SUPPLEMENT FOR PHASE II
REMEDIAL INVESTIGATION REPORT

Sunnyside Yard
Queens, New York

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CONTENTS

TABLES

ATTACHMENTS

PLATES

1.0 INTRODUCTION

On behalf of the National Railroad Passenger Corporation (AMTRAK) and the New Jersey Transit Corporation (NJT), Roux Associates, Inc. (Roux Associates) has prepared this supplement to the February 1995 report titled, "Phase II Remedial Investigation, Sunnyside Yard, Queens, New York" for submittal to the New York State Department of Environmental Conservation (NYSDEC) in response to the comments and questions raised during the February 21, 1996 meeting at the NYSDEC's Region 2 Headquarters in Long Island City, New York.

The information presented herein is intended to facilitate the NYSDEC's understanding of the evolution of the design and completeness of the scope of the investigation, such that the feasibility study (FS) may be initiated as stipulated in Order On Consent (OOC) Index #W2-0081-87-06. At this time, sufficient sampling has been performed at the Yard to characterize the nature and extent of contamination to support the FS. Moreover, development of the FS would identify extraneous data gaps, if any, which could be filled during supplemented investigation/remediation work. The intention of this document is not to stop the investigation process, but to move forward with the FS and ultimately to begin the task of long-term remediation at the Site. However, NYSDEC approval is necessary before preparation of the FS can commence.

It should be noted that NYSDEC's approvals of the interim reports and various work plans for delineation of the Yard, as well as frequent consultation with the NYSDEC during on-site oversight (including on-site personnel), indicate that the RI's design for establishing the nature and extent of contamination was acceptable to the NYSDEC through all phases of work since the inception of the Remedial Investigation/Feasibility Study (RI/FS) activities in 1990. Furthermore, based on the outcome of the August 1992 public meeting at the NYSDEC Region 2 Headquarters, the local community also accepted the work performed up to that point and the proposed Scope of Work described in the Phase II RI work plan.

The purpose of this supplement is to clarify and expand the historical and technical information provided in the Phase II RI report, as well as Roux Associates' previously submitted reports regarding environmental conditions at the Sunnyside Yard (Yard). In addition, Roux Associates has reviewed previously prepared work plans, investigation reports, and correspondence, and visited the Yard on multiple occasions to inspect transformers, review files, and interview employees to support the information presented in this document. These sources have been referenced within this document where applicable.

The supplement is divided into four additional sections. Section 2.0 provides historical information on the use, sources, and disposal of polychlorinated biphenyls (PCBs), Section 3.0 presents the basis for the design of the RI scope of work, Section 4.0 presents a discussion on ground-water flow and non-aqueous phase liquids, and Section 5.0 includes conclusions and recommendations.

2.0 HISTORICAL INFORMATION

To address comments regarding the use, sources, and disposal of PCBs, additional documentation was procured from AMTRAK, and on-site transformers were inspected. The information derived from this documentation is summarized below, and copies of documents not previously submitted to the NYSDEC are provided as attachments where applicable.

2.1 Use and Sources of PCBs

PCBs were used as dielectric fluids in electrical transformers and capacitors. Potential sources of PCBs at the Yard only include accidental leaks from stationary transformers, and from motive power transformers on self propelled cars and locomotives which occasionally had minor releases through the vent on the transformer due to pressure build up ("burping") or strikes from debris on the track to the under belly transformers. AMTRAK has retained a log of all PCB spills or releases since 1977. A review of these records indicate six incidences at the Yard. All of the spills/releases at the Yard were fully remediated to less than 50 ppm which was the standard in effect at the time. In addition, the mere existence of transformers, even those containing elevated PCB concentrations, does not indicate that there has been a release.

It is important to note that AMTRAK never purchased or stored PCB oil at the Yard, nor has any filling, retrofilling, or servicing been performed on transformers at the Yard. However, AMTRAK employees have removed intact NJT transformers and shipped them offsite for retrofilling as discussed below. The transformers were removed in the drop table pit of the Engine House. No spills occurred during these activities.

Prior to the identification of PCB-containing transformers, AMTRAK's policy (stated in an interoffice memo dated April 24, 1981 and included herein as Attachment 1) was that all transformer oils be treated as containing PCBs. AMTRAK established procedures for handling motive power transformers to conform with the regulations (40 CFR 761.33) for retrofilling, and

for handling and disposal of waste PCBs and PCB-contaminated materials. Retrofilling was performed in stages to lower PCB concentrations to less than 1,000 parts per million (ppm). This servicing, and all repairs of leaking motive power transformers, were performed at the Wilmington Shops in Wilmington, Delaware.

An inventory of locomotives which were owned and/or operated by AMTRAK and which contained PCB transformers was submitted to the New York City Fire Department in February 1986. Transformers were located in the locomotive car body in models GG-1 and E-60 units used by New Jersey Transit, ConRail, Pennsylvania Railroad, and AMTRAK; therefore, if leakage occurred within the locomotive car bodies there was little possibility of transformer fluids leaking to the outside. Pennsylvania Railroad commuter cars (multiple unit MP-54s), Metroliners (used by Pennsylvania Railroad and United States Department of Transportation), and NJT Arrow 1s and Arrow 2s carried transformers on the car's underside. These types of cars are out of service (MP-54s since 1981 and Metroliners since 1983, Arrow 1 and Arrow 2 since 1988/1989), but as discussed previously spills resulting from these cars were generally the result of either debris strikes or "burping". Based on AMTRAK's records and experience, the typical release from "burping" is approximately one to two gallons. If such an event occurred, AMTRAK employees would seal the unit, and move the train to their shops in Wilmington, Delaware. The contaminated media would be removed, manifested, and disposed at an appropriate facility and the unit repaired as necessary. During AMTRAK's tenure at the Yard, the only PCB spills were those noted above.

Stationary transformers maintained by the Electric Traction Department (ET), in Area 10 (Substation 44) were sampled in 1982 and 1983. Only one sampled transformer (S-3) contained PCBs greater than 50 ppm (125 ppm). In November 1985, RMC Environmental Services sampled and analyzed the contents of 49 stationary transformers maintained by the Buildings and Bridges Department (B&B) at the Yard. PCBs were detected above 500 ppm in nine transformers, and between 50 and 499 ppm in five transformers (Areas 1, 5, and 8). The four transformers in Area 8 containing PCBs above 500 ppm were taken out of service on

December 3, 1985. An inventory of the stationary transformers discussed above is presented in Table 1 and the locations of the stationary transformers are provided in Plate 1. Additional ET transformers are currently being evaluated at the Yard and will be discussed in a follow-up correspondence.

2.2 Engine House

Samples from the walls and floors of the Engine House drop table pit were collected in February 1985 and analyzed for PCBs. Based on the analytical results, AMTRAK pumped the pits and cleaned the walls to reduce the potential for exposure, and disposed of the waste as PCB-waste solids. The pit was contaminated from infiltration of ground water and oil through the foundation walls and from persistent drainage problems from rain water runoff passing through PCB-contaminated soil outside the Engine House. The surface runoff in this area ran over the edge of the doorway and flowed into the pit during heavy rainfall. AMTRAK continually constructed barricades to prevent rainwater entry, however these measures were not permanent. In late 1992, AMTRAK constructed a concrete curb at the east end of the Engine House to prevent rain water entry. Additional sampling of the walls and floor was performed in November 1985, and the results indicated less than 50 ppm PCBs in all samples. However, due to continuous ground-water seepage into the pit (due to the water table being close to the surface), AMTRAK solicited bids to paint and seal the pit area. Prior to painting and sealing additional sampling was performed in January 1986 to determine potential employee exposure. Analytical results indicated that oil collected in the pit contained less than 50 ppm. The drop table pit was recleaned, and employees working in the Engine House were trained on the hazards of PCBs. After the cleaning, holes were drilled through the concrete, grouted, sandblasted, and sealed with PCB-resistant epoxy paint in early 1986. It is important to note that the drop table pit was not the source of the PCB oil, but instead received the contaminated oil from surface runoff coming from track ballasts east of the Engine House and infiltration through wall cracks.

In April 1986, the National Institute for Occupational Safety and Health (NIOSH) conducted environmental monitoring which included the collection of air, wipe, and bulk samples. NIOSH reported no hazard associated with airborne PCBs within or near the Engine House. Although

wipe samples contained PCB contamination (0.18 - 7.6 microgram per 100 square centimeters [µg/cm2]), as stated in the NIOSH report, there were no standard evaluation criteria for industrial surfaces contaminated with PCBs. However, the Toxic Substance Control Act (TSCA) PCB Spill Cleanup Policy (40 CFR 761.125) requirements for cleanup of spills states that "indoor solid surfaces and high contact outdoor solid surfaces defined as high contact residential/commercial surfaces under 761.123, shall be cleaned to 10 µg/100 square centimeters."

Investigations were also performed on the exterior of the Engine House initially to excavate and remove fuel oil contaminated soil at the east end of the Engine House at the request of the New York City Fire Department in December 1985. AMTRAK retained Atlantic Environmental Technology Corp. (AETC) to perform the sampling. The soil contained less than 44 ppm PCBs based on AETC's tests. While the fuel oil contaminated soil was being removed east of the Engine House, petroleum was found floating on ground water at 4 feet below land surface. A collection well was fabricated by AMTRAK and 17 drums of liquid and two drums of solid wastes were collected. The oil contained 83 to 190 ppm (mg/kg) PCBs while the water samples contained 20 to 61 ppm (mg/l) PCBs. The quality of the water sample is not known. Based on the fact that the sample was not collected from a developed monitoring well but rather from a crudely constructed collection well, the sample was probably turbid. The PCBs detected are the result of PCBs sorbed to the soil particles. This is supported by the absence of PCB detections in developed monitoring wells. The nineteen drums were removed and disposed in a permitted facility.

In August 1989, two soil samples and five air samples were collected from the Metro Shop repair pit by United States Testing Company, Inc. Concentrations of hydrogen sulfide, total volatile organic compounds (VOCs), and explosive gas were below the detection limits in all five air samples. The results of the two soil samples were reported for petroleum hydrocarbons (242,718 ppm, 323,798 ppm) and PCBs (9.261 ppm, 134.682 ppm). Based on these results, the pits were cleaned and sealed. To mitigate the flow of separate-phase petroleum into the service

pit of the Metro Shop, three petroleum recovery trenches were installed in January 1990 as part of the interim remedial measures system (IRM). To further preclude employee exposure to PCBs, access to the service pit was restricted. Only employees donning protective clothing and trained in the hazards of PCBs, were permitted to enter.

2.3 Disposal

An inventory of PCB waste removal at the Yard was prepared for 1980/1981 in the Industrial Chemical Survey submitted by C.T. Prehm of AMTRAK to the NYSDEC on August 16, 1984. In addition, a summary of hazardous waste removed from the Yard from 1980 through 1988 was submitted by Robert Noonan to the NYSDEC in November 1989. As stated above, AMTRAK established procedures for disposal of waste PCBs and PCB-contaminated material including manifesting and disposal locations. These inventories of waste contain inconsistencies which are most likely due to one of the three AMTRAK departments that handle disposal of PCB-contaminated material not submitting their manifests for the Industrial Chemical Survey. The more complete inventory was submitted with the 1989 correspondence. The manifesting and disposal indicate that all PCB waste were properly shipped to permitted landfills using the New York State waste codes for PCBs (i.e., B waste).

The manifests for 1980/1981 were the result of excavation work performed on Tracks 3 and 4 (the spoils pile). Prior to analysis, a low spot near the oil house was filled with the material from these tracks and covered with concrete. This material was subsequently removed from under the concrete roadway in December 1985.

The spoils pile materials were also staged in a depression in Area 4. After receipt of analytical results, these materials were remediated to less than 50 ppm. The PCB concentration in soil sample CS-49 (49 ppm PCBs) is the result of the spoils pile. Additional sampling is proposed in Section 5.0 to delineate to 25 ppm.

3.0 BASIS FOR DESIGN

This section is divided into the historical evolution of the work plans and reports prepared for the Yard, and the technical information used to develop these plans and reports.

3.1 Historical Basis for Design

The OOC states that the work conducted at the Yard would be conducted in accordance with the current Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) guidance. As such, the investigation was performed in accordance with the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final (USEPA, 1988). This guidance states that data should be collected in several phases. Initially the investigation should provide a general understanding of the Yard, with subsequent investigations focusing on filling identified data gaps, and gathering information to evaluate remedial alternatives.

As stated in the February 27, 1990 "Work Plan for the Remedial Investigation and Feasibility Study, Sunnyside Yard, Queens, New York (Roux Associates, 1990), the initial field tasks of the RI were designed to address the nature, extent (including offsite), and potential migration pathways of separate-phase petroleum previously identified in limited areas (Roux Associates, 1990, Work Plan for RI/FS, p.1). The Phase I RI was also designed to develop hydrogeologic, soil quality, and ground-water quality information to determine the nature and extent of any other areas of contamination at the Yard.

The work plan identified 16 Areas of Concern (AOCs) based on the results of site inspections, discussions with AMTRAK personnel, review of historical aerial photographs, review of facility records and plans to identify potential spills and operating history, and previous investigations (pp. 5, 6, 7, and 14). The design of the Phase I RI was approved by the NYSDEC and New York State Department of Health in an April 2, 1990 letter (NYSDEC, 1990). Field modifications to implementing the Phase I work plan (Tasks II and III soil sampling program) were completed under the oversight of NYSDEC's Project Engineer James Quinn (Roux Associates, 1992a; Phase I RI, pp. 11-13) who agreed to the modifications.

The 16 AOCs identified in the work plan, and the one additional AOC identified during the field investigation, are further discussed in the Phase I RI report in Section 3.1.2 discussing drainage pathways and previous uses, and Section 4.1.4 discussing the evaluation of potential hydrocarbon source areas of concern (Roux Associates, 1991, Phase I; pp. 38-46). Based on the review of the environmental and hydrogeological information developed during the Phase I RI, supplemental work was proposed in Section 7 of the Phase I RI report. In addition, the off-site delineation work performed as an extension of the field investigation for the Phase I to further delineate the extent of the petroleum above ground water in Area 1, and beyond the property boundary, commenced in October 1991 when access agreements to off-site properties were secured. The results of this investigation were accepted by the NYSDEC in November 1992 (NYSDEC, 1992). A further investigation was also conducted on the UST in Area 2 upon receiving approval of the work plan (NYSDEC, 1991). The UST remediation was completed under the direction of the NYSDEC as a leaking underground storage tank (LUST) project. These results are discussed in Section 3.2.

