of Interchange 12. Cyanide was detected in B-8B soil sample at concentration well below the Soil Cleanup Criteria.

Within the vicinity of the Interchange 12, one groundwater sample was collected from boring B-8 for environmental testing purposes. VOCs, SVOCs, PCBs and pesticides were not detected in the groundwater sample collected from boring B-8. In boring B-8 groundwater sample, PP Metals were detected at concentrations below their respective GWQC, except for arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury and nickel, which exceeded their respective GWQC. Cyanide was not detected in boring B-8 groundwater sample. Phenol and chloride were detected in boring B-8 groundwater sample; however, there are no clean up criteria established for phenol and chloride. Total dissolved solids were also detected in boring B-8 groundwater sample at concentrations below their respective GWQC.

Along the Connector Road, six soil samples were collected from three boring (B-10, B-11 and B-15) locations. In general, TPHC, VOCs, SVOCs, pesticides, and PP Metals were detected in the soil samples at concentrations below their respective Soil Cleanup Criteria, except for Benzo[b]fluoranthene in sample B-10A, which exceeded RDCSCC but less than NRDCSCC. PCBs were detected at concentrations below their Soil Cleanup Criteria in samples B-10A and B-11A along the Connector Road. Also, cyanide and phenol were not detected in the soil samples along the Connector Road.

Along the Connector Road, one groundwater sample was collected from boring B-11. VOCs were detected in the B-11 groundwater sample at concentrations below their respective GWQC. SVOCs such as 2 Methylphenol, 3&4 Methylphenol and Butybenzylphthalate were detected in boring B-11 groundwater sample at concentrations well above their respective GWQC. PCBs and pesticides were not detected in the groundwater sample collected from boring B-11. In boring B-11 along the Connector Road, PP Metals were detected in the groundwater sample at concentrations below their respective GWQC, except for arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury and nickel, which exceeded their respective GWQC. Also, cyanide was detected in B-11 groundwater sample at concentration well below the GWQC. Phenol and chloride were detected in the groundwater sample; however, there are no clean up criteria established for phenol and chloride. Total dissolved solids were detected in the groundwater sample at concentrations below their respective GWQC.

Based on the results of the soil and groundwater program, it is PS&S's opinion that the presence of non-significant contamination would not pose any impediment that would preclude the proposed project. PS&S recommends that additional soil and groundwater sampling be performed to delineate soil and groundwater contaminations within the BP/Amoco petroleum storage tank containment area within the vicinity of Interchange 12, and at boring B-12 location along the Connector Road, which was not performed due to site access constraints during this phase.



BORING	OBSERVATION WELL	LOCATION	APPROX. STATION
B-1		SERVICE ROAD	
B-2		RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	30+40 LT. 90'
B-3	X	RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	33+30 RT. 35'
B-4		RAMP FROM ROOSEVELT AVE TO TOLL PLAZA	35+25 RT. 5'
B-5		LOOP RAMP	13+40 LT. 25'
B-6		TOLL PLAZA/RAMP WITH 200' RADIUS	25+70 RT. 25'
B-7		LOOP RAMP	21+00 LT. 15'
B-8	X	LOOP RAMP	26+70 RT. 40'
B-16		RAMP TO/FROM INDUSTRIAL RD. TO TOLL PLAZA	26+80 RT. 5'
B-9		RAMP TO/FROM INDUSTRIAL RD. TO TOLL PLAZA	29+00 RT. 45'

BORING PROGRAM:

1. BORINGS SHALL BE CONTINUOUSLY SAMPLED THROUGH THE FILL AND ORGANICS AND SAMPLED AT 5-FOOT INTERVALS THEREAFTER. BORINGS SHALL BE TERMINATED 5 FEET INTO ROCK. ROCK SHALL BE CORED WITH AN NX SIZE CORE BARREL.
2. THE CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITTING PRIOR TO DRILLING BORINGS.
3. OBSERVATION WELLS SHALL BE INSTALLED IN SELECTED BORINGS (DESIGNATED ON) TO MEASURE THE FLUCTUATION IN GROUNDWATER LEVEL.
4. ONE UNDISTURBED SAMPLE OF ORGANIC DEPOSITS SHALL BE OBTAINED FROM EACH BORING.

REVISIONS/ISSUES

NO.	DATE	DESCRIPTION

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PROJECT

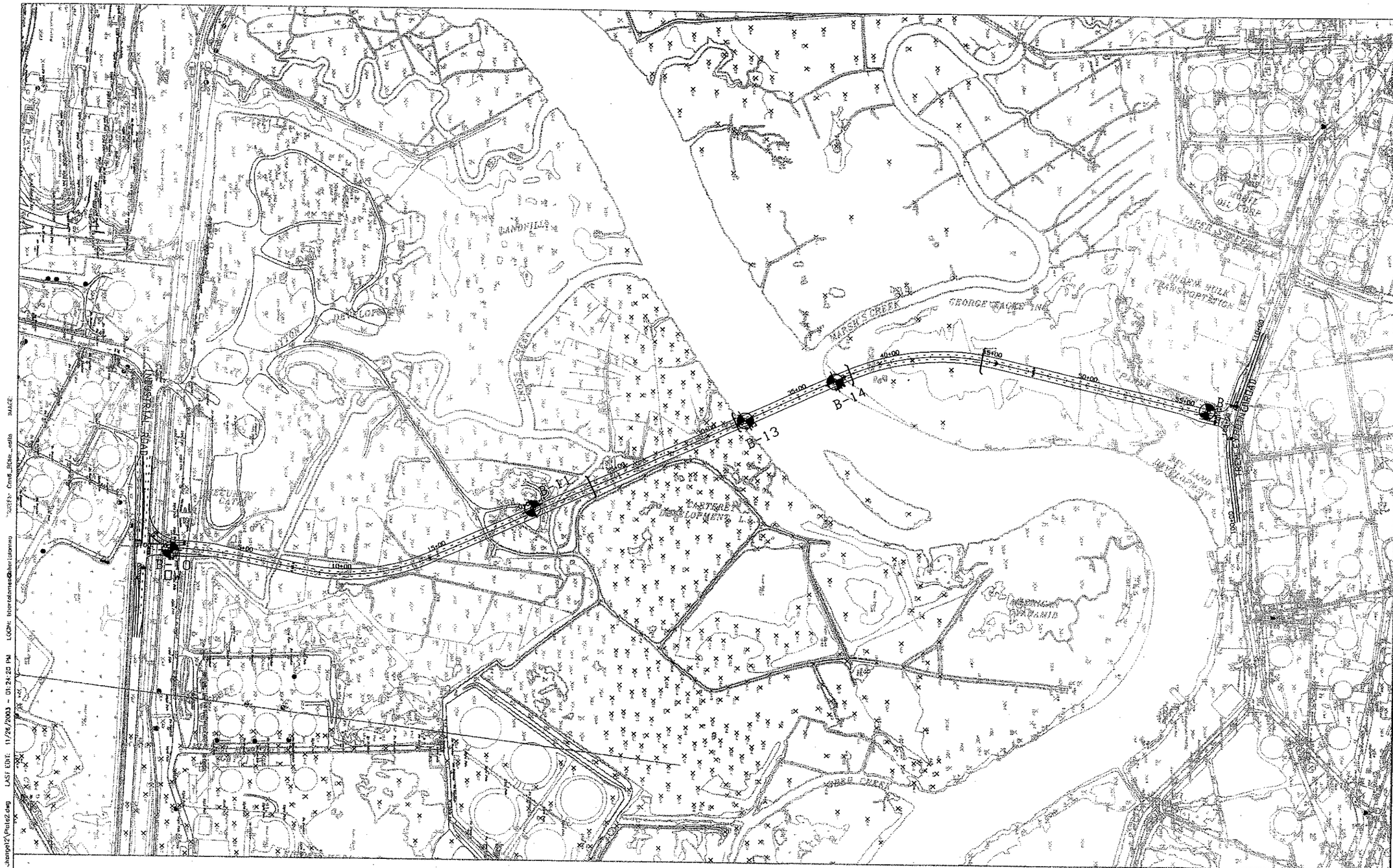
NEW JERSEY TURNPIKE AUTHORITY
INTERCHANGE 12 IMPROVEMENTS PROJECTS
BOROUGH OF CATERET, MIDDLESEX COUNTY
&
THE CITY OF LINDEN, UNION COUNTY
NEW JERSEY

SHEET TITLE

BORING LOCATION PLAN
VICINITY OF INTERCHANGE 12

DATE 11-21-03	JOB NO. 02595.001.023
SCALE 1" = 300'	
DRAWN BB	SHEET NO. PLATE No. 1
CHKD. GK	

PROJECT: FILE NAME: ...\25\001023\...\interchange12\Plate1.dwg LAST EDIT: 11/26/2003 - 01:26:10 PM LOGIN bhorlacher@sarlab.com ...\Drawings\ All-VA_BORE IMAGE



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PROJECT

NEW JERSEY TURNPIKE AUTHORITY
INTERCHANGE 12 IMPROVEMENTS PROJECTS
BOROUGH OF CATERET, MIDDLESEX COUNTY
&
THE CITY OF LINDEN, UNION COUNTY
NEW JERSEY

SHEET TITLE

BORING LOCATION PLAN
ALONG PROPOSED CONNECTOR ROAD

BORING DATA:

BORING	OBSERVATION WELL	LOCATION	APPROX. STATION
B-10	X	CONNECTOR ROAD	1+40
B-11		CONNECTOR ROAD	18+10
B-12		CONNECTOR ROAD	25+20
B-13		CONNECTOR ROAD	32+00
B-14		CONNECTOR ROAD	37+00
B-15		CONNECTOR ROAD	56+28 LT. 15'

BORING PROGRAM:

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DATE 11-21-03	JOB NO. 02595.001.023
SCALE 1" = 500'	
DRAWN BB	SHEET NO. PLATE No. 2
CHKD. GK	