Prior to the submission of the Phase II RI work plan, Roux Associates conducted a site inspection with the NYSDEC on February 24, 1992 to discuss proposed locations of soil borings and monitoring wells. The results of the site inspection were incorporated into the work plan (Roux Associates, 1995a; Phase II RI, p. 25). A Phase II RI work plan was submitted to the NYSDEC on August 5, 1992, and approval of the work plan was received from Mr. James Quinn of the NYSDEC on August 26, 1992.

During the implementation of the Phase II RI work plan, the integrity of the Geraghty & Miller, Inc. (G&M) monitoring wells was deemed questionable by NYSDEC. The delineation of the separate-phase petroleum accumulation in Area 1 was therefore brought into question. A Phase II RI addendum work plan was implemented to delineate the extent of the separate-phase petroleum accumulation. A summary of this investigation is presented below, and the full text is presented in the Phase II RI report (Roux Associates, 1995a; Phase II RI, pp. 41-50).

The results of phases 1 through 4 of the additional delineation investigations, which included 53 hand borings, indicated that the previously delineated northern, western and southwestern boundaries of the separate-phase petroleum accumulation were accurate. However, the extent of the accumulation was not fully delineated to the east and southeast. Therefore, to complete the delineation of the accumulation, soil borings were collected in four general areas surrounding the separate-phase petroleum accumulation in Area 1: the Turntable Area, the area south of the Metro Shop, and the areas adjacent to existing Monitoring Wells MW-10 and MW-12. The delineations of these areas are summarized briefly below.

Northwest and West of the Turntable - Eight soil borings (S-118 through S-142) and one monitoring well pilot borehole (MW-54) were drilled northwest and west of the Turntable. These borings were drilled to confirm the extent of the separate-phase petroleum accumulation determined by the four phases of hand borings. No evidence of petroleum was detected in soil borings S-118, S-119 and S-140. Soil staining and petroleum odors were noted within soil at locations S-121 (PID reading was 39.4 ppm above background), S-141 and S-142. Separate-phase petroleum was detected at the water table in soil boring S-120 (PID reading was 84.4 ppm above background). At location S-129 (PID reading was 27.8 ppm above background) a sheen was present on the water table. The data collected from the Turntable Area indicate that separate-phase petroleum is present west of the Turntable and between the retaining walls but is absent at S-119 and north of location S-119. In addition, separate-phase petroleum was measured in Monitoring Well MW-60, located west of the Turntable and between the retaining walls.

Based on these results and observations of surface soil, the separate-phase petroleum detected west of the Turntable is a part of the larger previously identified accumulation.

South of the Metro Shop - Monitoring well pilot borehole MW-58 was drilled south of the Metro Shop and Locker Room/Shop to confirm the edge of the separate-phase petroleum accumulation. Staining and a petroleum odor were noted in soils at the water table in monitoring well pilot borehole MW-58. South of MW-58 and south of the retaining wall, three test pits (S-122 through S-124) were dug to determine if the accumulation extends beyond the retaining wall.

Test Pits S-122 through S-124 were dug to the water table, approximately 7.5 to 8 feet bls in that area. No staining, odors or evidence of separate-phase petroleum were encountered in the test pits. In addition, no PID readings above background were noted during this work. The Phase II data collected south of the Metro Shop indicate that separate phase petroleum is present south of both of the Metro Shop and Locker Room/Shop but does not extend south beyond the retaining wall. Based on these results, additional borings and wells were not required in this area.

Adjacent to Monitoring Well MW-10 - Soil Borings S-130 through S-134 and S-143 through S-145 were completed around MW-10 (south of the Engine House) to determine the extent of the isolated separate-phase petroleum detections near MW-10. These soil borings were drilled to the water table. Although dark staining was noted in the shallow soil (0 to 2 feet) of borings S-130 through S-133, a petroleum odor was only detected at locations S-133 and S-134. West of borings S-130 through S-134, a sheen was noted at S-143 and separate-phase petroleum was observed at S-144. However, there was no evidence of petroleum at location S-145, approximately 15 feet west of S-144. This indicates that the separate-phase petroleum detected in MW-10 is only present between S-133 (east) and a point between S-144 and S-145 (west), and between S-144 and S-145 (west), and between S-130 (north) and S-131 (south). The limited extent of this separate-phase petroleum indicates that it is an isolated occurrence, not related to the previously identified separate-phase petroleum accumulation located east of the Engine House.

As noted above, the entire progression of work has been approved by the NYSDEC. These approvals continually reinforced to AMTRAK and Roux Associates that the design and implementation of the RI for establishing the nature and extent of contamination were acceptable.

3.2 Technical Basis for Design

As discussed above, the evaluation of environmental conditions was a dynamic process performed with continual consultation with the NYSDEC. Additional sampling was recommended based on the results of previous investigations, additional historical information becoming available, or observation made by the NYSDEC Project Engineer or Roux Associates' Project Manager. No

industrial site specific cleanup levels have been developed for soils at the Yard. Therefore, for the purpose of this supplement, contamination refers to the existence of a chemical constituent detected at concentrations above background, and which is aberrant from environmental conditions throughout the rest of the Yard.

3.2.1 Technical Considerations

To better understand the following discussion on the evaluation of contamination, the factors presented below must be considered. These factors were incorporated into the development of all work plans for the Yard.

- Data from previous investigations (not performed by Roux Associates) were used for screening purposes only based on the NYSDEC comments that all analyses performed should follow Analytical Services Protocols (ASP), and have the appropriate reporting levels to meet the data quality objectives (NYSDEC, 1990). Roux Associates was permitted to use the Contract Laboratory Program (CLP) in lieu of ASP until the laboratories capabilities were amended. The analytical documentation for previous investigations did not provide enough information to evaluate the quality of the data (i.e., no quality assurance/quality control information was included).

- Background for total petroleum hydrocarbon (TPH) was considered 500 ppm in the Phase I RI report which was accepted by the NYSDEC. Therefore, where concentrations of TPH were below 500 ppm, no further investigation or discussion of results was required.

- Based on correspondence with NYSDEC Project Engineer Mr. James Quinn, wells containing separate-phase petroleum were not purged, and only petroleum was sampled to avoid contamination of well screens, soils and water below the water table. Ground-water samples would not be collected from monitoring wells with separate-phase petroleum (separate phase petroleum includes petroleum sheen) due to the potential interferences with the quality of the data (NYSDEC, 1991). These interferences may raise the detection levels which may mask detections of chemicals below the elevated detection limits. Interference may also exist with the surrogate spikes, matrix spikes, and internal standards, rendering the sampling results unusable. [Note: For clarification purposes, a sheen is defined as a layer of pure chemical that forms when the amount of chemical in contact with water exceeds its solubility limits in water (Feenstra, et. al., 1991). Although the product (sheen) was not measurable, it did exist in several wells, and these wells were not sampled as part of the investigations (in accordance with the NYSDEC correspondence and NYSDEC project engineer approval).

- The ground water in Queens is significantly degraded from industrial contamination, and salt-water intrusion from over pumping. Thus, ground water is not considered potable. However, to be conservative, ground-water sample results from the Site were compared to the NYSDEC ambient water quality guidelines for class GA waters and ground-water samples for PCBs were analyzed using low level detection limits dictated by ASP Method 89-3.

- No site-specific soil cleanup levels have been developed therefore no benefit would be derived from the use of isopleths as part of data presentation. In addition, based on the fact that the soil is mostly fill, and most borings are very shallow, a geologic cross section would not provide useful information. This information was not included in the Phase I RI report, but was discussed with NYSDEC Project Engineer James Quinn prior to the completion of the Phase I RI report. Mr. Quinn agreed that there was no need to provide this information.

- The source of soil contamination was identified whenever possible. Where sources were not able to be determined, the monitoring wells downgradient of the location of contaminated soil samples were investigated to verify that ground water was not impacted.

- Sampling data from construction and routine track maintenance activities were not included as part of the remedial investigations, as agreed to by NYSDEC Project Engineer James Quinn. These results were used to characterize soil for excavation and disposal (i.e., beneficial use, off-site disposal), and therefore would not be representative of current conditions at the Yard.

3.2.2 Contaminant Aberrations

As discussed at the February 21, 1996 meeting, particular instances where contaminants were detected but were not considered indicative of conditions at the Yard, and justification that the environmental conditions are adequately delineated, are presented below.

PCBs were detected in ground water in Monitoring Wells MW-35 and TW-3, however both samples were turbid. MW-35 was redeveloped, resampled, and analyzed following the same ASP methodology. No PCBs were detected in the second nonturbid sample (Roux Associates, 1995a; Phase II RI, p. 96). TW-3 consisted of a temporary wellpoint with no gravel pack and as a result was not developed, therefore detections were attributed to PCBs sorbed to the suspended particulates, and were not representative of ground water conditions (Roux Associates, 1995a;

Phase II RI, p. 111). As reported in the Phase II RI report (Roux Associates, 1995a; p. 134), PCBs have very low solubilities, and have a great affinity for organic carbon and therefore partition strongly to soil materials (Pankow and Cherry, 1996; p.10). The sorption of PCBs to suspended soil particles is considered responsible for the detections noted in the turbid samples.

There was an isolated, elevated detection of mercury in soils in Area 2 (CS-43). There is no known source of mercury at the Yard, no other concentrations of this magnitude were detected in Area 2 or the rest of the Yard, and no mercury was detected above ground-water standards in the any of the monitoring wells. Based on these factors, this mercury detection is considered an isolated occurrence. However, to verify that this incidental detection is isolated, three additional soil samples will be collected adjacent to CS-43 and analyzed for mercury (See Section 5.0).

Soil sample MW-31 (0-2) had the highest concentration of lead detected at the Yard. The source of this detection is unknown. To verify that this is an isolated occurrence, additional soil samples will be collected adjacent to MW-31 and analyzed for lead (see Section 5.0).

3.2.3 UST

An initial investigation of the Material Control Area (Area 2) was performed during the Phase I RI. An apparent hydrocarbon release was detected in the subsurface, and upon further investigation, a UST was discovered (Roux Associates, 1992a; Phase I RI, p. 39). Based on the analytical results indicating the presence of hydrocarbon constituents and solvents in close proximity to the UST, it appeared that the tank and associated piping may have leaked, or the tank had been overfilled. AMTRAK retained Roux Associates to prepare and implement a work plan to remove the UST. Because the contents of the UST were unknown (solvent or fuel oil), the analytical parameters were adjusted accordingly. This work plan was approved by the NYSDEC on October 10, 1991, as a LUST project and not included as part of the RI/FS.

As stated in the Phase II RI, (Roux Associates, 1995a; p.98), the UST was emptied and cleaned, however tank removal and soil excavation were unsuccessful due to the proximity of surrounding structures and numerous underground utilities. The results of the investigation and the closure in

place of the UST were presented to the NYSDEC in a report dated October 23, 1992 (Roux Associates, 1992e). Roux Associates addressed the NYSDEC comments in a letter dated December 23, 1992 (Roux Associates, 1992f). To further support that no significant contamination had escaped detection due to the placement of only one Monitoring Well (MW-41) downgradient of the UST, two temporary well points (TW-2, TW-3) were installed. The results of the sampling of these well points, and MW-41, indicated that there were no VOCs detected in the ground-water samples above the applicable guidance values as discussed in the April 9, 1993 letter, therefore, no further investigation was required by the NYSDEC.

3.2.4 Presence of Transformers

As stated in Section 2.1, the locations of the transformers are presented in Plate 1. Using these locations in conjunction with the drawings presented in the October 31, 1995 correspondence which identify the soil samples collected at the Yard, it is obvious that adequate sampling has been performed in the majority of locations where PCB concentrations in transformers exceed 50 ppm. The exceptions exist for transformer 31 located on the south side of the Engine House, transformers 35 through 37 located north of the Metro Shop, transformer 39 which is a pole mounted transformer, and transformer 44 which is on top of Building 4. Although the existence of transformers in these locations does not indicate that these transformers leaked, additional sampling and analysis will be performed on soil samples located adjacent to transformers 31, and 35 through 37 (See Section 5.0). The locations of transformer 39 (pole mounted above concrete) and transformer 44 (on top of building) are not likely to have impacted soil, even if there had been a spill, therefore no additional sampling is warranted.

As stated above, data from previous investigations and data from investigations not analyzed using ASP or CLP, were used only for screening. However, the number of samples collected from all investigations at the Yard (over 500 samples), and the location of the samples as presented in the October 31, 1995 letter to Hari Agrawal (Roux Associates, 1995b), demonstrate that adequate sampling has been performed to characterize the extent of contamination at the Site. The analytical results from these investigations are provided in Attachment 2.

4.0 DISCUSSION OF NON-AQUEOUS PHASE LIQUID

This section presents the ground-water flow, the delineation and movement of light non-aqueous phase liquid (LNAPL) as represented by separate-phase petroleum accumulation, and the absence of DNAPL.

4.1 Ground-Water Flow

Ground-water flow and vertical gradients are discussed in both the Phase I RI (Section 3.3.4, p. 25,26), and the Phase II RI (Section 3.3.2, p. 66-72). The Phase II RI report also includes drawings indicating ground-water flow in the shallow (Plates 6 through 9), and deep (Plate 10) aquifers. The Phase II RI states that the upward flow in Area 1 and the horizontally downgradient portion of the Yard prevents (or slows) the downward migration of contaminants within the aquifer (Phase II RI, pp. 69,70).

4.2 Delineation of Separate-Phase Petroleum Accumulation

Roux Associates strongly disagrees with the NYSDEC comments regarding their belief that the FS cannot be initiated because the nature and extent of contamination cannot be defined without the removal of the petroleum accumulation. As mentioned in Section 3.0, the OOC stated that all work would be performed in accordance with CERCLA guidance documents. The CERCLA guidance document states that "it is important to note that the RI and FS are to be conducted concurrently ....", therefore the FS should have already been initiated. Even more important to this discussion is the fact that delaying the FS until the petroleum accumulation is removed will result in a minimum of a ten year lag time to initiate the ultimate cleanup of the Yard.

The information presented below supports the fact that the nature and extent can be satisfactorily defined prior to the removal of the accumulation

As we discussed at the February 21, 1996 meeting, active recovery of the separate-phase petroleum in not presently an issue as stated in the OOC. Regardless, delineation of the Yard has been accomplished. The previous off-site investigation, four phased separate-phase petroleum investigation, along with the Phase II RI and Phase II RI Addendum work delineated the extent of the separate-phase petroleum accumulation. The results of these investigations were presented in correspondence to James Quinn of the NYSDEC on January 19, 1993, February 4, 1993, February 25, 1993, and April 26, 1993 as well as in Section 4.1.2 of the Phase II RI report (Roux Associates, 1995a; pp. 77 through 86).

1. The lateral and vertical extent of the plume is defined by well over 60 on-site and off-site hand borings, 13 monitoring wells, and six years of monitoring data.

2. Ground-water flow is west and northwest in Area 1. The ground-water quality downgradient of the accumulation in Area 1 is well defined even though the plume is still there. This observation is based on ground-water sampling and analyses from multiple rounds of shallow and deep monitoring wells. This is exemplified by ground-water sample results from MW-23D (deep well through heart of accumulation), shallow downgradient monitoring wells (e.g., MW-19, MW-13, MW-49, MW-35), and deep downgradient monitoring wells (e.g., MW-44D, MW-39D, MW-38D).

3. If separate-phase petroleum accumulation was causing considerable dissolved contamination to ground water, then based on the calculated ground-water velocity, contamination would be detected in the properly positioned, NYSDEC-approved monitoring well network, but it is not. This is not an indication that contamination was missed, but rather that it does not exist.

4. Soil contamination in Area 1 is substantially defined. It is known that soil in contact with the separate-phase petroleum accumulation is significantly contaminated, and since the extent of accumulation is known, the extent of soil contamination is known. Soil saturated with petroleum will be addressed in the FS along with petroleum recovery issues. Soil quality beneath the water table is not assessed since data are not representative of soil only, but of soil and ground-water quality. Furthermore, soil in the unsaturated zone in Area 1, as well as the rest of the Yard, is not fully defined at this time because the site-specific cleanup levels have not been determined by the NYSDEC.

4.3 Movement of Separate-Phase Petroleum Accumulation

As discussed above, the extent of the separate-phase petroleum accumulation has been defined. Although G&M in their preliminary site evaluation stated that the plume is moving at an estimated rate of 0.65 feet per day, the calculation they used was based on fresh, virgin oil, as opposed to

degraded, mixed petroleum. More importantly, G&M had not delineated the downgradient extent of the plume prior to making that statement. More complete delineation of the plume indicates that the product was not migrating beyond the sewer line at the north side of Area 1. As discussed in the October 13, 1992 "Delineation of the Off-Site Extent of Separate-Phase Petroleum Accumulation, Sunnyside Yard, Queens, New York" (Roux Associates, 1992d) separate phase petroleum was present south, but not north (downgradient) of the sewer. Based on the monitoring wells data (i.e., no separate phase was detected north of sewer [MW-9 or MW-35]), the sewer appears to be acting as a barrier to the northward migration of the separate-phase petroleum accumulation. The investigations performed identifying the boundaries of the plume, including wells immediately downgradient of the plume with no evidence of product, indicate that there is no migration beyond the sewer line. This conclusion was agreed to by NYSDEC Project Engineer James Quinn in a November 2, 1992 letter (NYSDEC, 1992).

In addition, PCBs mixed with the degraded separate-phase petroleum alters the physical properties of the accumulation. This includes the density, viscosity, and interfacial tension (adsorption), as well as biodegradation, all of which impact the movement of the accumulation. The result of these factors is a net retardation in the velocity of the separate phase relative to the velocity of ground water. PCBs have a great affinity for organic carbon in soil , therefore the mixture is more likely to be attenuated, and remain closer to the source area. In addition, the source of the separate-phase petroleum was removed in 1984, when the fuel oil tanks were removed from service and closed in place which included backfilling with wet clay (Roux Associates, 1992a; Phase I RI, p 28). An Interim Remedial Measure (IRM) was also implemented in January 1990 to passively recover the separate-phase petroleum and minimize potential migration (Roux Associates, 1995a; Phase II RI, p 157).

4.4 DNAPL

As previously discussed, PCBs released at the Yard originated from either leaking stationary transformers, self-propelled car transformers, or locomotive transformers which had releases through "burping" or strikes from debris on the track to the under belly transformers. As noted in Section 2.1, the number of releases reported are few, and the quantity released was small. In

addition, there was weeping around the fittings which may have resulted in small quantities being released over long periods of time. It should be noted that the source of the releases was not pure PCBs, but instead a mixture of soluble PCBs in oil (generally 30 to 60% carrier fluid). This mixture determines the physical properties of the PCB fluid resulting in decreases to the density/viscosity ratio, thus decreasing mobility (i.e., downward migration) for the occurrence of DNAPL. According to the literature some petroleum oil/PCB mixtures reportedly create LNAPLs (Cohen, et. al., 1993). The occurrence of LNAPL is evident in Area 1 where fuel oil from the USTs became contaminated with PCBs.

As reported in the Phase II RI (Roux Associates, 1995a; p.134), PCBs are expected to be strongly retarded by naturally-occurring organic matter in soil and aquifer matrices, and are relatively immobile in ground water. This information combined with the concentrations of PCBs in soil within Area 8 (i.e., in the locations of transformers containing the highest PCB concentrations) and the highest concentrations of PCBs detected in the shallow soil samples indicate that there is little potential for DNAPL at the Yard. In addition, no PCBs or chlorinated chemicals were detected in wells downgradient of Area 1 and Area 8.

To our knowledge, the NYSDEC does not have a document for determining the presence of DNAPL, therefore the United States Environmental Protection Agency document "Estimating Potential for Occurrence of DNAPL at Superfund Sites" (January 1992) was consulted (Attachment 2). This document states that two types of existing information should be used to determine DNAPL occurrence, namely historical site use information and site characterization data. The potential for DNAPL occurrence is greatest at sites where PCBs were produced, reprocessed, and/or disposed in quantity. Based on the flow charts provided in this document, the Yard does not fall into an industry (which would include rail yards) with high probability of historical DNAPL release, nor have waste disposal practices with high probability of historical DNAPL release, nor use DNAPL-related chemicals in appreciable quantities. In addition, the absence of PCBs and related chlorinated chemicals in ground water indicate that DNAPLs are not present at the Yard.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The information presented in this supplement indicates that the results of the investigations completed, used in conjunction with the suggestions for additional sampling (both in this document and Section 10 of the Phase II RI), result in adequate sampling of the Yard to initiate the Feasibility Study. Final delineation of environmental conditions will not be possible until the NYSDEC provides approved site-specific cleanup levels.

As stated in Sections 3.2.2 and 3.2.4, additional sampling is recommended to verify that the elevated mercury concentration in CS-43 (Area 2) is an isolated incidence, and that the areas adjacent to transformers 31 (Engine House) and 35 through 37 (Metro Shop) have been adequately sampled. The following approach will be implemented upon receiving approval from the NYSDEC. All sample collection and analysis will be performed in accordance with the methods specified in the Phase II RI Work Plan.

Area 2: Three additional soil samples will be collected within approximately five feet of CS-43. The samples will be collected from 0 to 2 feet below the pavement (concrete and asphalt), and analyzed for mercury using USEPA Method 7471.

Engine House: Three soil samples will be collected on the south side of the Engine House, beneath and adjacent to transformer 31. These samples will be collected from 0 to 2 feet bls, and analyzed for PCBs using ASP Method 91-3.

Metro Shop: Four soil samples will be collected on the north side of the Metro Shop, beneath and adjacent to transformers 35, 36 and 37. These samples will be collected from 0 to 2 feet bls, and analyzed for PCBs using ASP Method 91-3.

Area 4: Three new soil borings will be completed to further delineate the extent of PCBs around CS-49. These borings will be advanced with samples collected from each consecutive one foot interval until the concentration of PCBs detected are less than 25 ppm. Additional samples will be collected from CS-49 to further delineate the vertical extent of PCBs. Samples will be collected starting at the last interval sampled and analyzed (2-4 ft), and will be advanced with samples collected at one foot intervals until the concentrations of PCBs are less than 25 ppm.

Immunoassay soil test kits will be utilized to determine the concentration of PCBs as described in the Phase II RI (pp. 55-58). Samples with detections below 25 ppm will be confirmed using laboratory analysis (USEPA Method 8081).

Three additional soil samples will be collected within approximately five feet of MW-31. The samples will be collected from 0 to 2 feet below land surface and analyzed for lead using USEPA Method 6010. In addition, one ground-water sample will be collected and analyzed for lead only using USEPA Method 6010.

Respectfully submitted,

ROUX ASSOCIATES, INC.

Linda M. Wilson
Senior Regulatory Affairs Specialist

Joseph D. Duminuco
Project Principal/
Principal Hydrogeologist

6.0 REFERENCES

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Table 1. Transformer Inventory

Designation	Location	Serial Number	Aroclor 1260 ppm
TFRM-1	Former Substation 1A	965665	<5
TFRM-2	Former Substation 1A	965664	<5
TFRM-3	Former Substation 1A	965663	<5
TFRM-4	Former Substation 1A	225202	<5
TFRM-5	Former Substation 1A	225201	<5
TFRM-6	Former Substation 1A	50234890	<5
TFRM-7	Former Substation 1A	5868	<5
TFRM-8	Outdoor Feeder Station	4087430	<5
TFRM-9	Outdoor Feeder Station	HT-37000-115	<5
TFRM-10	Outdoor Feeder Station	4087429	<5
TFRM-11	Downstairs Former Substation 1A	3722191	<5
TFRM-12	Downstairs Former Substation 1A	3722192	<5
TFRM-13	Downstairs Former Substation 1A	3722913	<5
TFRM-14	Q-Tower	2694872	<5
TFRM-15	Q-Tower	2694871	<5
TFRM-16	Rear Former Commisary Building	6783580	<1
TFRM-17	Rear Former Commisary Building	6780346	<1
TFRM-18	MR #33216	Unknown	<1
TFRM-19	Car Washer E (Area 12)	1984478	31.5
TFRM-20	Car Washer E (Area 12)	1980820	29.5
TFRM-21	Car Washer W (Area 12)	1981371	30.1
TFRM-22	Car Charger	810510-1	<5
TFRM-23	Car Charger	810511-1	<5
TFRM-24	Back of YMCA	1004125	<5
TFRM-25	On Pole, South Side of Engine House	833483	<5
TFRM-26	25 Track, Area 8C	5819	27.6
TFRM-27	MR #58208, Area C	Unknown	504000
TFRM-28	20 Track, Area 8B	5822	485000
TFRM-29	15 Track, Area 8A	A-7867	491000
TFRM-30	15 Track, Area 8A	77J562224	12000
TFRM-31	Southside of Engine House, Area 1	78D1709801	2620
TFRM-32	Northside of Metro Shed, Area 1	H316909P70AA	571
TFRM-33	Northside of Metro Shed, Area 1	H316911P70AA	23.4
TFRM-34	Northside of Metro Shed, Area 1	8177132	NS
TFRM-35	Northside of Metro Shed, Area 1	Unknown	104
TFRM-36	Northside of Metro Shed, Area 1	8177091	122
TFRM-37	Northside of Metro Shed, Area 1	8490832	16500
TFRM-38	Rear of General Foremans Office, Building 6	59AA01310	14.1
TFRM-39	Rear of General Foremans Office, Building 6	C233194	91.2
TFRM-40	Rear of General Foremans Office, Building 6	C117624	12.7
TFRM-41	Boiler House	Unknown	<1
TFRM-42	Boiler House	Unknown	<1
TFRM-43	Boiler House	Unknown	<1
TFRM-44	On top of Laundry, Building #4	6950682	104.39
TFRM-45	Honeywell Avenue Bridge Track #1 (Area 5)	5821	270000
TFRM-46	Honeywell Avenue Bridge Track #1 (Area 5)	A7866	486000
TFRM-47	Engine House	1519519	74.5
TFRM-48	Engine House	1519515	<5
TFRM-49	Engine House	1519518	<5
TFRM-50	Area 10	122128	ND
TFRM-51	Area 10	C-122112	2
TFRM-52	Area 10	4911420	2
TFRM-53	Area 10	4911419	1
TFRM-54	Area 10	1104-54	ND

Table 1. Transformer Inventory

Designation	Location	Serial Number	Aroclor 1260 ppm
TFRM-55	Area 10	C-19451	ND
TFRM-56	Area 10	K6086750	30
TFRM-57	Area 10	K6066750-105	6
TFRM-58	Area 10	K60466750-101	125
TFRM-59	Area 10	K6066750	ND
TFRM-60	Area 10	17722	ND
TFRM-61	Area 10	152	NA*
TFRM-62	Area 10	152T	NA*
TFRM-63	Area 10	122	NA*
TFRM-64	Area 10	123	NA*
TFRM-65	Area 10	124	NA*
TFRM-66	Area 10	125	NA*
TFRM-67	Area 10	134	NA*
TFRM-68	Area 10	135	NA*
TFRM-69	Area 10		NA*
TFRM-70	Area 10		NA*

Notes:

ppm - Parts per million
NS - Not Samples
ND - Not detected
NA - Data Not Available to be sampled

ATTACHMENT A

AMTRAK Interoffice Memorandum
April 24, 1981

PYI - carrier oils

ATIONAL RAILROAD PASSENGER CORPORATION

INTEROFFICE MEMO

DATE: April 24, 1981

DISTRIBUTION

P. J. Mead

T: PCB Oil Status

Attached, for your information, is the latest PCB update. Please note that even though we have different base fluids in the transformers, they all have to be treated as if they are PCB fluids.

Attachment

DISTRIBUTION:

J. S. Crawford, Jr.
R. F. McGowan
R. T. Noonan ✓
T. N. Butler
J. J. Pfister
R. R. Eyrich
J. R. Wilson
K. M. Watkins
Mechanical Desk - Philadelphia
Mechanical Desk - Washington
R. D. Caudill - Metro Shop Wilmington

TRADENAMES USED BY VARIOUS MANUFACTURERS

FOR PCB CONTAINING TRANSFORMER OILS

Aroclor	Monsanto
Asbestol	American Corporation
Askarel	
Chlorextol	Allis Chalmers
Diaclor	Sangamo Electric
Dykanol	Cornell Dubilier
Elemex	McGraw Edison
Hyvol	Aerovox
Inerteen	Westinghouse
No-Flamol	Wagner
Pryanol	General Electric
Saf-T-Kuhl	Kuhlman
Clophen	Bayer (Germany)
DK	Caffaro (Italy)
Fenclor	Caffaro (Italy)
Kennechlor	Mitsubishi (Japan)
Phenoclor	Prodelec (France)
Pyralene	Prodelec (France)
Santotherm	Mitsubishi (Japan)
EEC-18, NIL, or NON INFLAMMABLE LIQUID	NIAGARA

This information can be found on the transformer nameplate.