PROJECT: TILE NAME: R:\...\02595001023\... LAST EDIT: 11/26/2003 - 01:24:23 PM LUSER: bbartolomeo@sbartolomeo SCRIPT: Cmd_BOxe_odfb IMAGE:

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-1
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +26.9
Project Location: Carteret / Linden, New Jersey	Date Started: 4/03/03
Observer: Patrick Radomsky / Colleen Hunter	Date Completed: 4/16/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: Vince
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 10 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: $2^7/_8$ in. Tricone
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD Split Spoon
	U-Tube Sampler: Dia. in. Type:
	Core Barrel: Core Bit:
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in. (Mechanical Hammer)

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	2	6	S1: Red brown clayey SILT, some coarse-fine gravel, little coarse-fine sand (FILL)			
		6	10				
S2A	2-3.5	12	11	S2A: Red brown clayey SILT, trace coarse-fine gravel, trace coarse-fine sand (FILL)		F	
S2B	3.5-4	10	9				
S3	4-6	13	10	S2B: Dark gray brown clayey SILT, trace fine sand, wood			
		13	12		5		
S4	6-8	6	10	S3: Light gray / red ~~brown SIL~~T, some clay, trace coarse-fine sand, trace gravel			
		10	10				
S5	8-10	4	8	S4: Red brown coarse-fine+ SAND, little coarse-fine gravel, little clayey silt			
		8	8				
S6A	10-10.5	8	6	S5: Red brown coarse-fine+ SAND, trace+ silt	10		
S6B	10.5-12	5	5	S6A: Red brown coarse-fine SAND, trace silt			
				S6B: Red brown clayey SILT, little+ coarse-fine gravel, little coarse-fine sand			
S7	15-17	4	5	S7: "Do S6B"	15	GA	
		6	11				
S8	20-22	7	11	S8: Red brown coarse-fine Sand and Gravel, some clayey silt	20		
		10	9				
S9A	25-26	4	6	S9A: Red brown clayey SILT, trace coarse-fine sand, trace fine gravel	25		
S9B	26-27	22	23	S9B: Red brown coarse-fine Sand and Gravel, little clayey silt			

PLATE NO: 3.1

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-1
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S10	30-32	3	5	S10: Red brown clayey SILT, little coarse-fine gravel,	30		
		8	12	little coarse-fine sand			
S11	35-37	8	28	S11: Brown coarse-fine SAND, little coarse-fine gravel,	35		
		21	26	little clayey silt		GA	
S12	40-41.3	65	92	S12: Brown coarse-fine Gravel and Sand, little clayey	40		
		100/4"		silt			
S13A	45-46	7	16	S13A: Red brown clayey SILT, little coarse-fine	45		
S13B	46-47	20	100/5"	gravel, little coarse-fine sand			
				S13B: Red brown Sand and Gravel, little clayey silt			
S14A	50-51	11	29	S14A: Red brown clayey SILT, little coarse-fine gravel,	50		
S14B	51-52	48	52	little coarse-fine sand			
				S14B: Completely weathered red brown shale		DR	
							Drilled to 53'
				COMPLETION DEPTH = 53.0'	55		
					60		
					65		
					70		

PLATE 3.1

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-2
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +12.5
Project Location: Carteret / Linden, New Jersey	Date Started: 4/15/03
Observer: Colleen Hunter	Date Completed: 4/15/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: John
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 15 ft.	Auger Dia.: ID 2 in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: 2 7/8 in. Tricone

SAMPLING EQUIPMENT (type and size)

Split Spoon Sampler: 2" OD
U-Tube Sampler: Dia. in. Type:
Core Barrel: Core Bit:

Sampler Hammer Weight: 140 Lbs. Average Drop: 30 In. (Mechanical Hammer)

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
4/15/03			16'	6.5'	

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
	0-6"			Asphalt			
S1	1-3	7	6	S1: Red brown clayey SILT, some coarse-fine gravel,		F	
		5	3	trace coarse-fine sand, brick fragments (FILL)			
S2	3-5	2	2	S2: Gray clayey SILT, trace coarse-fine sand, trace			
		1	2	gravel			
S3	5-7	1	WH	S3: Red brown clayey SILT, little coarse-fine sand,	5		
		2	1	some coarse-fine gravel			
S4	7-9	1	2	S4: Red brown clayey SILT, little fine sand			
		5	5				
S5	9-11	5	3	S5: Red brown clayey SILT, little coarse-fine sand			
		4	6		10		
S6	15-17	11	6	S6: Red brown clayey SILT, trace fine gravel,	15	GA	
		5	10	trace fine sand			
S7	20-22	4	6	S7: Red brown clayey SILT, trace coarse-fine sand,	20		
		11	15	coarse-fine gravel			
S8	25-27	13	12	S8: Red brown clayey SILT, little coarse-fine sand,	25		
		11	10	coarse-fine gravel			

PLATE NO: 3.2

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-2
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S9	30-32	9	14	S9: Red brown clayey SILT, little coarse-fine sand,	30		
		20	24	little coarse-fine gravel, shale fragments			
S10	35-37	9	12	S10: Bluish purple to green gray clayey SILT, trace	35	G_A	
		14	17	coarse-fine sand, trace fine gravel, shale fragments			
S11	40-40.6	85	100/1"	S11: Red brown clayey SILT, coarse-fine sand, grading	40		
				to completely weathered red brown shale			
				COMPELTION DEPTH = 40.6'			
					45		
					50		
					55		
					60		
					65		
					70		

PLATE 3.2

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-3 (OW)
Sheet: 1 of 3
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +11.6
Project Location: Carteret / Linden, New Jersey	Date Started: 4/15/03
Observer: Joseph Trocchio	Date Completed: 4/29/03
Contractor: ADT Diamond Drilling	
Driller: Norm Crane	Helper: Mike Martinez
Type of Rig: CME LC-60 Track rig	
Casing Dia.: 4 in. From: 0 to 10 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: 3 ¾ in.
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD Split Spoon
	U-Tube Sampler: Dia. 3 in. Type:
	Core Barrel: Core Bit:
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in. (Mechanical Hammer)

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
4/15/03		8'		7'	
4/30/03	7:45 AM	15'		4.5'	
9/22/03	12:00 PM	-	-	4.71'	

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	2	4	S1: Red brown clayey SILT, coarse-fine gravel, trace coarse-fine sand (FILL)		F	Observation well was installed to a depth of 11 feet below grade in a separate hole adjacent to the boring. A 5-ft slotted screen was utilized.
		6	18				
S2	2-4	12	10	S2: Brown clayey SILT, trace coarse-fine sand, trace gravel (FILL)			
		8	8				
S3	4-6	8	7	S3: Red brown clayey SILT, little coarse-fine sand, medium-fine gravel, pieces of siltstone (FILL)			
		9	3		5		
S4	6-8	10	9	S4: Red brown clayey SILT, some coarse-fine gravel, trace coarse-fine sand		GA	
		7	5				
S5	8-10	5	6	S5: "Do S4"			
		7	9				
S6	10-12	5	7	S6: "Do S4"	10		
		9	10				
S7	15-17	5	6	S7: Red brown Clay and Silt, some coarse-fine gravel, little coarse-fine sand	15		
		8	10				
S8	20-22	6	7	S8: Red brown Clay and Silt, some coarse-fine gravel, little coarse-fine sand	20		
		12	13				
S9	25-27	10	21	S9: Red brown clayey SILT, and coarse-fine sand, some coarse-fine gravel	25		
		23	27				

PLATE NO: 3.3

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-3 (OW)
Sheet: 2 of 3
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S10	30-32	11 17 26 31	S10: Red brown coarse- fine sand, little fine gravel	30		
S11	35-37	11 26 23 31	S11: Red brown CLAY and SILT, some coarse-fine gravel, little coarse-fine sand	35	GA	
S12	40-42	11 26 44 50	S12: Dark brown clayey SILT, little coarse-fine sand, some coarse-fine gravel, shale fragments	40		
S13	45-45.9	29 100/5"	S13: Dark brown clayey SILT, some fine-medium gravel, little coarse-fine sand, shale fragments	45		
S14	50-51.2	9 21 100/3"	S14: Completely weathered red brown shale	50		
S15	55-55.4	100/5"	S15: "Do S14"	55	DR	
				60		Hard drilling Rock coring was not attempted due to clogging of core barrel
S16	65-67	10 25 43 64	S16: Completely weathered gray green to red brown shale	65		
S17	70-72	19 36 37 43	S17: Highly weathered red brown shale	70		

PLATE 3.3

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-3 (OW)
Sheet: 3 of 3
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S18	75-75.9	57 100/4"	S18: Slightly weathered red brown shale	75		
				80		Hard drilling Rock coring was not attempted due to clogging of core barrel
NR19	85-85.1	100/1"	NR19: No recovery	85	DR	Completely weathered shale in wash
NR20	90-90.1	100/1"	NR20: No recovery	90		Completely weathered shale in wash
NR21	95-95.1	100/1"	NR21: No recovery	95		Completely weathered shale in wash Drilled to 100'
			COMPLETION DEPTH = 100.0'	100		
				105		
				110		
				115		

PLATE 3.3

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-4
Sheet: 1 of 3
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +10.8
Project Location: Carteret / Linden, New Jersey	Date Started: 4/28/03
Observer: Colleen Hunter	Date Completed: 4/30/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: Mike
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 10 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: 2 7/8 in. Tricone
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD Split Spoon
	U-Tube Sampler: Dia. in. Type:
	Core Barrel: Core Bit:
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in. (Mechanical Hammer)

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
4/28/03			10'	7'-8'	

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	1	2	S1: Dark gray clayey SILT, little coarse-fine sand, trace			
		5	5	coarse-fine gravel (Topsoil)			
S2	2-4	5	5	S2: Yellow brown coarse-fine SAND, trace clayey silt			
		4	4	(FILL)			
S3	4-6	5	4	S3: "Do S2"			
		7	9		5	F	
S4	6-8	7	5	S4: "Do S2"			
		9	15				
S5	8-10	16	23	S5: Pale brown coarse-fine SAND, trace clayey silt			
		9	10	(FILL)			
S6A	10-11	5	6	S6A: Green gray coarse-fine SAND, trace silt (FILL)	10		
S6B	11-12	11	12	S6B: Red brown clayey SILT, trace fine sand			
S7	15-17	4	5	S7: Red brown Clay and Silt, trace coarse-fine sand,	15		
		8	9	some fine-medium gravel			
S8	20-22	5	8	S8: "Do S7"	20	GA	
		5	7				
S9	25-27	5	6	S9: Red brown clayey SILT, trace fine sand, trace fine-	25		
		11	14	medium gravel			

PLATE NO: 3.4

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-4
Sheet: 2 of 3
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S10	30-32	3 8 12 16	S10: Red brown clayey SILT, some coarse-fine sand, some fine-medium gravel	30		
S11	35-35.3	100/4"	S11: "Do S10", shale fragments	35	GA	
S12	40-42	10 16 18 32	S12: Dark brown with grayish green clayey SILT, some fine-medium gravel, little coarse-fine sand	40		
S13	45-47	20 52 52 100/2"	S13: Dark brown with grayish green silty clay, graded to completely weathered shale	45		
S14	50-51.9	42 100/5"	S14: Completely weathered dark brown to grayish green shale	50		
S15	55-55.3	100/4"	S15: Completely weathered red brown shale	55		
S16	60-60.6	75 100/1"	S16: "Do S15"	60	DR	
S17	65-65.3	100/3"	S17: "Do S15"	65		
S18	70-70.4	100/5"	S18: "Do S15"	70		

PLATE 3.4

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-4
Sheet: 3 of 3
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S19	75-75.3	100/3"	S19: Completely weathered red brown shale	75		
S20	80-80.1	100/1"	S20: "Do S19"	80		
S21	85-85.1	100/1"	S21: "Do S19"	85		
S22	90-90.2	100/2"	S22: "Do S19"	90	DR	
S23	95-95.1	100/1"	S23: "Do S19"	95		
S24	100-100.2	100/2"	S24: "Do S19"	100		
S25	105-105.1	100/1"	S25: "Do S19"	105		
S26	110-110.1	100/1"	S26: "Do S19"	110		
				115		Rock coring was not attempted due to possibility of core barrel clogging Drilled to 120'

COMPLETION DEPTH = 120.0'

PLATE 3.4

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-5
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +21.5
Project Location: Carteret / Linden, New Jersey	Date Started: 4/04/03
Observer: Patrick Radomsky	Date Completed: 4/08/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: AJ Benjamin
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 5 ft.	Auger Dia.: ID 2.5 in. OD 4 in. to 3'
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: $3^7/_8$ in. Tricone beyond 3'
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD Split Spoon
	U-Tube Sampler: Dia. 3 in. Type: Modified Shelby
	Core Barrel: Core Bit:
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in. (Mechanical Hammer)

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
04/07/03	7:30 AM	37'	5'	10'±	

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
							Asphalt: 0-9"
							Aggregate: 9"-3'±
S1	3-5	7	9	S1: Brown yellow coarse-fine SAND, little coarse-fine			
		11	11	gravel, trace silt (FILL)			
S2A	5.5-6.5		7	S2A: "Do S1"	5		
S2B	6.5-7	9	7	S2B: Red brown clayey SILT, little coarse-fine sand,			
S3	7-9	3	6	little coarse-fine gravel (FILL)			
		9	6	S3: "Do S2B" with occ plant fibers (FILL)			
S4	9-11	2	3	S4: "Do S2B" with layer of yellow brown coarse-fine		F	
		4	5	SAND, trace fine gravel, trace silt	10		
S5	11-13	3	3	S5: Red brown clayey SILT, some coarse-fine gravel,			
		5	5	little coarse-fine sand			
S6	13-15	3	3	S6: "Do S5" becoming red brown, coarse-fine+ sand			
		5	8	clayey silt, trace+ gravel			
S7	15-17	9	14	S7: Olive gray coarse-fine SAND, trace silt	15		
		16	18				
S8A	20-21	8	7	S8A: Gray yellow coarse-fine SAND, trace silt	20		
S8B	21-22	6	8	S8B: Gray yellow brown Silt and Clay, trace fine sand,			
				grading to red brown clayey SILT, little coarse-fine sand			
S9	25-27	9	11	S9: Red brown clayey SILT, little+ coarse-fine gravel,	25	GA	
		13	16	little coarse-fine sand			

PLATE NO: 3.5

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-5
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S10	30-32	3 6	S10: Red brown clayey SILT, little coarse-fine gravel,	30		
		7 11	trace coarse-fine sand			
S11	35-37	7 7	S11: Red brown clayey SILT with silty clay laminations	35		P.P. = 1.5 to 2.5 TSF
		8 11				
U12	37-39	PUSH=24"	U12: Red brown clayey SILT			Tube damaged
		REC=12"				P.P. = 4.0 TSF
S13A	40-41.5	10 9	S13A: Red brown clayey SILT with silty clay	40	GA	
S13B	41.5-42	10 14	laminations			P.P. = Pocket
			S13B: Red brown clayey SILT, little coarse-fine sand,			Penetrometer
			little coarse-fine gravel			
S14	45-47	6 12	S14: "Do S13B"	45		
		16 18				
S15	50-51.7	20 60	S15: Red brown clayey SILT, some coarse-fine gravel,	50		
		75 50/2"	little coarse-fine sand, grading to decomposed shale			
S16	55-55.9	28 100/5"	S16: Completely weathered red brown shale	55	DR	
S17	60-60.2	100/3"	S17: "Do S16"	60		
C1	60.5-65.5	REC=59/60"	C1: Red brown moderately weathered siltstone, closely			
		RQD=39/60"	jointed to fractured		R	
				65		
			COMPLETION DEPTH = 65.5'			
				70		

PLATE 3.5

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-6
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +18.3
Project Location: Carteret / Linden, New Jersey	Date Started: 4/10/03
Observer: Colleen Hunter	Date Completed: 4/10/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: AJ Benjamin
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 5 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Grout	Rotary Bit Diameter: $3^7/_8$ in. Tricone

SAMPLING EQUIPMENT (type and size)

Split Spoon Sampler: 2" OD Split Spoon
U-Tube Sampler: Dia. 3 in. Type: Modified Shelby
Core Barrel: Core Bit:

Sampler Hammer Weight: 140 Lbs. Average Drop: 30 in. (Mechanical Hammer)

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
4/10/03			5'	10.5'	

SAMPLE NO.	DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2			S1: Red brown coarse-fine SAND, trace silt, trace			Asphalt: 6"
		11	7	coarse-fine gravel (FILL)			
S2A	2-3.5	10	10	S2A: Yellow brown coarse-fine SAND, trace silt (FILL)			
S2B	3.5-4	10	9	S2B: Red brown clayey SILT, trace sand, trace coarse-			
				Gravel (FILL)			
S3	4-6	7	7	S3: Brown yellow coarse-fine SAND, trace silt, trace	5		
		9	7	coarse-fine gravel			
S4	6-8	11	9	S4: "Do S3"			
		8	8			F	
S5	10-12	2	4	S5: Yellow coarse-fine SAND, trace silt	10		
		6	8				
S6	15-17	2	2	S6: Brown yellow coarse-fine SAND, trace silt, some	15		
		2	3	coarse gravel			
S7	20-22	3	8	S7: Red brown clayey SILT, little coarse-fine gravel,	20		
		8	10	trace fine sand			
S8	25-27	6	7	S8: Red brown clayey SILT, little coarse-fine sand,	25	GA	
		6	7	coarse-fine gravel			

PLATE NO: 3.6

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-6
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S9	30-32	3	6	S9: Red brown clayey SILT, trace fine sand	30		
		8	12				
S10	35-37	6	12	S10: Red brown clayey SILT, some coarse-fine sand,	35		
		21	24	some coarse-fine gravel			
S11	40-42	22	30	S11: Red brown coarse-fine SAND, some coarse-fine	40	GA	
		53	50	gravel, some clayey silt			
S12	45-47	50	52	S12: Red brown clayey SILT, some coarse-fine gravel,	45		
		42	47	shale fragments			
S13	50-50.2	100/2"		S13: Completely weathered red brown shale	50		
				COMPLETION DEPTH = 50.2'			
					55		
					60		
					65		
					70		

PLATE 3.6

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-7 (OW)
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +10.7
Project Location: Carteret / Linden, New Jersey	Date Started: 4/10/03
Observer: Colleen Hunter	Date Completed: 4/11/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: AJ Benjamin
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 5 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type:	Rotary Bit Diameter: 3 7/8 in.

SAMPLING EQUIPMENT (type and size)

Split Spoon Sampler:	2" OD Split Spoon
U-Tube Sampler: Dia.	in. Type:
Core Barrel: 5' Double Barrel NX	Core Bit: NX Diamond

Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in.