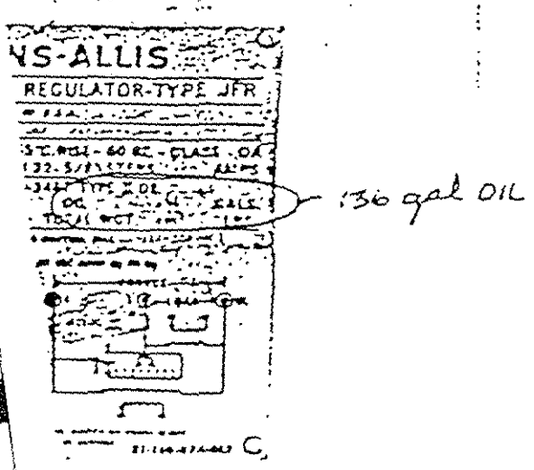
Determination of Transformer Fluid Type

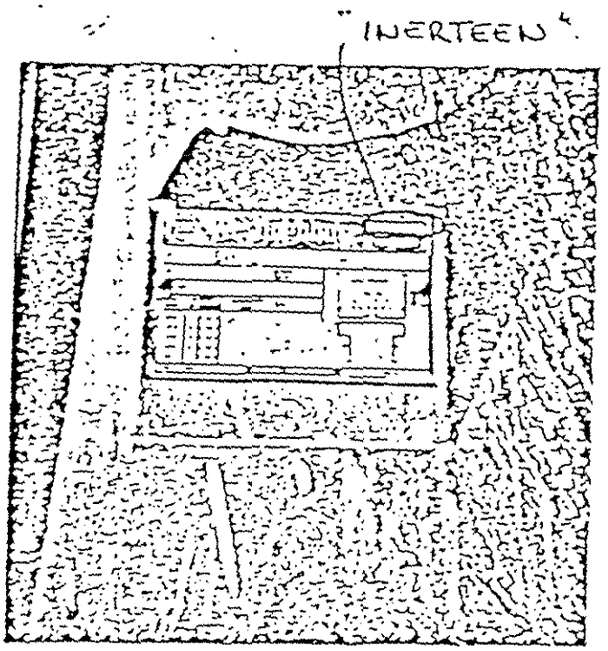
All transformers have metal manufacturer's nameplates attached somewhere on the unit that provide information such as the serial number and type of the unit, its electrical capacity and rating, electrical wiring diagrams, weight of the unit etc. The nameplates usually provide an indication of type and volume or weight of fluid contained. Thus, a quick determination of whether the unit is a mineral oil or PCB type transformer can be made by inspecting the label.

Mineral oil types can be identified by the indication that they contain "OIL", "10C OIL", "TRANSIL OIL", or when the nameplate bears no indication of fluid contents. For example, note that the copy of the Siemens-Allis nameplate (attached) indicates that the unit contains 136 gallons of oil.

PCB filled transformers will bear a company tradename or code to indicate that the unit contains PCB fluid. This may be printed on or stamped into the nameplate. For example, the copy of the Westinghouse Transformer nameplate (attached) indicates that the unit contains "INERTEEN", that company's tradename for PCB fluid (in this case, "INERTEEN" was printed in red letters). Different companies have different tradenames for PCB fluid. For General Electric it is "Pyranol". For Allis-Chalmers it is "Chlorextol". A list of common tradenames for PCB containing transformer oils is attached. Note that sometimes PCB fluid is identified by a code such as "EEC-18" or simply by the letters "NIL".

Assistance in determining transformer fluid type from nameplate information may be obtained from the USEPA at (201) 321-6669.





WILMINGTON, DELAWARE

PCB STATUS REPORT

1. Medical Program

Twenty five (25) employees tested in 1979.

One hundred and twenty (120) employees tested in April and May of 1980. Raw test results expected by June 20, 1980.

Letter sent to pensioners in May offering free PCB tests. Thirty to forty (30 - 40) pensioners (and others) have indicated a desire to have their blood analyzed for PCB levels. These people will be tested on June 6, 1980.

2. Mechanical Program

Amtrak no longer adds PCB based dielectric fluids to any of its transformers, nor any of those serviced by us. All "topping off" and retrofills are made with PCB substitutes.

To date, we have filled ten (10) transformers with the General Electric recommended PCB substitute "Iralec."

The phasing in of the Westinghouse equivalent substitute, called "FR-15", in their transformers will begin as soon as it becomes available in June.

In the next six (6) months, we expect to have twenty (20) transformers filled with these PCB substitutes.

Amtrak has purchased one thousand gallons (1000 Gal.) of "Midel", a PCB substitute which is a mixture of synthetic polyesters. This material will be tested in a Metroliner transformer by July 30, 1980. It will also be tested in a SEPTA transformer in June, 1980 by Westinghouse.

Burp tanks have been added to fifteen (15) General Electric transformers to catch any fluid which may be vented by the transformer. Burp tanks should be on all of our Metroliner equipment within four (4) months.

3. Facility Modifications

In order to improve the handling and storage of materials containing PCB at Wilmington, Delaware, Amtrak is installing two (2) personal hygiene facilities at Wilmington and upgrading the shop areas where PCBs are handled and stored. Bids have been received on these contracts and contractors are expected to be selected by June 11, 1980. These modifications are expected to be completed by August 31, 1980.

4. Training Program

Amtrak's formal training program for the proper handling of PCBs has been in effect since August, 1979. This has now been expanded to include a visual presentation on the proper use of personal protective equipment. The next training

Training sessions held to date include:

January 22, 1980	All shop employees who directly work with or handle PCB. A total of fifty (50) employees.
March 4, 1980	Dr. Rubin, Toxicologist, Johns Hopkins University, met with six hundred (600) employees to review the hazards of PCB exposure. His presentation was video taped and shown to Wilmington shop personnel on all three (3) shifts. A total of seven hundred and sixty five (765) employees.
May 16, 1980	Classroom training for new hires and transferred employees. A total of fourteen (14) employees.

NOTE: A briefing on available medical knowledge and general PCB problems was held on August 12, 1979 for all shop personnel from the Electric, Boiler, Locomotive and Car Shops.

ATTACHMENT B

Analytical Results from Previous Investigations

CANBERRA
RMC
Environmental Services Division, Fricks Lock Rd., RD #1, Pottstown, PA 19464 (215) 326-9662

22 December 1983

rec'd
12/27/83

Robert T. Noonan
Environmental Division
National Rail Passenger Corporation
400 North Capitol Street
Washington, DC 20001

Dear Mr. Noonan:

Enclosed please find the results of the PCB analysis performed on the soil samples collected from the Sunnyside Maintenance Facility on 1 November. The samples were collected, extracted and analyzed in accordance with the protocal sent to you in my letter of 28 November 1983. Also enclosed is a map of the area with the actual sampling locations marked and labeled by sample number.

If you have any questions concerning this data or require additional sampling in the future at this facility, please feel free to contact me.

Sincerely yours,

Richard S. Rodgers

Richard S. Rodgers
Manager
Environmental Chemistry Laboratory

gjs
Enc.

Results of PCB Analysis of Soil Samples Collected from
AMTRAK Sunnyside Maintenance Facility on
1 November 1983

Sample Number	RMC Number	Sample Description	Depth	Aroclor	Concentrati (mg/kg)
1	2693	68 Spur Spoils Pile	6"	1254	57
2	2694	68 Spur Spoils Pile	6"	1260	68
3	2695	68 Spur Spoils Pile	6"	1254	15.7
4	2696	68 Spur Spoils Pile	6"	1254	290
5	2697	68 Spur Spoils Pile	6"	1254	420
6	2698	68 Spur Spoils Pile	6"	1260	89
7	2699	Under Honeywell Avenue Near YMCA	6"	1254	410
8	2700	Under Honeywell Avenue Near YMCA	6"	1254	399
9	2701	Boiler House Spoils Pile	6"	1254	182
10	2702	#5 Track (East)	6"	1254	9.1
11	2703	#5 Track (East)	18"	1254	9.0
12	2704	#6 Track (East)	6"	1260	<0.5
13	2705	#7 Track (Center)	6"	1260	<0.5
14	2706	#7 Track (Center)	18"	1260	<0.5
15	2707	#6 Track (Center)	6"	1260	0.6
16	2708	#7 Track (West)	6"	1260	0.7
17	2709	#8 Track (West)	6"	1260	1.7
18	2710	#8 Track (West)	18"	1260	<0.5
19	2711	#9 Track (West)	6"	1260	<0.5
20	2712	#10 Track (West)	6"	1260	1.9
21	2713	#10 Track (West)	18"	1260	1.6
22	2714	#11 Track (West)	6"	1260	<0.5
23	2716	#13 Track (West)	6"	1260	0.8
24	2717	#13 Track (West)	18"	1260	1.4
25	2715	#12 Track (West)	6"	1260	1.4
26	2718	#14 Track (West)	6"	1260	7.6
27	2719	#15 Track (West)	6"	1260	<0.5
28	2720	#14 Track (East)	6"	1260	4.4
29	2721	#14 Track (East)	18"	1260	2.1
30	2722	#12 Track (East)	6"	1260	5.5

Sample Number	RMC Number	Sample Description	Depth	Aroclor	Concentration (mg/kg)
31	2723	#12 Track (East)	18"	1260	<0.5
32	2724	#11 Track (East)	6"	1260	0.9
33	2725	#10 Track (East)	6"	1260	3.9
34	2726	#10 Track (East)	18"	1260	<0.5
35	2727	#9 Track (East)	6"	1260	12.0
36	2728	#8 Track (East)	6"	1260	16.5
37	2729	#8 Track (East)	18"	1260	<0.5
38	2730	#7 Track (East)	6"	1260	4.7

Approved By: Richard S. Rodgers

Richard S. Rodgers, Manager
Environmental Chemistry Laboratory
21 December 1983

ATLANTIC
ENVIRONMENTAL

ak-Sunnyside Yard, NYC

PCB Evaluation
8/21,22/85

ODUCTION

Soil sampling was performed in the area surrounding the Engine
e of Sunnyside Yard, New York, N.Y., on August 21 and 22, 1985.
purpose of this sampling was to determine polychlorinated bi-
nyl (PCB's) levels in the soils tested and to assess the potential
employee exposure.

RVATIONS

Sunnyside Yard is an old maintenance facility for trains where
wastes were disposed of indiscriminately in the past.

Sampling for PCB's in the soil around this area was initiated
etermine possible contamination.

LING METHODS

The designation of sampling locations was established by dis-
sions with Amtrak employees including Charles Lin, Environmental
cialist.

Core samples were taken down to a depth of six inches in
h of the designated locations.

Sampling methods and the laboratory analysis of samples was
e in accordance with EPA and NIOSH techniques.

T RESULTS

The following Table illustrates the survey results and data
presented in parts per million (ppm).

EPA defines any substance with greater than 50 ppm PCB's to be
o containing.

ATLANTIC
ENVIRONMENTAL

Amtrak-Sunnyside Yard, NYC

PCB Survey Results
8/21 & 22/85

Sample #	Date	Location	PCB's ppm	Rec.Safe Level
SSM0821E	082185	East Engine House Area Between Track 1 & 2 20' feet east or Engine House Core Sample-6" down	43.4	50 ppm
SSM0821F	082185	North Engine House Area 20 ft north of N. Wall Engine House 40 ft West of E. Wall Core Sample-6" down	6.32	50 ppm
SSM0822G	082285	East Engine House Area 140 ft. east of E. Wall Engine House 5' South of Track I Core Sample-6" down	9.75	50 ppm

ENVIRONMENTAL SERVICES
Environmental Chemistry Laboratory, Fricks Lock Rd., RD # 1, Pottstown, PA 19464 (215) 326-9662

CERTIFICATE OF ANALYSIS

LABORATORY NO. 2313-85 RECEIVED: 10 September 1985 REPORTED: 13 September 1985

CLIENT: Joe DeVito
AMTRAK-Operations and Maintenance
Sunnyside Yards
3929 Honeywell Street
Long Island City, NY 11101

SAMPLE DESCRIPTION: Zero to six inch depth composite of soil collected in 10 foot by 10 foot area east of boiler house.

Parameter	Units	Concentration
Polychlorinatedbiphenyl	mg/kg* (as Aroclor 1254)	147

*As received or wet weight basis.

Approved by: Kyle F. Gross, Supervisor
Environmental Chemistry
Laboratory

RMC ENVIRONMENTAL SERVICES
Environmental Chemistry Laboratory, Fricks Lock Rd., RD # 1, Pottstown, PA 19464 (215) 326-9662

CERTIFICATE OF ANALYSIS

LABORATORY NO: See Below RECEIVED: 11/12/85 REPORTED: 11/19/85

CLIENT: AMTRAK Sample Date: 11/12/85
Sampled By: G. Starr

SAMPLE DESCRIPTION: Sunnyside Station - New York City (Wall Scrapings)
(Engine House)

Parameter		Upper Left Corner of East Wall in Pit Under Drop Table RMC#3147-85	Northeast Area of Floor in Pit Under Drop Table RMC#3148-85
Polychlorinated Biphenyls (PCB's)	mg/kg (ppm) As Aroclor 1254	7.0	14.3

Approved By: Kyle F. Gross
Kyle F. Gross, Supervisor
Environmental Chemistry Laboratory

— Car Wash Area Prior To, Rehab.

2197-1 to 6

FIRST ENVIRONMENTAL LABORATORIES, INC.

TEST REPORT

Amtrak/Office Services
2000 Market, 6th Floor
Philadelphia, Pennsylvania 19103
Attn: Charlie Cluchak

Job Number: 2197

Subject: First Environmental Laboratories, Inc. personnel collected the soil samples at the Amtrak Sunnyside Yards in Queens, New York on 01/18/90. Sampling sites were selected by Amtrak personnel as indicated in the attached site map.

Eleven (11) soil samples were collected and are identified as per Chain of Custody Record. The samples were composited as per Amtrak personnel instructions and identified for analysis as samples 1 through 6.