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
9/22/03	1:00 PM	-	-	6.11'	

SAMPLE NO.	DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	2	10	S1: Red brown coarse-fine silty SAND, some coarse-gravel (FILL)			Observation well was installed to a depth of 11 feet below grade in a separate hole adjacent to the boring. A 5-ft slotted screen was utilized.
		53	10				
S2	2-4	12	12	S2: Pieces of wood, brown clayey SILT, some coarse-sand, some coarse-fine gravel, cinders, brick fragments (FILL)			
		10	10				
S3	4-5.5	23	20			F	
		100/3"		S3: Black to red brown coarse-fine SAND, some coarse-fine gravel, asphalt, cinders (FILL)	5		
S4	6-8	1	2				
		1	2	S4: Brown clayey SAND, some coarse-fine gravel to black, with fibrous roots (FILL)			
S5	8-10	2	3				
		6	9	S5: Brown to red brown clayey SAND, trace fine sand, trace fine gravel			
S6	10-12	7	7		10		
		9	8	S6: Red brown coarse-fine SAND, some clayey silt, trace coarse-fine gravel			
					15		No sample was obtained due to over drilling
S7	20-22	8	9	S7: Red brown clayey SILT, some fine gravel, trace coarse-fine sand	20	GA	
		10	13				
S8	25-27	10	18	S8: Red brown clayey SILT, trace fine sand	25		
		21	29				

PLATE NO: 3.7

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-7 (OW)
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S9	30-32	8 11 15 18	S9: Red brown clayey SILT, some coarse-fine gravel, little coarse-fine sand	30		
S10	35-37	8 10 19 27	S10: Red brown clayey SILT, some coarse-fine sand, some coarse-fine gravel	35	GA	
S11	40-40.4	100/5"	S11: Completely weathered red brown shale	40	DR	
C1	41-46	REC=20/60" RQD=0/60"	C1: Highly weathered siltstone, closely jointed	45	R	
			COMPLETION DEPTH = 46.0'	50		
				55		
				60		
				65		
				70		

PLATE 3.7

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-8
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +11.5
Project Location: Carteret / Linden, New Jersey	Date Started: 4/08/03
Observer: Patrick Radomsky	Date Completed: 4/09/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: AJ Benjamin
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 10 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: $3^7/_8$ in.

SAMPLING EQUIPMENT (type and size)

Split Spoon Sampler: 2" OD Split Spoon / 3" as noted
U-Tube Sampler: Dia. in. Type:
Core Barrel: 5' Double Barrel NX Core Bit: NX Diamond

Sampler Hammer Weight: 140 Lbs. Average Drop: 30 in. (Mechanical Hammer)

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
4/18/03	9:00 AM			7.9'	In temporary piezometer
4/22/03				7.6'	In temporary piezometer

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	4	13	S1: Asphalt millings becoming clayey silt,			Observation well was installed to a
		5	4	little+ coarse-fine gravel, little coarse-fine sand (FILL)			depth of 15 feet below grade in a
S2	2-4	6	7	S2: Brown clayey SILT and sand and gravel (FILL)			separate hole adjacent to the boring.
		8	7				A 5-ft slotted screen was utilized.
S3	4-6	8	7	S3: Brown/black SAND and GRAVEL, some+			
		5	5	clayey silt (with cinders, ash) (FILL)	5	F	
S4	6-8	WR	1	S4: Brown clayey SILT, some coarse-fine gravel, little			
		2	2	coarse-fine sand (FILL)			
S5	8-10	WH	WH	S5: Brown clayey SILT, little coarse-fine gravel, trace+			
		1	2	coarse fine sand (FILL)			
S6	10-12	3	10	S6: Brown clayey SILT, trace coarse-fine sand, trace	10		
		10	5	gravel (FILL)			
S7A	12-13	2	3	S7A: Brown organic clayey SILT, trace peat fibers,		O	P.P. = 0.5 TSF (3" spoon)
S7B	13-14	3	4	trace decomposed wood			
S8	14-16	2	3	S7B: Gray Clay and Silt grading to trace coarse-fine			Attempted a tube, damaged
		3	5	sand, trace fine gravel	15		
				S8: Red brown coarse-fine SAND, trace silt			
S9	20-22	3	3	S9: Red brown SILT, little clay grading to clayey silt,	20	GA	
		3	5	little coarse-fine sand, little coarse-fine gravel			
S10	25-27	6	9	S10: Red brown clayey SILT, trace+ coarse-fine gravel,	25		
		10	12	trace sand			P.P. = Pocket Penetrometer

PLATE NO: 3.8

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-8
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S11	30-32	8 9	S11: Red brown clayey SILT with occ. layers of silty clay	30		P.P.=2.5 TSF
		12 14				
S12	35-37	10 16	S12: Red brown clayey SILT, some coarse-fine gravel, little coarse-fine sand	35	GA	
		18 24				
					DR	
S13	40-40.2	100/3"	S13: Completely weathered red brown/gray green shale	40		
C1	41-46	REC=48/60"	C1: Moderately weathered red brown/gray sandstone interbedded with siltstone/shale		R	
		RQD=15/60"				
				45		
			COMPLETION DEPTH = 46.0'			
				50		
				55		
				60		
				65		
				70		

PLATE 3.8

BORING LOG

Paulus, Sokolowski and Sartor
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Boring No.: B-9
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +9.7
Project Location: Carteret / Linden, New Jersey	Date Started: 05/01/03
Observer: Colleen Hunter	Date Completed: 05/02/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: Mike
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 10 ft.	Auger Dia.: ID 4 in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: 3 7/8 in.
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD Split Spoon U-Tube Sampler: Dia. in. Type: Core Barrel: Core Bit:
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in.

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
5/1/03		52'	10'	3.5'	

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2			S1: Gray clayey SILT, little coarse-fine sand, trace coarse-fine gravel, wire, metal, brick (FILL)		F	Hand augered to 5' below grade Observation well was not installed in accordance with BP/Amoco requirements.
S2	2-3			S2: Gray silty CLAY, c-f sand, tr. c-f gravel (FILL)			
S3	3-4			S3: Brown silty CLAY, trace fine sand (FILL)			
S4	4-5			S4: Red brown to brown silty SAND, trace clay (FILL)			
S5	5-7	4	3	S5: Red brown clayey SILT, trace fine sand, trace fine gravel	5		
		4	6				
S6	7-9	6	6	S6: Red brown clayey SILT, trace coarse-fine gravel, trace fine sand			
		9	9				
S7	9-11	3	9	S7: "Do S6"			
		12	11		10		
S8	15-17	16	32	S8: Red brown clayey SILT, some coarse-medium gravel, little coarse-fine sand	15	GA	
		21	20				
S9	20-22	4	9	S9: "Do S8"	20		
		13	16				
S10	25-30	11	15	S10: Red brown clayey SILT, some fine-coarse sand, some coarse-fine gravel	25		
		18	18				

PLATE NO: 3.9

BORING LOG

Paulus, Sokolowski and Sartor
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Boring No.: B-9
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S11	30-32	25 54 62 60	S11: Completely weathered red brown shale	30		
S12	35-35.8	80 100/3"	S12: "Do S11"	35		
S13	40-40.5	100/5"	S13: "Do S11"	40	DR	
S14	45-45.6	51 100/1"	S14: "Do S11"	45		
S15A	50-51.3	21 51 100/3"	S15: Completely weathered red brown shale with green gray to yellowish brown weathered siltstone	50		
			COMPLETION DEPTH = 51.3'	55		
				60		
				65		
				70		

PLATE 3.9

BORING LOG

Paulus, Sokolowski and Sartor
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Boring No.: B-10 (OW)
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +6.8
Project Location: Carteret / Linden, New Jersey	Date Started: 4/17/03
Observer: Colleen Hunter / Joseph Trocchio	Date Completed: 4/18/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: Mike Martinez
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 5 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: 3 7/8 in.
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD Split Spoon U-Tube Sampler: Dia. in. Type: Core Barrel: 5' Double Barrel NX Core Bit: NX Diamond
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in.

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
4/17/03		41.5'	5'	4.5'	
5/8/03	10:30 AM			3.3'	In Piezometer

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	2	2	S1: Red brown clayey silt, little coarse-fine sand, trace gravel, cinder and ash (FILL)		F	Observation well was installed to a depth of 11 feet below grade in a separate hole adjacent to the boring. A 5-ft slotted screen was utilized.
		5	6				
S2	2-4	10	6	S2: Brick, wood, ash, cinder (FILL)			
		5	8				
S3	4-6	7	3	S3: Wood, brick and cinder fragments (FILL)			
		3	3		5		
S4	6-8	2	2	S4: Red brown clayey SILT, trace fine sand, trace fine Gravel (FILL)			
		2	2				
S5	8-10	5	6	S5: Red brown clayey SILT, trace coarse-fine sand, trace fine gravel		GA	
		6	5				
S6	10-12	6	6	S6: Red brown silty CLAY, trace coarse-fine sand, little coarse-fine gravel	10		
		8	8				
NR7	15-17	7	8	NR7: No Recovery	15		
		15	14				
S8	20-22	19	18	S8: Red brown clayey SILT, some coarse-fine sand, some coarse-fine gravel	20		
		25	38				
S9	25-26.9	12	35	S9: Green gray to olive gray clayey SILT, some coarse-fine sand, some coarse-fine gravel grading to completely weathered shale	25		
		88	100/5"				

PLATE NO: 3.10

BORING LOG

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Boring No.: B-10 (OW)
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S10	30-30.1	100/1"	S10: Completely weathered green gray to red brown shale	30	DR	
S11	35-35.1	100/0.5"	S11: Completely weathered red brown shale	35	R	
C1	36-41	REC=61.5/60" RQD=44/60"	C1: Slightly weathered red brown siltstone, closely jointed	40		
			COMPLETION DEPTH = 41'	45		
				50		
				55		
				60		
				65		
				70		

PLATE 3.10

BORING LOG

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Boring No.: B-11A
Sheet: 1 of 1
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +3.9
Project Location: Carteret / Linden, New Jersey	Date Started: 6/02/03
Observer: Lamberto Santiago	Date Completed: 6/02/03
Contractor: ADT Diamond Drilling, Inc.	
Driller: Denis Crayon	Helper: Mike Martinez
Type of Rig: CME 75	
Casing Dia.: 4 in. From: 0 to 5 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Water	Rotary Bit Diameter: 3 7/8 in.
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD
	U-Tube Sampler: Dia. in. Type:
	Core Barrel: 5' Double Barrel NX Core Bit: NX Diamond
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in.

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks

SAMPLE NO.	DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	4	7	S1: Red Brown Clayey Silt, trace coarse-fine Sand			Soil samples were obtained from a separate hole, approximately 10' North of B-11A, for environmental testing purposes.
		4	5	Miscellaneous debris (concrete fragments) (FILL)			
S2	2-4	3	3	S2: Brown CLAY & SILT, trace fine Gravel			
		6	4	Miscellaneous debris (FILL)			
S3	4-6	2	2	S3: Do "S2"			
		2	2		5	F	
S4	6-8	2	2	S4: Dark gray CLAY & SILT, miscellaneous debris			
		3	2	(FILL)			
S5A	8-9.5	3	3	S5A: Do "S4"			
S5B	9.5-10	15	16	(FILL)			
S6	10-12	7	5	S5B: Dark coarse-fine Gravel, little coarse-fine Sand	10		
		9	13	little Silt, occasional asphalt fragments (FILL)			
				S6: Brown CLAY & SILT, trace fine Gravel		GA	
				COMPLETION DEPTH = 15'	15		Drilling terminated after encountering strong odor at a depth of 15' below grade. Halted drilling for 3-4 hrs. without any improvement.
					20		
					25		

PLATE NO: 3.11A

BORING LOG

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Boring No.: B-11B
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +8.5
Project Location: Carteret / Linden, New Jersey	Date Started: 7/21/03
Observer: Golam Kabir	Date Completed: 7/21/03
Contractor: ADT Diamond Drilling, Inc.	
Driller: Dominic Pepe	Helper: Paul Gaddis/Edwin Cruz
Type of Rig: CME 55	
Casing Dia.: 4 in. From: 0 to 19 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Yes Type:	Rotary Bit Diameter: 3 7/8 in.
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD
	U-Tube Sampler: Dia. in. Type:
	Core Barrel: 5' Double Barrel NX Core Bit: NX Diamond
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in. (Mechanical Hammer)

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
7/22/03	11:20 a.m.			4.3'	In temporary piezometer

SAMPLE NO.	DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	12	10	S1: Crushed stone, Dark brown Clayey Silt, little			A temporary piezometer was
		9	10	coarse-fine Sand (FILL)			installed in a separate hole to
NR2	2-4	7	5	NR2: No Recovery			obtain groundwater sample for
		4	3				environmental testing purposes.
NR3	4-6	WOH/12"		NR3: No Recovery			
		1	2		5	F	Strong petroleum odor in soil
S4	6-8	1	2	S4: Black organic SILT, pieces of wood			samples
		3	2				
S5	8-10	2	4	S5: Do "S4"			
		1	1				
S6	10-12	WOH/24"		S6: Brown PEAT	10		
						O	
S7	15-17	2	4	S7: Gray coarse-fine SAND, trace Clayey Silt.	15		
		6	8				
S8	20-22	2	4	S8: Red brown SILT & CLAY	20	GA	p.p. = 1.5 TSF
		4	5				
							p.p. = Pocket Penetrometer
	25-27	1	6	S9: Red brown coarse-fine GRAVEL, little Clayey Silt,	25		
		5	10	trace coarse-fine Sand			

PLATE NO: 3.11B

BORING LOG

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Boring No.: B-11B
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S10	30-32	8 10	S10: Red brown SILT & CLAY	30	GA	p.p. = 4.0 TSF
		14 16				
S11	35-37	21 21	S11: Red brown coarse-fine GRAVEL, little coarse-fine	35		
		24 67	Sand, trace Clayey Silt, decomposed shale fragments			
			at tip		DR	
C1	40-45	REC= 60/60	C1: Slightly weathered red brown Sandstone,	40	R	
		RQD= 46/60	closely jointed			
			COMPLETION DEPTH: 45'-0"	45		
				50		
				55		
				60		
				65		
				70		

PLATE 3.11B

BORING LOG

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Boring No.: B-13
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation:
Project Location: Carteret / Linden, New Jersey	Date Started: 4/16/03
Observer: Robert Bernard	Date Completed: 4/17/03
Contractor: ADT Diamond Drilling	
Driller: Dominick Pepe	Helper: Paul Gaodis
Type of Rig: CME 55	
Casing Dia.: 4 in. From: 0 to 14.5 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Yes Type: Zeo Gel	Rotary Bit Diameter: 3¾ in.

SAMPLING EQUIPMENT (type and size)	
	Split Spoon Sampler: 2" OD Split Spoon
	U-Tube Sampler: Dia. in. Type: Osterberg
	Core Barrel: 5' Double Barrel NX Core Bit: NX Diamond

Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in.

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks

SAMPLE NO.	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	WR/6"	Dark gray to black organic silty clay			Depth measured from mudline
		WH/18"				
S2	2-4	WR/6"	S2: "Do S1"			
		WH/18"				
U3	4-6	PUSH=24"	U3: "Do S1"			
		REC=24"		5		P.P.=0.0 TSF
S4	6-8	WR/12"	S4: "Do S1"			
		WH/12"			O	P.P. = Pocket Penetrometer
S5	8-10	WR/18"	S5: "Do S1"			
		WH/6"				
S6	10-12	WR/24"	S6: "Do S1"	10		
S7	15-17	3 6	S7: Red brown coarse-medium+-fine Sand and Gravel,	15		
		6 5	little clayey silt			
S8	20-22	2 3	S8: Red brown silty CLAY, some coarse-fine gravel,	20	G_A	
		4 7	little coarse-fine sand			
U9	25-27	PUSH=24"	U9: "Do S8"	25		Attempted a tube, damaged
		REC=24"				

PLATE NO: 3.12

BORING LOG

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Warren, New Jersey 07059

Boring No.: B-13
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S10	30-32	31 58	S10: Completely decomposed red brown shale	30		
		29 84				
S11	35-35.2	100/2"	S11: "Do S10"	35	DR	
C1	40-45	REC=51/60"	C1: Reddish brown slightly weathered sandstone, very closely jointed	40	R	
		RQD=44/60"				
			COMPLETION DEPTH = 45.0'	45		
				50		
				55		
				60		
				65		
				70		

PLATE 3.12

BORING LOG

Paulus, Sokolowski and Sartor
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Boring No.: B-14
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation:
Project Location: Carteret / Linden, New Jersey	Date Started: 4/17/03
Observer: Robert Bernard	Date Completed: 4/18/03
Contractor: ADT Diamond Drilling	
Driller: Dominick Pepe	Helper: Paul Gaddis
Type of Rig: CME 55	
Casing Dia.: 4 in. From: 0 to 14'6" ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: 3¾ in.
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD Split Spoon
	U-Tube Sampler: Dia. 3 in. Type:
	Core Barrel: 5' Double Barrel NX Core Bit: NX Diamond
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in.

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks

SAMPLE NO.	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-2	WR/24"	S1: Dark gray organic silty clay			Depth measured from mudline
S2	2-4	WR/24"	S2: "Do S1"			
S3	4-6	WR/24"	S3: "Do S1"			
				5		
S4	6-8	WR/6"	S4: "Do S1"			
		WH/18"				
S5	8-10	WR/24"	S5: "Do S1"			
S6	10-12	WR/12"	S6: "Do S1"	10	O	
		WH/12"				
U7	15-17	PUSH=24"	U7: "Do S1"	15		P.P. = 0.0 TSF
		REC=24"				P.P. = Pocket Penetrometer
S8	20-22	2 2	S8: "Do S1"	20		A piece of gravel, possible wash
		1 3				
					GA	
S9	25-25.1	100/1"	S9: Completely weathered red brown shale	25	DR	

PLATE NO: 3.13

BORING LOG

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Warren, New Jersey 07059

Boring No.: B-14
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
C1	30-35	REC=60/60"	C1: Red brown moderately weathered siltstone, closely to medium jointed	30		Numerous vertical to near vertical fractures
		RQD=4/60"				
C2	35-39	REC=36/48"	C2: Red brown moderately weathered siltstone, closely to medium jointed	35	R	Numerous vertical to near vertical fractures
		RQD=0/48"				
C3	40-45	REC=54/60"	C3: Red brown slightly weathered siltstone, closely jointed	40		
		RQD=36/60"				
			COMPLETION DEPTH = 45.0'	45		
				50		
				55		
				60		
				65		
				70		

PLATE 3.13

BORING LOG

Paulus, Sokolowski and Sartor
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Warren, New Jersey 07059

Boring No.: B-15
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +6.0
Project Location: Carteret / Linden, New Jersey	Date Started: 4/30/03
Observer: Joseph Trocchio	Date Completed: 5/11/03
Contractor: ADT Diamond Drilling	
Driller: Norm Crane	Helper: Charles
Type of Rig: CME LC-60 Track rig	
Casing Dia.: 4 in. From: 0 to 5 ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type: Bentonite	Rotary Bit Diameter: 3 7/8 in.

SAMPLING EQUIPMENT (type and size)

Split Spoon Sampler: 2" OD Split Spoon
U-Tube Sampler: Dia. in. Type:
Core Barrel: Core Bit:

Sampler Hammer Weight: 140 Lbs.
Average Drop: 30 in.