Analysis: The six (6) composite samples were analyzed for PCBs.

Methodology: Samples were analyzed according to EPA Method 8080.

Results: Attached

Richard Posner
President

Seyed Dastgheyb
Laboratory Director

Introduction

This report (Reference: FEL Job Number 2197) contains the results of PCB analyses for the following samples which were received on 01/18/90.

FEL Sample ID	Amtrak Sample ID
2197 - 1	1A, 2A, 3A
2197 - 2	1B, 3B
2197 - 3	4A, 5A, 6A
2197 - 4	4B, 5B, 6B
2197 - 5	(1A+1B), 2A, (3A+3B)
2197 - 6	(4A+4B), (5A+5B), (6A+6B)

RST ENVIRONMENTAL LABORATORIES, INC.

PCB ANALYSIS REPORT SHEET

Client: Amtrak/Office Services
Project: Amtrak (Sunnyside Yards, Queens, NY)

Lab Sample ID:	2197-1		
Date Received:	01/18/90	Method:	EPA 8080
Date Prepared:	01/23/90	Instrument ID:	GC-01
Date Analyzed:	01/23/90	GC Run No.:	83
Matrix:	Soil	Primary Column:	1.5% OV-17
Dilution Factor:	100	Conf. Column:	3% SP 2100
Percent Moisture:	19.90		

****
Amtrak Sample Identification: Composite 1 (1A, 2A, 3A)
****

CAS NUMBER	COMPOUND	CONCENTRATION	UNITS
53469-21-9	Aroclor 1242	ND [.10]	mg/Kg
11097-69-1	Aroclor 1254	12.1	mg/Kg
11096-82-5	Aroclor 1260	ND [.20]	mg/Kg
12674-11-2	Aroclor 1016	ND [.10]	mg/Kg
11104-28-2	Aroclor 1221	ND [.10]	mg/Kg
11141-16-5	Aroclor 1232	ND [.10]	mg/Kg
12672-29-6	Aroclor 1248	ND [.10]	mg/Kg

****
ND = None Detected, Detection Limit in Brackets, [ ]

RST ENVIRONMENTAL LABORATORIES, INC.

PCB ANALYSIS REPORT SHEET

Client: Amtrak/Office Services
Project: Amtrak (Sunnyside Yards, Queens, NY)

Lab Sample ID:	2197-2		
Date Received:	01/18/90	Method:	EPA 8080
Date Prepared:	01/23/90	Instrument ID:	GC-01
Date Analyzed:	01/23/90	GC Run No.:	84
Matrix:	Soil	Primary Column:	1.5% OV-17
Dilution Factor:	10	Conf. Column:	3% SP 2100
Percent Moisture:	16.49		

****
Amtrak Sample Identification: Composite 2 (1B, 3B)
****

CAS NUMBER	COMPOUND	CONCENTRATION	UNITS
53469-21-9	Aroclor 1242	ND [.10]	mg/Kg
11097-69-1	Aroclor 1254	ND [.19]	mg/Kg
11096-82-5	Aroclor 1260	3.95	mg/Kg
12674-11-2	Aroclor 1016	ND [.10]	mg/Kg
11104-28-2	Aroclor 1221	ND [.10]	mg/Kg
11141-16-5	Aroclor 1232	ND [.10]	mg/Kg
12672-29-6	Aroclor 1248	ND [.10]	mg/Kg

****
ND = None Detected, Detection Limit in Brackets, [ ]

RST ENVIRONMENTAL LABORATORIES, INC.

PCB ANALYSIS REPORT SHEET

Client: Amtrak/Office Services
Project: Amtrak (Sunnyside Yards, Queens, NY)

Lab Sample ID:	2197-3		
Date Received:	01/18/90	Method:	EPA 8080
Date Prepared:	01/23/90	Instrument ID:	GC-01
Date Analyzed:	01/23/90	GC Run No.:	68
Matrix:	Soil	Primary Column:	1.5% OV-17
Dilution Factor:	10	Conf. Column:	3% SP 2100
Percent Moisture:	19.26		

****
Amtrak Sample Identification: Composite 3 (4A, 5A, 6A)
****

CAS NUMBER	COMPOUND	CONCENTRATION	UNITS
53469-21-9	Aroclor 1242	ND [.10]	mg/Kg
11097-69-1	Aroclor 1254	0.66	mg/Kg
11096-82-5	Aroclor 1260	ND [.20]	mg/Kg
12674-11-2	Aroclor 1016	ND [.10]	mg/Kg
11104-28-2	Aroclor 1221	ND [.10]	mg/Kg
11141-16-5	Aroclor 1232	ND [.10]	mg/Kg
12672-29-6	Aroclor 1248	ND [.10]	mg/Kg

****
ND = None Detected, Detection Limit in Brackets, [ ]

ST ENVIRONMENTAL LABORATORIES, INC.

PCB ANALYSIS REPORT SHEET

Client: Amtrak/Office Services
Project: Amtrak (Sunnyside Yards, Queens, NY)

Lab Sample ID:	2197-4		
Date Received:	01/18/90	Method:	EPA 8080
Date Prepared:	01/23/90	Instrument ID:	GC-01
Date Analyzed:	01/23/90	GC Run No.:	63
Matrix:	Soil	Primary Column:	1.5% OV-17
Dilution Factor:	1	Conf. Column:	3% SP 2100
Percent Moisture:	23.06		

****
Amtrak Sample Identification: Composite 4 (4B, 5B, 6B)
****

CAS NUMBER	COMPOUND	CONCENTRATION	UNITS
53469-21-9	Aroclor 1242	ND [.10]	mg/Kg
11097-69-1	Aroclor 1254	ND [.21]	mg/Kg
11096-82-5	Aroclor 1260	0.21	mg/Kg
12674-11-2	Aroclor 1016	ND [.10]	mg/Kg
11104-28-2	Aroclor 1221	ND [.10]	mg/Kg
11141-16-5	Aroclor 1232	ND [.10]	mg/Kg
12672-29-6	Aroclor 1248	ND [.10]	mg/Kg

****
ND = None Detected, Detection Limit in Brackets, [ ]

ST ENVIRONMENTAL LABORATORIES, INC.

PCB ANALYSIS REPORT SHEET

Client: Amtrak/Office Services
Project: Amtrak (Sunnyside Yards, Queens, NY)

Lab Sample ID:	2197-5		
Date Received:	01/18/90	Method:	EPA 8080
Date Prepared:	01/23/90	Instrument ID:	GC-01
Date Analyzed:	01/23/90	GC Run No.:	85
Matrix:	Soil	Primary Column:	1.5% OV-17
Dilution Factor:	100	Conf. Column:	3% SP 2100
Percent Moisture:	18.54		

****
Amtrak Sample Identification: Composite 5 (1A+1B), 2A, (3A+3B)
****

CAS NUMBER	COMPOUND	CONCENTRATION	UNITS
53469-21-9	Aroclor 1242	ND [.10]	mg/Kg
11097-69-1	Aroclor 1254	ND [.20]	mg/Kg
11096-82-5	Aroclor 1260	15.8	mg/Kg
12674-11-2	Aroclor 1016	ND [.10]	mg/Kg
11104-28-2	Aroclor 1221	ND [.10]	mg/Kg
11141-16-5	Aroclor 1232	ND [.10]	mg/Kg
12672-29-6	Aroclor 1248	ND [.10]	mg/Kg

****
ND = None Detected, Detection Limit in Brackets, [ ]

ST ENVIRONMENTAL LABORATORIES, INC.

PCB ANALYSIS REPORT SHEET

Client: Amtrak/Office Services
Project: Amtrak (Sunnyside Yards, Queens, NY)

Lab Sample ID:	2197-6		
Date Received:	01/18/90	Method:	EPA 8080
Date Prepared:	01/23/90	Instrument ID:	GC-01
Date Analyzed:	01/23/90	GC Run No.:	70
Matrix:	Soil	Primary Column:	1.5% OV-17
Dilution Factor:	5	Conf. Column:	3% SP 2100
Percent Moisture:	21.16		

****
Amtrak Sample Identification: Composite 6 (4A+4B), 5A, (6A+6B)
****

CAS NUMBER	COMPOUND	CONCENTRATION	UNITS
53469-21-9	Aroclor 1242	ND [.10]	mg/Kg
11097-69-1	Aroclor 1254	1.27	mg/Kg
11096-82-5	Aroclor 1260	ND [.20]	mg/Kg
12674-11-2	Aroclor 1016	ND [.10]	mg/Kg
11104-28-2	Aroclor 1221	ND [.10]	mg/Kg
11141-16-5	Aroclor 1232	ND [.10]	mg/Kg
12672-29-6	Aroclor 1248	ND [.10]	mg/Kg

****
ND = None Detected, Detection Limit in Brackets, [ ]

LABORATORY CONTROL SAMPLES

****
FEL Job Number: 2197
****

LCS #	RESULT	TRUE VALUE	% RECOVERY	SPECIFICATION	ACTION
1	53	52	101.9	85 - 115%	None

METHOD BLANKS

COMPOUND	RESULT	SPECIFICATION	ACTION
Aroclor 1242	ND < 0.08 mg/L	< 0.08 mg/L	None
Aroclor 1254	ND < 0.16 mg/L	< 0.16 mg/L	None
Aroclor 1260	ND < 0.16 mg/L	< 0.16 mg/L	None

ND = Not Detected

AnalytiKEM An American NuKEM Company

AnalytiKEM Inc.
28 Springdale Road
Cherry Hill, NJ 08003
609/751-1122
215/923-2068

TEST REPORT NO. A22506

August 30, 1990

4-84205-0
HJu 4054

Prepared for:

Amtrak
2000 Market Street
5th Floor
Philadelphia, PA 19103

Attention: Scott Anderson

Project: Sunnyside Yard

Date of Sample Receipt: August 9, 1990

NJ Certification No. NJ 04012

NY Certification No. NY 10815

SC Certification No. SC 94004

NC Certification No. NC 258

PA Certification No. PA 68-366

Reviewed & Approved by: _____

Name Edward J. Palmer, Jr.

Title Technical Manager

AnalytiKEM

II. Sample Designations

AnalytiKEM Designation	Client Designation	Matrix	Date Sampled
A22506-1	Area A	Nonaqueous	8/9/90
A22506-2	Area B	Nonaqueous	8/9/90
A22506-3	Area C	Nonaqueous	8/9/90
A22506-4	Area D	Nonaqueous	8/9/90
A22506-5	Area E	Nonaqueous	8/9/90
A22506-6	Area F	Nonaqueous	8/9/90
A22506-7	Area G	Nonaqueous	8/9/90
A22506-8	Area H	Nonaqueous	8/9/90
A22506-9	Area I	Nonaqueous	8/9/90
A22506-10	Area J	Nonaqueous	8/9/90
A22506-11	Area K	Nonaqueous	8/9/90
A22506-12	Area L	Nonaqueous	8/9/90

AnalytiKEM

IV. Analytical Results

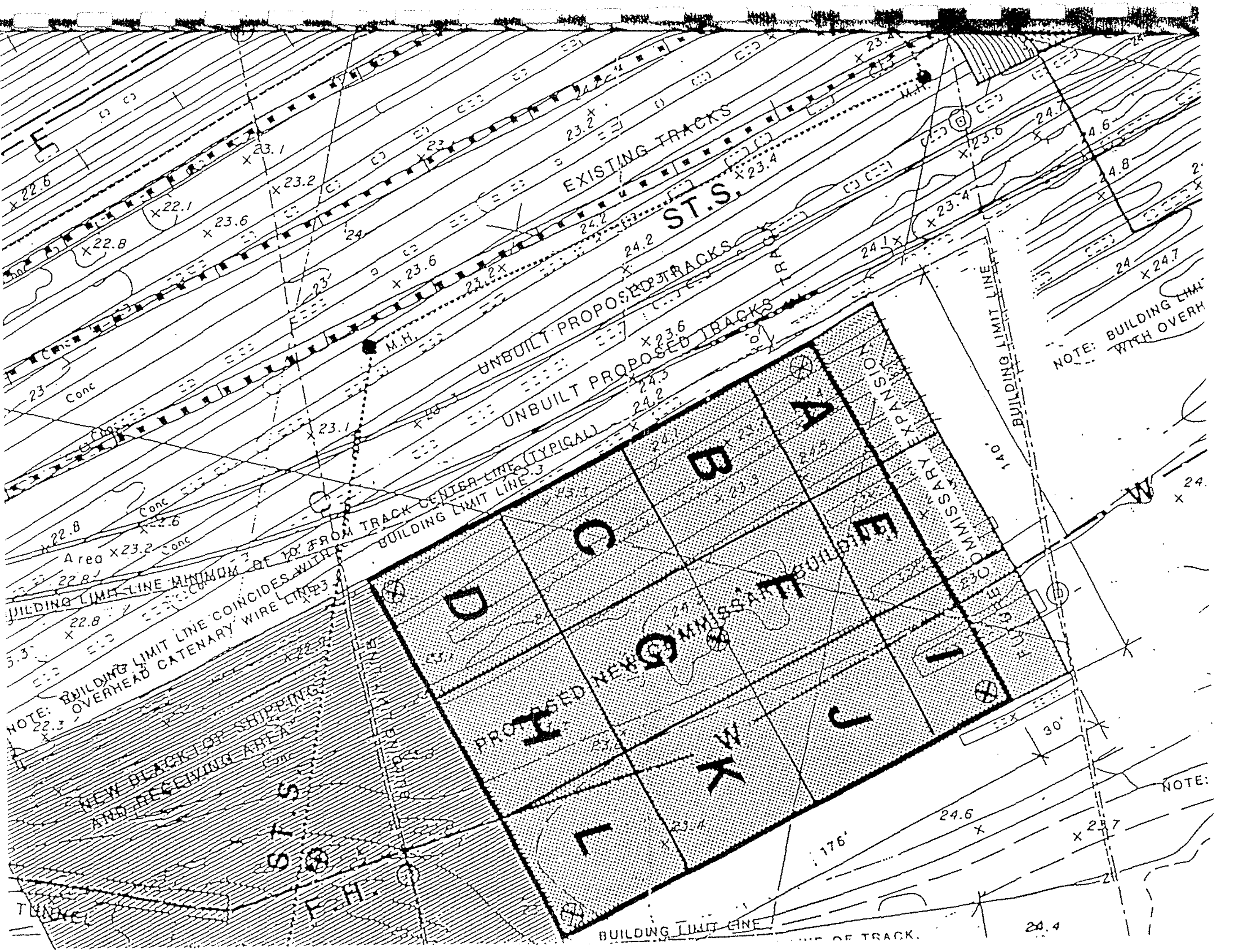
Polychlorinated Biphenyls

		Sample Designation			
Parameter	Method Blank	A22506-1 Area A	A22506-2 Area B	A22506-3 Area C	A22506-4 Area D
Aroclor 1016	330 U	33,000 U	3,300 U	33,000 U	3,300 U
Aroclor 1221	330 U	33,000 U	3,300 U	33,000 U	3,300 U
Aroclor 1232	330 U	33,000 U	3,300 U	33,000 U	3,300 U
Aroclor 1242	330 U	33,000 U	3,300 U	33,000 U	3,300 U
Aroclor 1248	330 U	33,000 U	3,300 U	33,000 U	3,300 U
Aroclor 1254	330 U	33,000 U	3,300 U	33,000 U	3,300 U
Aroclor 1260	330 U	340,000	24,000	110,000	13,000
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)

	Sample Designation			
Parameter	A22506-5 Area E	A22506-6 Area F	A22506-7 Area G	A22506-8 Area H
Aroclor 1016	3,300 U	33,000 U	330 U	3,300 U
Aroclor 1221	3,300 U	33,000 U	330 U	3,300 U
Aroclor 1232	3,300 U	33,000 U	330 U	3,300 U
Aroclor 1242	3,300 U	33,000 U	330 U	3,300 U
Aroclor 1248	3,300 U	33,000 U	330 U	3,300 U
Aroclor 1254	3,300 U	33,000 U	330 U	3,300 U
Aroclor 1260	5,200	160,000	1,900	5,600
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)

	Sample Designation			
Parameter	A22506-9 Area I	A22506-10 Area J	A22506-11 Area K	A22506-12 Area L
Aroclor 1016	3,300 U	3,300 U	3,300 U	3,300 U
Aroclor 1221	3,300 U	3,300 U	3,300 U	3,300 U
Aroclor 1232	3,300 U	3,300 U	3,300 U	3,300 U
Aroclor 1242	3,300 U	3,300 U	3,300 U	3,300 U
Aroclor 1248	3,300 U	3,300 U	3,300 U	3,300 U
Aroclor 1254	3,300 U	3,300 U	3,300 U	3,300 U
Aroclor 1260	5,600	5,400	9,400	1,900 J
Units	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)

Note: All compounds reported at levels exceeding the PQL have been confirmed by alternate column GC.


EXISTING TRACKS
ST.S.
UNBUILT PROPOSED TRACKS
UNBUILT PROPOSED TRACKS
TRACK CENTER LINE (TYPICAL)
BUILDING LIMIT LINE 3
BUILDING LIMIT LINE
NOTE: BUILDING LIMIT LINE COINCIDES WITH
OVERHEAD CATENARY WIRE LINE
NOTE: BUILDING LIMIT
WITH OVERH
EXPANSION
COMMISSARY
FUTURE
PROPOSED NEW COMMISSARY BUILDING
A
B
C
D
E
F
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H
I
J
K
L
NEW BLACKTOP SHIPPING
AND RECEIVING AREA
M.H.
M.H.
140'
176'
30'
NOTE:
TUNNEL

United States Testing Company, Inc.
Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

PCBs in Soil Sampling Survey

at

Track 20
Sunnyside Railyard
Queens, New York

for

Amtrak National Passenger Corporation
Northeast Corridor Track Dept.
Penn Station, 31st and 7th Avenue
New York, New York

DATE: August 4, 1992

REPORT OF TEST NO. 159558

PREPARED BY

Christopher Pope
Project Manager
CP:nt

SIGNED FOR THE COMPANY BY

John H. Chiaviello
Project Manager

United States Testing Company, Inc.

Client: Amtrak National Passenger Corp.
NE Corridor Track Dept.
Penn Station, 31st & 7th Avenue
New York, New York

Number: 159558
Date: 08/04/92

SUBJECT

A soil sampling survey for PCBs was performed at Track 20 at Sunnyside Railyard, Queens, New York, New York on July 21, 1992. Soil samples were also collected from the soil stock piles designated as coming from track 22A and Penn Station.

PROJECT

This survey involved the collection of soil samples at Track 20 to a depth of at least 18 inches for PCB analyses. Samples of the soil piles were collected up to a depth of 25 inches.

PROCEDURE

Eight soil samples were collected to a depth of at least 18 inches from the top of the tie at 150 foot intervals for the length of Track 20. Samples were collected from the east signal to 1050 feet west.

One soil sample was collected from the Penn Station soil pile at the approximate center of the top of the pile to a depth of 25 inches.

Two soil samples were collected from the track 22A soil pile. One sample was collected from the top of the west side of the pile to a depth of approximately 18 inches. One sample was collected at 3 feet from the ground at the approximate center of the south side of the pile to a horizontal depth of 25 inches.

Samples were collected utilizing a one inch inner diameter coring tool. The tool was driven into the soil and a core sample extracted. The soil sample was homogenized and transferred to 750 ml glass jars.

Samples were analyzed by US. EPA SW846 Method 8080.

United States Testing Company, Inc.

Client: Amtrak National Passenger Corp.

Number: 159558
Date: 08/04/92

RESULTS

DATE: July 21, 1992

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb
159558-SPCB-1	At east signal	18"	AROCLOR-1016	ND
			AROCLOR-1221	ND
			AROCLOR-1232	ND
			AROCLOR-1242	ND
			AROCLOR-1248	ND
			AROCLOR-1254	ND
			AROCLOR-1260	640
159558-SPCB-2	150 ft. west of east signal	18"	AROCLOR-1016	ND
			AROCLOR-1221	ND
			AROCLOR-1232	ND
			AROCLOR-1242	ND
			AROCLOR-1248	ND
			AROCLOR-1254	ND
			AROCLOR-1260	160
159558-SPCB-3	300 ft. west of east signal	18"	AROCLOR-1016	ND
			AROCLOR-1221	ND
			AROCLOR-1232	ND
			AROCLOR-1242	ND
			AROCLOR-1248	ND
			AROCLOR-1254	ND
			AROCLOR-1260	240

United States Testing Company, Inc.

Client: Amtrak National Passenger Corp.

Number: 159488
Date: 06/27/92

RESULTS

DATE: July 21, 1992

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb
159558-SPCB-4	450 ft. west of east signal	18"	AROCLOR-1016	ND
			AROCLOR-1221	ND
			AROCLOR-1232	ND
			AROCLOR-1242	ND
			AROCLOR-1248	ND
			AROCLOR-1254	ND
			AROCLOR-1260	330
159558-SPCB-5	600 ft. west of east signal	18"	AROCLOR-1016	ND
			AROCLOR-1221	ND
			AROCLOR-1232	ND
			AROCLOR-1242	ND
			AROCLOR-1248	ND
			AROCLOR-1254	ND
			AROCLOR-1260	290
159558-SPCB-6	750 ft. west of east signal	18"	AROCLOR-1016	ND
			AROCLOR-1221	ND
			AROCLOR-1232	ND
			AROCLOR-1242	ND
			AROCLOR-1248	ND
			AROCLOR-1254	ND
			AROCLOR-1260	1300

United States Testing Company, Inc.

Client: Amtrak National Passenger Corp.

Number: 159488
Date: 06/27/92

RESULTS (cont'd)

DATE: July 21, 1992

Sample #	Location	Sample Depth	PCB Type	PCB conc. ppb
159558-SPCB-7	900 ft. west of east signal	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 530
159558-SPCB-8	1050 ft. west of east signal	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 420
159558-SPCB-9	Top of west side of Track 22A soil pile	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 800

Client: Amtrak National Passenger Corp.

Number: 159488
Date: 06/27/92

RESULTS (cont'd)

DATE: July 21, 1992

Sample #	Location	Sample Depth	PCB Type	PCB Concn. ppb
159558-SPCB-10	South side of Track 22A soil pile	25"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2900
159558-SPCB-11	Top of center of Penn Station soil pile	25"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 420

DISCUSSION

Eight soil samples for PCB analyses were collected at 150 foot intervals along Track 20 starting at the east signal. The track was sampled for a length of 1050 feet.

The intention of the sampling was to extract a core sample to a 18-inch depth from the top of the Rail Tie. Three samples were also collected from the soil piles designated to be from Track 22A and Penn Station.

All samples collected were found to contain some concentration of AROCLOR-1260.

CONCLUSION

Soil samples were determined to contain AROCLOR-1260 at concentrations ranging from 420 to 2,900 parts per billion.

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

AN ASBESTOS, PETROLEUM HYDROCARBON
&
PCBs IN SOIL SAMPLING SURVEY

Sal piles - not on map

Conducted At:

Utility Tunnel, Water Leak by Sand Tower
and Q Tower Water Line
Sunnyside Railyard
Queens, New York

Performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

Submitted to:

Amtrak Safety and Environmental Control
Amtrak Penn Station
31st Street & 8th Avenue
New York, New York 10001

DATE: December 16, 1992

REPORT OF TEST NO.: 159796

PREPARED BY:

Kevin Cosgrove
Project Manager
KC:rp

SIGNED FOR THE COMPANY BY:

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control
Amtrak Penn Station
31st Street & 8th Avenue
New York, New York 10001

Number: 159796
Date: 12/16/92

SUBJECT

A soil sampling survey for asbestos, petroleum hydrocarbons and PCBs was performed at the utility tunnel, water leak at the Sand Tower and Q tower water line Sunnyside Railyard, Queens, New York by the United States Testing Company, Inc. on December 2 and 3, 1992.

PROJECT

The purpose of this survey was to collect soil samples at various locations at the railyard and analyze those samples for various contaminants including PCBs, asbestos and petroleum hydrocarbons. Samples were collected from soil piles in the utility tunnel for PCB and asbestos analysis. Soil samples were collected at the water leak by the Sand Tower and along the new water line route for Q Tower with analysis for PCBs and petroleum hydrocarbons.

PROCEDURE

Three to four soil samples were collected from each sampling site.

Sample collection performed in the utility tunnel involved collecting approximate equal quantities of soil from three or four points through the approximate center of each pile sampled utilizing a hand trowel. The piles were excavated with a shovel to allow for sample collection along the center vertical line of the pile.

Sampling performed at the water leak by the Sand Tower and water line route to Q Tower utilized a soil borer providing a core sample from 20 to 32 inches in depth.

Soil samples collected along the Q Tower water line route were collected in line with the hydrant adjacent the track outside of the Radio Shop and the electrical box on the north side of Q Tower.

All samples were homogenized and transferred to glass jars.

All soil samples to be analyzed for asbestos were first homogenized and then ashed in a high temperature furnace at 425°C for 6 hours. The soil samples were then pulverized and analyzed for suspect fibers utilizing a stereobinocular microscope.

Client: Amtrak Safety and Environmental Control

Number: 159796
Date: 12/16/92

PROCEDURE ...continued

Sample analysis of soil materials was performed in accordance with procedures described in Appendix A, "Interim Method for the Determination of Asbestiform Minerals in Bulk Insulation Samples", Section 1 and Section 2, published in the Federal Register, Volume 47, No. 103, May 27, 1982. The procedure involves examination of the samples with a petrographic microscope utilizing polarized light, a procedure commonly known as polarized light microscopy (PLM).

Dispersion staining is a technique that is used in conjunction with PLM. This technique allows the analysts to measure the refractive index of the fiber by producing colors through the dispersion of refractive index of the fiber as it relates to the dispersion index of the mounting liquid. A more positive identification of asbestos can be made when both PLM and dispersion staining are utilized.

Ten samples were analyzed for PCB's according to U.S.E.P.A.- SW 846, Method S080.

Seven samples were analyzed for petroleum hydrocarbons in accordance with the procedures outlined in "Methods for chemical analysis of water and wastes, 1979" (Revised 1983). Method 418.1 (Modified for Soils)

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 159796
Date: 12/16/92

RESULTS

Soil Samples Analyzed for Asbestos

DATE: December 2, 1992

Sample #	Sample ID	Type of Asbestos Present	Total Percentage by Volume	Other Materials Present	Gross Appearance
20817	159796-ASB-01 Utility Tunnel -south side track 36, 6 1/2 ft soil pile approximately 100 ft from south access	Chrysotile	< 1%	Cellulose 10% Carbonate 10% Quartz 10%	Soil Sample
20818	159796-ASB-02 Utility Tunnel -South side of track 36, 3 ft soil pile approximately 155 ft from south access	Chrysotile	< 1%	Cellulose 10% Carbonate 10% Quartz 10%	Soil Sample
20819	159796-ASB-03 Utility Tunnel -2 foot soil pile under tracks 20 & 21	Chrysotile <1% Amosite <1%	< 1%	Cellulose 10% Carbonate 10% Quartz 10%	Soil Sample

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 159796
Date: 12/16/92

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: December 2, 1992

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. ppb
159796-PCB-1	Utility Tunnel - 6 1/2 foot pile approximately 100 ft. from south access opening	Composite at 2 foot intervals through pile starting at surface	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 790	NA
159796-PCB-2	Utility Tunnel - 3 foot pile approximately 155 ft from south access opening	Composite at 1 1/2 foot intervals through pile starting at surface	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND	NA
159796-PCB-3	Utility Tunnel - 2 foot pile under tracks 20 and 21	Composite at 1 foot intervals starting at surface	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 23500	NA

ND - Not Analyzed

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 159796
Date: 12/16/92

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: December 2, 1992

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. ppb
159796-PCB-PHC-4	Water leak by Sand House 3 feet east of signal at skid	20"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 1500	2450
159796-PCB-PHC-5	Water leak by Sand House - between conveyor pillars on south side of track 1	32"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 85	2600
159796-PCB-PHC-6	Water leak by Sand House - 8 feet east of conveyor pillar on south side of track 1	32"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 250	2420

Client: Amtrak Safety and Environmental Control

Number: 159796
Date: 12/16/92

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum (PHC)

DATE: December 3, 1992

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. ppb
159796-PCB-PHC-7	Q Tower water line - 5 feet south of hydrant	30"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 500	101
159796-PCB-PHC-8	Q - Tower water line - north of Q Tower, between leads 3 and 4 in line with hydrant and eletrical box on Q Tower	31"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 1800	86
159796-PCB-PHC-9	Q Tower water line - north of Q Tower, 8 feet north of electrical box	30"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND	45

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 159796
Date: 12/16/92

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: December 3, 1992

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. ppb
159796-PCB-PHC-10	Q Tower water line - lead 4 ballast in line with hydrant and Q Tower	Surface	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND	4460

Client: Amtrak Safety and Environmental Control

Number: 159796
Date: 12/16/92

DISCUSSION

Soil sampling performed in the utility tunnel involved the collection of samples from piles of soil and ballast that had fallen into the tunnel. Samples were collected from three of the soil piles in the tunnel as directed by Amtrak personnel on site. All three piles were sampled by compositing approximately equal quantities of soil from the surface, middle and base of the pile. Sampling was performed along the center line of each pile. Samples collected from soil piles in the tunnel were analyzed for asbestos and PCBs. Asbestos concentrations of less than one percent and PCB concentrations of None Detected to 23,500 parts per billion were detected in the samples collected in the utility tunnel.