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1A	0-1	1	1	S1A: Black organic silt (Topsoil)		TS	
S1B	1-2	2	2	S1B: Red brown clayey SILT with little fine gravel			
S2	2-4	4	4	S2: "Do S1B" with trace fibrous roots			
		5	6				
S3	4-6	8	9	S3: "Do S1B"			
		10	10		5		
S4	6-8	9	9	S4: Red brown clayey SILT with some fine medium			
		10	10	shale fragments			
S5	8-10	13	13	S5: Red brown clayey SILT, trace fine-medium gravel			
		10	10				
S6	10-12	9	13	S6: Red brown clayey SILT, trace fine-medium gravel	10		
		15	14				
S7	15-17	3	3	S7: Red brown Silt and Clay, trace fine-medium gravel	15	GA	
		4	6				
S8	20-22	7	11	S8: Red brown SILT, some fine sand	20		
		10	22				
S9	25-27	4	6	S9: Red brown clayey SILT, trace fine sand	25		
		8	7				

PLATE NO: 3.14

BORING LOG

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Boring No.: B-16
Sheet: 1 of 2
Job No.: 2595-001-023

Project: NJTA Interchange 12 Improvements	Elevation: +4.5
Project Location: Carteret / Linden, New Jersey	Date Started: 05/22/03
Observer: Colleen Hunter	Date Completed: 05/23/03
Contractor: ADT Diamond Drilling	
Driller: Denis Crayon	Helper: Mike Martinez
Type of Rig: CME 75	
Casing Dia.: in. From: to ft.	Auger Dia.: ID in. OD in.
Drilling Mud Utilized: Type:	Rotary Bit Diameter: in.

SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler: 2" OD
	U-Tube Sampler: Dia. in. Type:
	Core Barrel: Core Bit:
Sampler Hammer Weight: 140 Lbs.	Average Drop: 30 in.

WATER LEVEL OBSERVATIONS

Date	Time	Depth of Hole	Depth of Casing	Depth to Water	Remarks
5/22/03		40.0'	25.0'	5.0'	

SAMPLE NO.	SAMPLE DEPTH (FT)	BLOWS/6"		SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S1	0-1			S1: Red brown silty sand with trace black root fiber			Augered to 5'
	1-2			Olive gray / light brown silty sand			
S2	2-3			S2: Red brown silty sand, trace clay		F	
	3-5			Red brown to light brown silty fine-coarse sand, trace			
				fine gravel			
S3	5-7	3	5	S3: Red brown silty CLAY, trace coarse-fine sand,	5		
		6	10	trace fine gravel			
S4	7-9	15	10	S4: Red brown clayey SILT, trace fine gravel			
		10	11				
S5	9-11	8	6	S5: Red brown clayey SILT, trace coarse-fine sand,			
		6	7	trace fine gravel	10		
S6	11-13	16	15	S6: "Do S5"			
		12	11				
S7	13-15	8	8	S7: "Do S5"		GA	
		10	15				
					15		
S8	20-22	7	7	S8: Red brown Silt and Clay, some coarse-fine sand,	20		
		11	17	trace fine-medium gravel			
S9	25-25.1	100/2"		S9: Completely weathered red brown shale	25		
						DR	

PLATE NO: 3.15

BORING LOG

Paulus, Sokolowski and Sartor
Consulting Engineers
Warren, New Jersey 07059

Boring No.: B-16
Sheet: 2 of 2
Job No.: 2595-001-023

SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	DEPTH	STRATA	REMARKS
S10	30-32	54 32 30 100/1"	S10: Completely weathered red brown shale with bluish Green gray weathered siltstone	30		
S11	35-35.1	100/1"	S11: Completely weathered red brown shale	35	DR	
S12	40-40.1	100/1"	S12: "Do S11"	40		
			COMPLETION DEPTH = 40.0'			
				45		
			Notes: Double cased hole: 6¼' ID HSA to 25'. Installed 4" black casing to 25" and grouted the annular space between the steel casing and the HSA	50		
				55		
				60		
				65		
				70		

PLATE 3.15

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

(See Issuing Division below)

PERMIT*

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to the further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit.

Permit No. 0000-05-0007.1 WFD 050001 IP Upland & 0000-05-0007.1 FWW 050001 GP 12	Application No. 0000-05-0007.1 WFD 050001 IP Upland & 0000-05-0007.1 FWW 050001 GP 12

Issuance Date SEP 15 2005	Effective Date SEP 15 2005	Expiration Date SEP 15 2010

Name and Address of Applicant	Name and Address of Owner	Name and Address of Operator
New Jersey Turnpike Authority P.O. Box 1121 New Brunswick, New Jersey 08903	Same as applicant.	Same as applicant.

Location of Activity/Facility *(Street Address)*	Issuing Division	Statute(s)
Proposed Tremley Point Connector Road	Land Use Regulation Program	NJSA 12:5-3 NJSA 13:9B-1 et seq. NJSA 13:9A-1et seq. NJSA 58:10A-1

Type of Permit: Waterfront Development/Freshwater Wetlands GP 12/ Water Quality Certificate	Maximum Approved Capacity, if applicable

This permit grants permission to:
Conduct 32 geotechnical soil borings to obtain site-specific data on subsurface conditions along the proposed alignment of the Tremley Point Connector Road. This permit does not approve the proposed crossing or any proposed alignment for the road.

The authorized work is shown on :
On one (1) sheet entitled, "NEW JERSEY TURNPIKE AUTHORITY TREMLEY POINT CONNECTOR ROAD BORING LOCATION PLAN" in the City of Linden and Borough of Carteret, Union and Middlesex Counties, N.J., prepared by Edwards and Kelcey, Inc., dated February 2005 and last revised August 25, 2005.

This permit is authorized under and in compliance with the Rules on Coastal Zone Management for Wetlands (N.J.A.C 7:7E-3.27), Water Quality (N.J.A.C 7:7E-8.4) and all other applicable Rules on Coastal Zone Management N.J.A.C 7:7E-1.1 et seq.), and in compliance with the Freshwater Wetlands Protection Act Rules at NJAC 7:7A. This permit also includes a Water Quality Certificate for these activities.

The issuance of this permit does not in any way relinquish the State's Tidelands interest/ownership rights in these properties.

The permittee shall allow an authorized Department representative the right to inspect boring activities pursuant to N.J.A.C. 7:7-1.5(b)4.

The permittee shall notify the NY/NJ Baykeeper at least three (3) days prior to the commencement of any boring activities.

This permit is not valid until the permit acceptance form has been signed by the applicant and returned to the Program at P.O. Box 439, Trenton, NJ 08625.

Prepared by Judith V. Burton
Judith V. Burton

REVISED DATE	Approved by the Department of Environmental Protection
	Name (Print or Type) _____ Title _____
	Signature SEE FINAL PAGE Date

**The word permit means "approval, certification, registration, etc."*

(General Conditions are on Page Two)

LIMIT OF AUTHORIZED DISTURBANCE

No ftrch.

Based upon the information submitted, the activities authorized by Statewide General Permit No. 12 involve the temporary disturbance of Freshwater wetlands, State open water and /or Transition areas for the drilling of geo-technical soil borings. Any additional disturbance of Freshwater wetlands, State open waters or Transition area shall be considered a violation of the Freshwater Protection Act unless the activity is exempt, or a permit is obtained from the Land Use Regulation Program prior to the start of the disturbance.

The activities authorized by the Waterfront Development permit involve the temporary disturbance of open tidal waters and/or regulated upland areas for the drilling of geo-technical soil borings. Any additional disturbance of open tidal waters and/or regulated upland areas shall be considered a violation of the Waterfront Development Law unless the activity is exempt, or a permit is obtained from the Land Use Regulation Program prior to the start to the disturbance.

TRANSITION AREA

The Freshwater Wetlands affected by this permit authorization will be of exceptional resource value, requiring 150 foot Transition Areas (or buffers). This Permit includes a Transition Area Waiver, which allows encroachment only in that portion to the Transition Area, which has been determined by the Department to be necessary to accomplish the regulated activities. Any additional regulated activities conducted within the standard Transition Area on-site shall require a separate Transition Area Waiver from the Program. Regulated activities within a transition area are defined at N.J.A.C. 7:7A-6.2(a).

PERMIT CONDITIONS

The activities allowed by this authorization shall comply with the following conditions as well as the conditions noted at N.J.A.C. 7:7A-4.3.

SPECIAL CONDITIONS

The following best management practices (BMPS) shall be followed whenever applicable:

1. Track or balloon tire vehicle rigs shall be used whenever possible to perform borings in a wetlands. Skid rigs may only be used when wooden planks (marsh/timber mats) or snow fencing is laid down to minimize disturbance of the ground surface.

2. The area used for access to the boring location shall be minimized to the maximum extent practicable. Matting for track equipment access must be used when the ground is soft to avoid soil compaction. When used, matting should not remain in place for more than 5 days. If it is necessary to leave matting in place long enough to kill the underlying vegetation, the disturbed area must re-vegetated with appropriate native species.

3. All wetland areas disturbed for access, as well as the boring site, must be vegetated upon completion of the boring. The disturbed wetland should be allowed to naturally re-vegetate, however, if it is necessary to prevent erosion, the area may be seeded with wetland seed mixture to stabilize the ground until natural vegetation re-establishes. Re-vegetation with native species is required only when disturbances within the work area have resulted in destruction of vegetation and disturbance to the soil, which would preclude natural re-vegetation within one growing season.

4. Bore holes shall be backfilled to the original surface level. Sand may not be used for backfilling in wetlands. Restoration of all bore holes must maintain the hydrologic integrity of the wetlands. To avoid the potential for draining a wetland by the boring puncturing a hard-pan or confining layer, all borings must be sealed with grout or bentonite in accordance with the NJDEP Water Monitoring Management Program regulations.

5. With the exception of acidic soils and contaminated soils (as defined under Condition #6 and #7, below), excess soil material may be spread evenly over the ground surface in a shallow layer no more than 3 inches deep, and must not form an impediment to surface water flow, nor shall it be compacted.

6. All borings performed in the vicinity of known or suspected contamination shall be performed in accordance with NJDEP Field Sampling Procedures Manual (May 1992).

7. The project is located in an acid producing formation (Raritan). All borings shall be monitored for the presence of acid-producing deposits. If any such deposits are encountered, the applicant shall implement the mitigation and disposal standards outlined in the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13-3.7).

8. Water used to flush borings may not be discharged to the ground. Soil Erosion and Sediment Control measures shall be utilized as necessary to contain/filter excess water. Drilling fluid shall be contained for off-site disposal.