Though asbestos concentrations found in the soil piles were found to be less than one percent, an extensive amount of pipe insulation in very poor condition was observed throughout the tunnel. The insulation was reported to be asbestos-containing. Much of the insulation has delaminated from the piping and is scattered about the tunnel. Due to the confines of the tunnel and proximity of the insulation it is likely that work involved to remove the soil piles will cause the disturbance of reported asbestos-containing materials in the tunnel. It is recommended that the presence of asbestos in the insulation be confirmed and, if present, appropriate protective measures be taken when working in the tunnel.

Soil sampling performed at the water leak by the Sand House involved the collection of three samples in the area of the leak. Samples collected at the leak were analyzed for PCBs and PHCs. PCB concentrations ranged from 85 to 1500 parts per billion. PHC concentrations ranged from 2420 to 2600 parts million.

Soil sampling performed along the Q Tower water line route involved the collection of three soil core samples and one surface sample of track ballast. All samples were analyzed for PCBs and petroleum hydrocarbons. PCB concentrations ranged from non detected to 500 parts per billion. PHC concentrations ranged from 45 to 101 parts per million in core samples and was found to be 4460 parts per million in the surface sample collected of the ballast.

An area the width of the track and approximately twenty five feet in length on lead 4 between the Radio Shop and Q Tower was observed to be covered by oil. At the time of sample collection Locomotive 783 was stationed on the track above the oiled area preventing a core sample. Consequently only a surface sample of the ballast could be collected (see sample #159796-PCB-PHC-10). No PCBs were detected in the sample collected from this area however the concentration of petroleum hydrocarbons was found to be 4460 parts per million. It is suspected, though not confirmed that the locomotive is the source of oil on the track.

Client: Amtrak Safety and Environmental Control

Number: 159796
Date: 12/16/92

CONCLUSION:

The three samples collected in the utility tunnel were found to contain asbestos concentrations of less than one percent and PCB concentrations of non detected (less than 470 parts per billion) to 23,500 parts per billion.

The three samples collected at the water leak by the Sand House were found to contain PCB concentrations of 85 to 1500 parts per billion and petroleum hydrocarbon concentrations of 2420 to 2600 parts per million.

The three soil core samples collected on the Q Tower water line route were found to contain PCB concentrations of non detected (less than 180 parts per billion) to 1800 parts per billion and petroleum hydrocarbon concentrations of 45 to 101 parts per million.

The sample collected of the ballast from lead 4 was found to contain no PCBs (less than 180 parts per billion) and a petroleum hydrocarbon concentration of 4460 parts per million.

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

AN ASBESTOS AND PCBs IN SOIL SAMPLING SURVEY

Conducted at:

Track #17
Sunnyside Railyard
Queens, New York

Performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

Submitted to:

Amtrak Safety Department
8th Avenue and 31st Street
New York, New York 10001

DATE: October 9, 1992

REPORT OF TEST NO.: 159692

PREPARED BY

Rajesh Ashar
Associate Scientist
RA:nt

SIGNED FOR THE COMPANY BY

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak Safety Department
8th Avenue and 31st Street
New York, New York 10001

Number: 159692
Date: 10/09/92

SUBJECT

A soil sampling survey for asbestos and PCBs was performed at Track #17 in the Sunnyside Railyard in Queens, New York, beginning at the west switch and continuing for 1200 feet east of the switch. The sampling was performed by the United States Testing Company, Inc., on September 25, 1992.

PROJECT

The purpose of this survey was to collect core samples from the railyard track and to analyze those samples for presence of asbestos and PCBS.

PROCEDURE

Body Track

Soil samples were collected beginning at the west switch of Track #17. The samples were taken approximately every 150 feet ending 1,200 feet east of the west switch. Samples were taken using a hand operated soil borer to a depth of 18 inches below the top of the rail tie. A pick and shovel was also used when necessary, to remove stones that interfered with the soil boring process. The samples were homogenized and transferred to glass jars. All sampling equipment was cleaned between samples.

Four soil samples to be analyzed for asbestos were first homogenized and then ashed in a high temperature furnace at 400° C for 8 to 12 hours. The soil samples were then pulverized and analyzed for suspect fibers utilizing a stereobinocular microscope.

Sample analysis of soil materials was performed in accordance with procedures described in Appendix A, "Interim Method for the Determination of Asbestiform Minerals in Bulk Insulation Sample," Section 1 and Section 2, published in the Federal Register, Volume 47, No. 103, May 27, 1982. The procedure involves examination of the samples with a petrographic microscope utilizing polarized light, a procedure commonly known as polarized light microscopy (PCM).

Dispersion staining is a technique that is used in conjunction with PLM. This technique allows the analyst to measure the refractive index of the fiber by producing colors through the dispersion of refractive index of the fiber as it relates to the refractive index of the mounting medium. A more positive identification of asbestos can be made when both PLM and dispersion staining are utilized.

Nine soil samples were analyzed for PCB's according to U.S. E.P.A. - SW 846, Method 8080.

United States Testing Company, Inc.

Client: Amtrak Safety Department

Number: 159692
Date: 10/09/92

RESULTS

DATE: September 25, 1992

SOIL SAMPLES ANALYZED FOR ASBESTOS

Sample #	Sample ID	Type of Asbestos Present	Total Percentage by Volume	Other Materials Present	Gross Appearance
20143	150692-ASB-2 (150 ft. east of west switch)	None Detected	-	Cellulose 10% CaCO3 40% Quartz 10%	Soil sample
20144	150692-ASB-5 (585 ft. east of west switch)	Chrysotile	<1%	Cellulose 10% CaCO3 40% Quartz 10%	Soil sample
20145	150692-ASB-7 (925 ft. east of west switch)	None Detected	-	Cellulose 10% CaCO3 40% Quartz 10%	Soil sample
20146	150692-ASB-9 (1200 ft. east of west switch)	None Detected	-	Cellulose 10% CaCO3 40% Quartz 10%	Soil sample

Done on both M & TA

United States Testing Company, Inc.

Client: Amtrak Safety Department

Number: 159692
Date: 10/09/92

RESULTS ....continued

DATE: September 25, 1992

SOIL SAMPLES ANALYZED FOR PCB's

Amtrak - SunnySide Railyard

Sample #	Location	Sample Depth	PCB Type	PCB Concentration (PPB)
159692-PCB-01	Track 17 - 15 ft. East of West switch	10"	AROCLOR-1260	3800
159692-PCB-02	Track 17 - 150 ft. East of West switch	15"	AROCLOR-1260	630
159692-PCB-03	Track 17 - 320 ft. East of West switch	16"	AROCLOR-1260	900
159692-PCB-04	Track 17 - 450 ft. East of West switch	18"	AROCLOR-1260	2300
159692-PCB-05	Track 17 - 585 ft. East of West switch	18"	AROCLOR-1260	860
159692-PCB-06	Track 17 - 750 ft. East of West switch	18"	AROCLOR-1260	960
159692-PCB-07	Track 17 - 925 ft. East of West switch	18"	AROCLOR-1260	1600
159692-PCB-08	Track 17 - 1050 ft. East of West switch	18"	AROCLOR-1260	710
159692-PCB-09	Track 17 - 1200 ft. East of West switch	18"	AROCLOR-1260	1500

United States Testing Company, Inc.

Client: Amtrak Safety Department

Number: 159692
Date: 10/09/92

DISCUSSION

Samples were collected of the soil at nine locations from the center of Track #17 at the SunnySide Railyard. Samples were collected to a depth of 18 inches from the top of the rail tie at approximatly 150 foot intervals from the west switch.

Due to the presence of ballast, it was not possible to collect samples to a depth of 18 inches at the three most western sampling locations. In addition, a train that was positioned on the track prevented the collection of samples at exactly 150 foot intervals.

A total of nine soil samples were collected for PCB analysis. All nine were found to contain AROCLOR-1260 at levels ranging from 630 to 3800 parts per billion. No AROCLOR - 1016, 1221, 1232, 1242, 1248, or 1254 was detected.

A total of four soil samples were analyzed for asbestos. No asbestos was detected in three of the four samples. One sample was found to contain less than one percent chrysotile asbestos.

CONCLUSION

Low levels of AROCLOR - 1260 was found in all nine collected soil samples. PCB concentrations ranged from 610 to 3800 parts per billion.

No asbestos was detected in three of the four collected soil samples. One of the samples was found to contain less than one percent chrysotile asbestos.

INDEPENDENT TESTING LABORATORIES, INC.

"SERVING INDUSTRY WORLDWIDE SINCE 1976"

129-11 18th Avenue - College Point, N.Y. 11356

(718) 961-8530 Fax (718) 762-1334

January 22, 1993

SSVK Group
36-06 43rd Avenue
Long Island City, New York 11101

Attention: Mr. Hans Tippman

Re: Our test report of January 19, 1993 referring to Rehabilitation of Honeywell Street Bridge over Sunnyside Railroad Yard. Contract No. HBQ 432A
Pin No. 84191BRQU092

Subject: Reissuance of report due to typographical errors

Dear Mr. Tippman:

The corrections for the report of January 19, 1993 are as follows:

REPORTED	CORRECTION
Method No. for TPH 413.1	Method No. 418.1
PCBs reported Mg/Kg	Ug/Kg

Attached you will find a copy of a revised report. Please accept our apologies for any inconvenience. Thank-you.

Very truly yours,

Dr. Babu K. Patel, Laboratory Director
Independent Testing Laboratories, Inc.

RECEIVED
JAN 25 1993
FIELD OFF. SSV & K INC.

BP/mp

STV Group

engineers/architects/planners/scientists/construction managers

STV/Seelye Stevenson Value & Knecht
STV/Sanders & Thomas
STV/Lyon Associates
STV Environmental
STV Architects

January 25, 1993

Mr. Rocco DiRuggiero, P.E.
Deputy Director, Bridge Construction
NYC Department of Transportation
Bureau of Bridges - Bridge Construction
2 Rector Street
New York, NY 10006

Attention : Mr. Habib Rahman, P.E.

Reference : Honeywell Street Bridge Rehabilitation
Phase I-Construction - Contract HBQ432
B.I.N. 2-24732-0 - P.I.N. 84192BRQU434

Subject : Soil Analysis
Letter No.: NYDOT-08

Gentlemen :

Attached and for your use, please find Testing Lab Report (Revision, dated 1-22-93) from Soil Samples, which were previously taken by Independent Testing Lab. in the Sunnyside Yard at Locations of proposed Switch Pole Foundations and Stand By Power Conduit Trench.

Location of Sample:	Contract Item:	Work to be performed by:
1) Pier 14 (Trks. 6&7)	Pole B925 3/4EN	Amtrak
2) Pier 17 (East side)	Pole B925 3/4 N	Amtrak
3) Pier 17	Pole B925 3/4 N	Amtrak
4) Pier 10 (Trk. 24)	Pole B925 3/4ES	Amtrak
5) Pier 12 (Trks. 15&16)	Pole B925 3/4EM	Amtrak
6) Pier 9 (Trk. 31)	Conduit Trench	Contractor J.P.Picone
7) Pier 9 (Trk. 31)	Conduit Trench	Contractor J.P.Picone

The Soil Sample Analysis was taken in conformance with Amtrak "Work Plan for Handling Potential Contaminated Waste (Attachment A).

*Note: This report supersedes previously released data of 1-19-93.

Should you have any questions, please call.

Very truly yours,

Hans Tippmann

Hans Tippmann, P.E.
Resident Engineer

Attachments: As Noted

Copy to : All Attendees of 1-20-93 Meeting at NYCDOT
F. Szachacz, R. Farmer - AMTRAK
J. Aliprantis, Project File 22-7256 - SSV & K

225 Park Avenue South New York, NY 10003 tel: 212/777-4400 fax: 212/529-5237

INDEPENDENT TESTING LABORATORIES, INC.

"SERVING INDUSTRY WORLDWIDE SINCE 1978"

129-11 18th Avenue - College Point, N.Y. 11356

(718) 961-8530 Fax (718) 762-1334

January 22, 1993

SSVK Group

Attention: Mr. Hans Tippman

Re: Rehabilitation of Honeywell Street Bridge over Sunnyside Railroad Yard
Contract HBQ-432A - Pin No. 841 91BRQU092

NOTE: 1. The report on the sample by Independent Testing Laboratories, Inc. applies only to the lot sampled.

2. The Aroclors 1016, 1221, 1232, 1242, and 1254 could not be identified seperately and therefore the results reported in terms of Aroclor 1260 where most of the peaks are matching.

Very truly yours,

Steven Deutsch

Steven Deutsch, Laboratory Supervisor
Independent Testing Laboratories, Incorporated

SD/mp

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INDEPENDENT TESTING LABORATORIES, INC.