9. In order to protect the fishery resources and/or the spawning of fish populations within the Rahway River, any activity which may introduce sediment into the river or cause the river to become turbid, shall be prohibited between April 1 through June 30 of each year. In addition, any activity within the 100-year flood plain or flood hazard area of this watercourse that could introduce sediment is also prohibited during this period. The Department reserves the right to suspend all regulated activities on site should it be determined that the applicant has not taken proper precautions to ensure continuous compliance with this condition.

10. No discharges of the material to the river shall occur from or below the barge. All cuttings from the hole shall be collected on the barge in a container and discharged off-site.

11. Auger casing shall be positively bedded into the river bottom as a means of minimizing disturbance to the riverbed and also to prevent discharge of cuttings into the waterway.

12. In order to protect the State listed threatened species the black-crowned night heron (*Nycticorax nycticorax*) and yellow-crowned night heron (*Nyctanassa violacea*), boring activities are prohibited between April 1 through August 15 of each year within the project area.

13. All borings performed within tidelands (all lands now or formerly flowed by the mean high tide of a natural waterway) shall require approval from the Bureau of Tidelands and/or Tidelands Resource Council. Please contact Jo Ann Cubberley, C.P. (ASPRS), Manager, 609-292-2573.

14. This permit does not authorize any dredging activities as per N.J.A.C. 7:7-2.3. Any dredging activities will require a separate Waterfront Development Permit.

15. Any borings performed within the vicinity of an area determined to be a landfill shall require a landfill disruption permit from the Division of Solid Waste Regulation Program. Please contact Mr. Sukhdev Bhalla at 609-984-6650.

16. The permittee shall received authorization from the NJDEP's Site Remediation Program prior to conducting any boring activities within areas with a Declaration of Environmental Restriction.

GENERAL CONDITIONS

1. All fill and other earth work on the lands encompassed within this permit authorization shall be stabilized in accordance with "Standards for Soil Erosion and Sediment Control in New Jersey" to prevent eroded soil from entering adjacent waterways or wetlands at any time during and subsequent to boring activities.

2. All excavated material must be disposed of in a lawful manner outside of any regulated floodplain, open water, freshwater wetlands or adjacent transition areas, and in such a way as not to interfere with the positive drainage of the receiving area.

3. This permit is revocable in accordance with DEP regulations and State law.

4. **The issuance of this permit shall not be deemed to affect in any way other actions by the Department on any future application. Specifically, the issuance of this permit for geotechnical investigations does not imply approval of any proposed crossing alignment and shall not be construed as implicit consent to the purpose and need of a crossing of the Rahway River.**

5. No change in plans or specifications shall be made except with the prior written permission of the Department.

6. The granting of this authorization shall not be construed to in any way affect the title or ownership of the property, and shall not make the Department or the State a party in any suit or question of ownership of the property.

7. This permit is not valid and no work shall be undertaken pursuant to this authorization until all other required federal, state, and local approvals, licenses and permits necessary for commencement of work onsite have been obtained.

8. A complete, legible copy of this permit shall be kept at the work site and shall be exhibited upon request of any person.

9. The permittee shall allow the Program ~~the right to inspect the~~ construction site and also shall provide the Bureau of Coastal and Land Enforcement, NJDEP with written notification 7 days prior to the start of the authorized work.

10. This authorization is valid for five years from the date of this letter unless more stringent standards are adopted by rule prior to this date.

Date: September 15, 2005

Approved by: Robert N. Cubberley

Robert N. Cubberley
Environmental Scientist 1
Land Use Regulation Program

Compliance Report
Waterfront Development Permit File No. 0000-05-0007.1 WFD050001

The State of New Jersey Coastal Management Program defines substantive policies to guide public decisions concerning significant proposed development and management of resources in New Jersey's Coastal Zone. The analysis of this coastal permit application is based upon the Rules on Coastal Zone Management (RCZM) (N.J.A.C. 7:7E-1.1 et seq.), adopted effective September 1978, revised January 20, 2004. This analysis will refer to applicable policies by administrative code section.

This permit is conditionally authorized under and in compliance with the Rules on Coastal Zone Management for Finfish Migratory Pathways (7:7E-3.5), Navigation Channels (7:7E-3.7), Intertidal and Subtidal Shallows (7:7E-3.15), Flood Hazard Areas (7:7E-3.25), Wetlands (7:7E-3.27), Wetlands Buffers (7:7E-3.28), Endangered or Threatened Wildlife or Plant Species Habitat (7:7E-3.38), Critical Wildlife Habitat (7:7E-3.39), Special Hazard Areas (7:7E-3.41), Special Urban Areas (7:7E-3.43), New Dredging (7:7E-4.7), Dredged Material Disposal (7:7E-4.8), Marine Fish and Fisheries (7:7E-8.2), Water Quality (7:7E-8.4), Vegetation (7:7E-8.8, Air Quality (7:7E-8.10) and Traffic (7:7E-8.14).

ADMINISTRATIVE HISTORY

Date received: February 16, 2005

20-Day Review Period Ends: March 16, 2005

30-Day Public Comment Period Extension: April 16, 2005

Complete for Public Hearing: April 26, 2005

Scheduled for Public Hearing: June 21, 2005

90-day Decision Date: September 18, 2005

PROJECT DESCRIPTION

The proposed project is the sampling, through the use of geotechnical borings within wetlands and within the Rahway River to determine the depth to bedrock as well as the structure of the bedrock along the alignment of the proposed Tremely Point Connector Road. The information obtained from this sampling program would be used for designing the piles for construction of proposed roadway.

The project area is located within the vicinity of the New Jersey Turnpike Interchange 12 in Carteret, Middlesex County and in the tidally influenced wetlands associated with the Rahway River in Carteret and Linden in Union County. The proposed geotechnical boring activities will be conducted east and northeast of Interchange 12 in wetlands and the Rahway River and are within the footprint of various alternative alignments of the proposed Tremely Point Connector Road.

The authorized work is shown on plan in one (1) sheet entitled "NEW JERSEY TURNPIKE AUTHORITY TREMELEY POINT CONNECTOR ROAD, BORING LOCATION PLAN, CITY OF LINDEN AND BOROUGH OF CARTERET, UNION AND MIDDLESEX COUNTIES, N.J." dated February 2005, unrevised and prepared by Edwards and Kelcey.

SUBCHAPTER 3. SPECIAL AREAS

Special Water Areas

7:7E-3.5 Finfish Migratory Pathways

Finfish migratory pathways are waterways (rivers, streams, creeks, bays and inlets) which can be determined to serve as passageways for diadromous fish to or from seasonal spawning areas, including juvenile anadromous fish which migrate in autumn and those listed by H.E. Zich (1977). Species of concern include alewife or river herring, blueback herring, American

shad, striped bass, Atlantic sturgeon, Shortnose sturgeon and American eel. Development which lowers water quality to such an extent as to interfere with the movement of fish along finfish migratory pathways or to violate State and Delaware River Basin Commission water quality standards is prohibited. Mitigating measures are required for any development which would result in lowering dissolved oxygen levels, releasing toxic chemicals, raising ambient water temperature, impinging or suffocating fish, entrainment of fish eggs, larvae or juveniles, causing siltation, or raising turbidity levels during migration periods. Water's edge development, which incorporates migration access structures, such as functioning fish ladders, will be conditionally acceptable.

The proposed project is geotechnical borings and will not result in any structural or permanent development. Best Management Practices (BMPs) for taking river borings shall be required in order to minimize disturbance to the river bottom as well as preventing the bore hole from collapsing into the water; thereby decreasing opportunity for increased turbidity. It is anticipated that implementation of these BMPs and a timing restriction of **April 1 through June 30** for protection of the general game fisheries resource within the Rahway River will result in no permanent impacts of finfish pathways. Compliance with this rule has been met.

7:7E-3.7 Navigation Channels

Navigation channels include water areas in tidal rivers and bays presently maintained by NJDEP or the U.S. Army Corps of Engineers and marked by the U.S. Coast Guard with buoys or stakes. Navigation areas include all areas between the top of channel slopes on either side. Development that causes terrestrial or shoreline erosion and siltation of the navigation channel must utilize appropriate mitigation measures. Development, which would result in loss of navigability in navigation channels, and construction, which would extend into a navigational channel are prohibited. The placement of structures within 50 feet of any authorized navigation channel is discouraged, unless it can be demonstrated that the proposed structure will not hinder navigation.

It is expected that the proposed geotechnical boring project will not generate significant sedimentation to impact navigability of the channel. The project meets all the standards relevant to navigation channels, specifically, the project does not result in terrestrial soil and shoreline erosion and siltation or loss of navigability. There will be no structures within the channel. The use of a floating barge mounted drill rig may temporarily impede marine traffic in the area; however, appropriate notification procedures shall be required for such obstructions. Therefore, compliance with this rule has been met.

7:75-3.15 Intertidal and Subtidal Shallows

Intertidal and subtidal shallows are all permanently and temporarily submerged areas from the spring high water line to a depth of four feet below mean low water. Development, filling, new dredging or other disturbance is discouraged but may be conditionally permitted.

It is anticipated that the proposed project will result in temporary impacts to the intertidal and subtidal shallows that are present. Considering that the geo-technical boring activity is temporary, impacts to the resource will be contained through the used of best management practices to limit and control sedimentation. Compliance with this rule has been met.

<u>Special Water's Edge Areas</u>

7:7E-3.25 Flood Hazard Areas

Flood hazard areas as they pertain to coastal water bodies are defined by the Federal Emergency Management Act (FEMA). Where flood hazard areas meet the definition of another Special Water's Edge type, the Special Water's Edge policy applies in terms of location acceptability.

The proposed project will occur within the 100-year floodplain, however, the activity is temporary and no development will occur. Therefore, compliance with this rule has been met.

7:7E-3.27 Wetlands and 7:7E-3.28 Wetland Buffers

Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration to support and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated conditions. Wetland buffers or transition areas are areas of land adjacent to a wetland, which minimizes adverse impact on the wetlands and serves as an integral component of the wetlands ecosystem. Activities in freshwater wetlands and freshwater wetland buffers are regulated in accordance with the Freshwater Wetlands Protection Act (FWPA) Rules (N.J.A.C. 7:7A). Activities in mapped coastal wetlands are regulated under the Wetlands Act of 1970.

The proposed project will result in temporary impacts to wetlands and wetland buffers. It is anticipated that the use of marsh mats and oversized low-pressure tires will prevent compaction; thereby, supporting the rapid re-establishment of vegetation to conditions that existed prior to the boring activities. The area of actual boring will be approximately 6 inches in diameter resulting in minimal disturbance ~~to the soil~~. Borings within wetlands and buffers are expected to temporarily impact an approximate maximum of 1,050 square feet for staging of equipment and taking of the borings. Implementation of BMPs will ensure that impact to the resource is temporary and minimal. Therefore, compliance with these rules has been met.

Coastwide Special Areas

7.7E-3.38 Endangered or Threatened Wildlife or Plant Species Habitats

Endangered or threatened wildlife of plant species habitats are areas known to be inhabited on a seasonal or permanent basis by or to be critical at any stage in the life cycle of any wildlife or plant identified as "endangered" or "threatened" species on official Federal or State lists of endangered or threatened species, or under active consideration for State or Federal listing. The definition also includes a sufficient buffer area to ensure continued survival of the population of the species.

Development of this Special Area is prohibited unless it can be demonstrated that endangered or threatened (E&T) wildlife or vegetation species habitat would not directly, or through secondary impacts on the site or surrounding area be adversely affected.

The project area has been identified as foraging habitat for State listed threatened species the black-crowned night heron (*Nycticorax nycticorax*) and yellow-crowned night heron (*Nyctanassa violacea*). Given the temporary nature of the proposed activity it is anticipated that utilizing timing restriction (**April 1 through August 15**) in conjunction with Best Management Practices (BMPs) will result in no adverse impacts to the resources. Review of Subchapter 3C-Standards for Conducting and Reporting the Results of an Endangered or Threatened Wildlife or Plant Species Habitat Impact Assessment and/or Endangered or Threatened Wildlife Species Habitat Evaluation has determined that the standards utilized comply with the requirements of the rule; therefore, compliance has been met.

7.7E-3.39 Critical Wildlife Habitats

Critical wildlife habitats are specific areas known to serve an essential role in maintaining wildlife particularly during wintering, breeding and migrating. Development that would directly or through secondary impacts on the relevant site or in the surrounding region adversely affect critical habitats is discouraged. Development that would directly or through secondary impacts on the relevant site or in the surrounding region adversely affect critical wildlife habitats is discouraged unless minimal feasible interference with the habitat can be demonstrated; there is no feasible alternative and the there is appropriate mitigation measures.

Due to the temporary nature of the project and restoration of disturbed areas following project activities it is anticipated that there will be no adverse secondary effects on critical wildlife habitat. Review of Subchapter 3C-Standards for Conducting and Reporting the Results of an Endangered or Threatened Wildlife or Plant Species Habitat Impact Assessment and/or Endangered or Threatened Wildlife Species Habitat Evaluation has determined that the standards utilized comply with the requirements of the rule; therefore, compliance has been met.

7:7E-3.41 Special Hazard Areas

Special hazard areas are those areas that have a known or potential hazard to public health, safety and welfare, or to public or private property such as navigable air space around airports and seaplane landing areas, potential evacuation zones and areas where hazardous substances are used or disposed including areas of hazardous material contamination). All development within special hazard areas must include mitigating measures to protect public health and safety.

Implementation of the project may occur within areas identified as potentially containing hazardous material, specifically in the areas adjacent to the former Cytec (American Cyanamid) lagoons. Borings have been identified to be taken in areas with a Declaration of Environmental Restriction as classified by the NJDEP's Site Remediation Program (SRP). Therefore, as a condition of this permit, the permittee shall obtain authorization from SRP for any borings occurring within these areas. Compliance with this rule has been met.

7:7E-3.43 Special Urban Areas

Special urban areas are those municipalities defined in urban aid legislation (N.J.S.A. 52:27D-178) qualified to receive State aid to enable them to maintain and upgrade municipal services and offset local property taxes. The Borough of Carteret is a qualifying municipality under this legislation. Development that will help restore the economic and social viability of the special urban area is encouraged. Development that would adversely affect the economic well being of these areas is discouraged, when an alternative that is more beneficial to the special urban area is feasible. Development that would be of economic and social benefit and that serves the needs of local residents and neighborhoods is encouraged.

The implementation of the proposed boring project is temporary and will not result in a development project. Compliance with this rule has been met.

SUBCHAPTER 4. GENERAL WATER AREAS

7:7E-4.7 New Dredging

New dredging is the removal of sediment from areas that have not been previously authorized and legally dredged for navigation and access channels, marinas, lagoons, canals or boat moorings for the purpose of maintaining a previously authorized water depth and width for safe navigation.

The proposed project will not result in any new dredging activity. Therefore, compliance with this rule has been met.

7:7E-4.8 Dredged Material Disposal

Dredged material disposal is the discharge of sediments removed during dredging operations.

The proposed project will require the disposal of sediment removed from bore holes, which shall be stored in suitable containers and disposed of appropriately off-site. Compliance with this rule has been met.

SUBCHAPTER 8. RESOURCE RULES

This step in the screening process of the Rules on Coastal Zone Management involves a review of a proposed development in terms of its effects on various resources of the built and natural environment of the coastal zone, both at the proposed site as well as in its surrounding region. These rules serve as standards to which proposed development must adhere. In addition to satisfying the standards addressed in this sub-chapter, proposed development must also adhere to applicable site development standards administered by other State and local agencies. These include but are not limited to Barrier Free Design Requirements promulgated by the New Jersey Department of Community Affairs pursuant to N.J.S.A. 52:32.1 et seq. and N.J.S.A. 52:27D-123, and N.J.A.C. 5:23-3.2 and 5:23-3.14.

7:7E-8.2 Marine Fish and Fisheries

Marine fish are marine and estuarine animals other than marine mammals and birds. Coastal activities are conditionally acceptable to the extent that minimal feasible interference is caused to the natural functioning of marine fish and fisheries, including the reproductive and migratory patterns of estuarine and marine estuarine dependent species of finfish and shellfish.

Based on the temporary nature of the boring project, no permanent impacts of finfish pathways are anticipated. However, in order to protect the general game fisheries resource within the Rahway River, timing restriction of **April 1 to June 30**, prohibiting in-water construction activities is imposed to reduce the possibility of increase turbidity. Compliance with this rule has been met.

7:7E-8.4 Water Quality

As required by Section 307(f) of the Federal Coastal Zone Management Act (P.L. 92-583), Federal, State and local water quality requirements established under the Clean Water Act 33 U.S.C. 1251 shall be the water resource standards of the coastal management program. Coastal development, which would violate the Federal Clean Water Act, or State laws, rules and regulations enacted or promulgated pursuant thereto, is prohibited.

The proposed project is not a major development and therefore is not subjected to the NJDEP Stormwater Management Rules at N.J.A.C. 7:8. The project does however have the potential to increase turbidity and sedimentation, however, the use of BPMs and in water timing restrictions (**April 1 to June 30**) will ensure that water quality of Rahway River is not degraded. Therefore, compliance with this rule has been met.

7:7E-8.8 Vegetation

"Vegetation" is the plant life or total plant cover that is found on a specific area, whether indigenous or introduced by humans. Coastal development shall preserve, to the maximum extent practicable, existing vegetation with a development site. Coastal development shall plant new vegetation, particularly appropriate coastal species native to New Jersey to the maximum extent practicable.

The proposed project will result in temporary disturbance to low and high marsh vegetation communities. It is anticipated that the use of marsh mats and low impact drill rig that can be floated at high tide to boring site will prevent compaction; thereby, supporting the rapid re-establishment of vegetation to conditions that existed prior to the boring activities. Compliance with this rule has been met.

7:7E-8.10 Air Quality

The protection of air resources refers to protection from air contaminants that injure human health, welfare, or property, and to attainment and maintenance of State and Federal air quality goals and the prevention of degradation of current levels of air quality.

The proposed boring activity is for a limited duration and with emissions comparable to one automobile, therefore impacts to existing air quality is expected to be minimal. Therefore, compliance with this rule has been met.

CONCLUSION

The Director of the Land Use Regulation Program hereby finds the applicable findings as required by the Waterfront Development Law (N.J.S.A. 12:5-3), Freshwater Wetlands Protection Act Rules (NJAC 7:7A), and the Rules on Coastal Zone Management will be met to the satisfaction of the Land Use Regulation Program. The issuance of this permit is contingent upon compliance with the conditions below and failure to comply with any or all conditions may result in appropriate enforcement action and revocation of this permit.

CERTIFICATIONS
N.J.A.C. 7:26C-1.2 et seq.

Any person making a submission to the Department required by this chapter and pursuant to N.J.A.C. 7:26E, shall include the following signature and notarized certification, for each technical submittal. Additionally, the certification shall indicate the case name and address, case number, type of documents submitted, e.g., Remedial Action Report, for each technical submittal.

TYPE OF DOCUMENT: **Remedial Investigative Report (RIR)**

CASE NAME: **Tremley Point Road Connector Project – OPS2052**

CASE ADDRESS: **Carteret Blocks 10 & 11 – Middlesex County**

Linden Block 587 – Union County

CASE NUMBER: _____

The following certification shall be signed by:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively, or;
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.
4. For persons other than 1 through 3 above, by the person with legal responsibility for the site.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement that I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Printed Name_____ Title_____

Signature_____ Date_____

Notary Signature_____ Date_____