"SERVING INDUSTRY WORLDWIDE SINCE 1976"

129-11 18th Avenue - College Point, N.Y. 11356

(718) 961-8530 Fax (718) 762-1334

January 22, 1993

SSVK Group
36-06 43rd Avenue
Long Island City, New York 11101

Job No.: 122892

Report No.: SBR-1R

Attention: Mr. Hans Tippman

Re: Rehabilitation of Honeywell Street Bridge over Sunnyside Railroad Yard
Contract HBQ 432A - Pin No. 84191BRQU092

Dear Mr. Tippman:

On December 21, 1992, Mr. Desmond Williams and Mr. Deonarine Damri of Independent Testing Laboratories, Incorporated delivered seven (7) soil samples to Independent Testing Laboratories, Incorporated for Total Petroleum Hydrocarbons and PCB's tests from the above referenced project location. The samples were taken by Independent Testing Laboratories, Incorporated on December 21, 1992. The tests were performed in accordance with EPA 418.1 and 8081. The following are the results of the tests:

LABORATORY TEST RESULTS FOR TOTAL PETROLEUM HYDROCARBONS

SAMPLE LOCATION AND ID #	RESULTS ppm
Between track 6 & 7 (depth 6' & 11") pier 14	18.112
East side (depth 7') pier 17	0.900
Water level 2' to 4' (depth 7') pier 17	20.267
Track 24 (depth 4' and 9")	29.744
Between track 15 & 16 (depth 5' & 3")	357.917
Track 31 (depth 3' & 11")	117.250
Track 31 (depth 2' & 9")	0.900

SAMPLE LOCATION AND ID #	AROCLOR 1260 ug/Kg (DRIED BASIS)
1 Between track 6 & 7 (depth 6' & 11") pier 14	156.9
2 East side (depth 7') pier 17	44.4
3 Water level 2' to 4' (depth 7') pier 17	89.37
4 Track 24 (depth 4' & 9")	114.51
5 Between track 15 & 16 (depth 5' & 3")	72.2
6 Track 31 (depth 3' & 11")	762.9
7 Track 31 (depth 2' & 9")	52.0

RECEIVED
JAN 25 1993
FIELD OFF. SSV & K INC.

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

A PETROLEUM HYDROCARBON
& PCBs IN SOIL SAMPLING SURVEY

conducted at:

The Proposed Water Main
Sunnyside Railyard
Queens, New York

performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

submitted to:

Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

REVISED DATE: March 2, 1993

DATE: March 1, 1993

REPORT OF TEST NO. 159925-R1

PREPARED BY

Gary Wyrwa
Scientist
GW:rp

SIGNED FOR THE COMPANY BY

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

Number: 159925-R1
Date: 03/02/93

SUBJECT

A soil sampling survey for petroleum hydrocarbons and PCBs was performed at the proposed water main at Sunnyside Railyard, Queens, New York by the United States Testing Company, Inc. on February 19, 1993.

PROJECT

The purpose of this survey was to collect soil samples at various locations at the railyard and analyze those samples for various contaminants including PCBs and petroleum hydrocarbons. Samples were collected along the proposed water main for PCB and petroleum hydrocarbon analysis.

PROCEDURE

Seven soil samples were collected along the proposed water main, beginning at the Commissary and heading east toward 39th Street. Sampling was performed utilizing a soil borer providing a core sample from 6 to 12 inches in depth.

All samples were homogenized and transferred to glass jars.

Seven samples were analyzed for PCBs according to U.S.E.P.A. SW846, Method 8080.

Seven samples were analyzed for petroleum hydrocarbons in accordance with the procedures outlined in "Methods for chemical analysis of water and wastes, 1978". Method 418.1 (Modified for Soils).

Client: Amtrak National Railroad Passenger Corporation

Number: 159925-R1
Date: 03/02/93

RESULTS

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: February 19, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. ppm
159925-SPCB/PHC-1 (Hole #1)	Southwest corner of Commissary, 10 ft. south of access road	12"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 260	95
159925-SPCB/PHC-2 (Hole #2)	Southeast corner of Commissary, 12 ft. south of access road, 200 ft. east of hole #1	8"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 12200	850
159925-SPCB/PHC-3 (Hole #3)	200 ft. east of hole #2, 6 ft. south of access road	8"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 264000	3450

ND - None Detected

Client: Amtrak National Railroad Passenger Corporation

Number: 159925-R1
Date: 03/02/93

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: February 19, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. ppm
159925-SPCB/PHC-4 (Hole #4)	200 ft. east of hole #3, 15 ft. south of access road	8"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 5300	1400
159925-SPCB/PHC-5 (Hole #5)	200 ft. east of hole #4, 7 ft. south of access road	12"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 510	1500
159925-SPCB/PHC-6 (Hole #6)	100 ft. south of hole #5, 90° turn from hole #5 to hole #6	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 13800	1400

ND - None Detected

Table 1. Transformer Inventory

Designation	Location	Serial Number	Aroclor 1260 ppm
TFRM-1	Former Substation 1A	965665	<5
TFRM-2	Former Substation 1A	965664	<5
TFRM-3	Former Substation 1A	965663	<5
TFRM-4	Former Substation 1A	225202	<5
TFRM-5	Former Substation 1A	225201	<5
TFRM-6	Former Substation 1A	50234890	<5
TFRM-7	Former Substation 1A	5868	<5
TFRM-8	Outdoor Feeder Station	4087430	<5
TFRM-9	Outdoor Feeder Station	HT-37000-115	<5
TFRM-10	Outdoor Feeder Station	4087429	<5
TFRM-11	Downstairs Former Substation 1A	3722191	<5
TFRM-12	Downstairs Former Substation 1A	3722192	<5
TFRM-13	Downstairs Former Substation 1A	3722913	<5
TFRM-14	Q-Tower	2694872	<5
TFRM-15	Q-Tower	2694871	<5
TFRM-16	Rear Former Commisary Building	6783580	<1
TFRM-17	Rear Former Commisary Building	6780346	<1
TFRM-18	MR #33216	Unknown	<1
TFRM-19	Car Washer E (Area 12)	1984478	31.5
TFRM-20	Car Washer E (Area 12)	1980820	29.5
TFRM-21	Car Washer W (Area 12)	1981371	30.1
TFRM-22	Car Charger	810510-1	<5
TFRM-23	Car Charger	810511-1	<5
TFRM-24	Back of YMCA	1004125	<5
TFRM-25	On Pole, South Side of Engine House	833483	<5
TFRM-26	25 Track, Area 8C	5819	27.6
TFRM-27	MR #58208, Area C	Unknown	504000
TFRM-28	20 Track, Area 8B	5822	485000
TFRM-29	15 Track, Area 8A	A-7867	491000
TFRM-30	15 Track, Area 8A	77J562224	12000
TFRM-31	Southside of Engine House, Area 1	78D1709801	2620
TFRM-32	Northside of Metro Shed, Area 1	H316909P70AA	571
TFRM-33	Northside of Metro Shed, Area 1	H316911P70AA	23.4
TFRM-34	Northside of Metro Shed, Area 1	8177132	NS
TFRM-35	Northside of Metro Shed, Area 1	Unknown	104
TFRM-36	Northside of Metro Shed, Area 1	8177091	122
TFRM-37	Northside of Metro Shed, Area 1	8490832	16500
TFRM-38	Rear of General Foremans Office, Building 6	59AA01310	14.1
TFRM-39	Rear of General Foremans Office, Building 6	C233194	91.2
TFRM-40	Rear of General Foremans Office, Building 6	C117624	12.7
TFRM-41	Boiler House	Unknown	<1
TFRM-42	Boiler House	Unknown	<1
TFRM-43	Boiler House	Unknown	<1
TFRM-44	On top of Laundry, Building #4	6950682	104.39
TFRM-45	Honeywell Avenue Bridge Track #1 (Area 5)	5821	270000
TFRM-46	Honeywell Avenue Bridge Track #1 (Area 5)	A7866	486000
TFRM-47	Engine House	1519519	74.5
TFRM-48	Engine House	1519515	<5
TFRM-49	Engine House	1519518	<5
TFRM-50	Area 10	122128	ND
TFRM-51	Area 10	C-122112	2
TFRM-52	Area 10	4911420	2
TFRM-53	Area 10	4911419	1
TFRM-54	Area 10	1104-54	ND

Table 1. Transformer Inventory

Designation	Location	Serial Number	Aroclor 1260 ppm
TFRM-55	Area 10	C-19451	ND
TFRM-56	Area 10	K6086750	30
TFRM-57	Area 10	K6066750-105	6
TFRM-58	Area 10	K60466750-101	125
TFRM-59	Area 10	K6066750	ND
TFRM-60	Area 10	17722	ND
TFRM-61	Area 10	152	NA*
TFRM-62	Area 10	152T	NA*
TFRM-63	Area 10	122	NA*
TFRM-64	Area 10	123	NA*
TFRM-65	Area 10	124	NA*
TFRM-66	Area 10	125	NA*
TFRM-67	Area 10	134	NA*
TFRM-68	Area 10	135	NA*
TFRM-69	Area 10		NA*
TFRM-70	Area 10		NA*

Notes:

ppm - Parts per million
NS - Not Samples
ND - Not detected
NA - Data Not Available to be sampled

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: February 19, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. ppm
159925-SPCB/PHC-7 (Hole #7)	75 ft. south of hole #6	10"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 6200	540

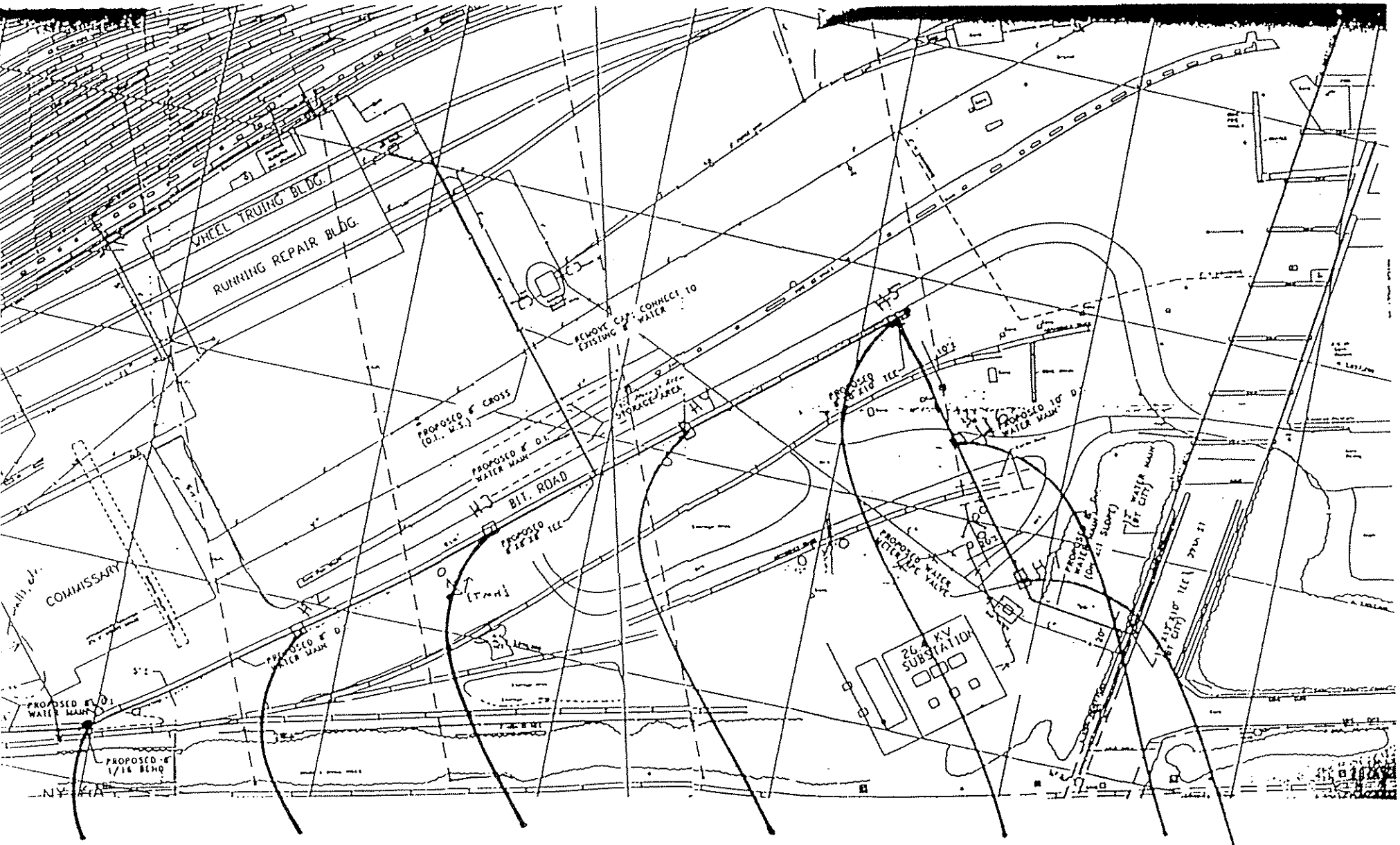
ND - None Detected

DISCUSSION

Seven soil samples for petroleum hydrocarbons and PCBs were collected along the proposed water main at the Sunnyside Railyard. The intention of the sampling was to extract a core sample to a depth of 6 to 12 inches from the top of the surface. All samples collected were found to contain concentrations of AROCLOR-1260 and petroleum hydrocarbons.

CONCLUSION

Soil samples were determined to contain AROCLOR-1260 at concentrations ranging from 260 to 264,000 parts per billion. Soil samples were determined to contain petroleum hydrocarbons at concentrations ranging from 95 to 3,450 parts per million.



159925-SPCB/PHC-1 (Hole 1)

159925-SPCB/PHC-2 (Hole 2)

159925-SPCB/PHC-3 (Hole 3)

159925-SPCB/PHC-4 (Hole 4)

159925-SPCB/PHC-5 (Hole 5)

159925-SPCB/PHC-6 (Hole 6)

159925-SPCB/PHC-7 (Hole 7)

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

PCBs IN SOIL SAMPLING SURVEY

conducted at:

The Proposed Water Main
Sunnyside Railyard
Queens, New York

performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

submitted to:

Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

DATE: March 17, 1993

REPORT OF TEST NO. 159925-1

PREPARED BY

Gary Wyrwa
Scientist
GW:nt

SIGNED FOR THE COMPANY BY

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

Number: 159925-1
Date: 03/17/93

SUBJECT

A soil sampling survey for PCBs was performed at the proposed water main at Sunnyside Railyard, Queens, New York by the United States Testing Company, Inc. on March 8, 1993.

PROJECT

The purpose of this survey was to collect soil samples 10 feet to the east and west of sample 159925-SPCB/PHC-3 at the railyard and analyze those samples for PCBs. Sampling was performed in response to an elevated PCB concentration found in the sample that was collected at Hole 3, sample 159925-SPCB/PHC-3 on February 19, 1993. See Report 159925 for sample 159925-SPCB/PHC-3 results.

PROCEDURE

Two soil samples were collected along the proposed water main, 10 feet to the east and west of the previously sampled Hole 3. Sampling was performed utilizing a soil borer providing a core sample 6 inches in depth.

All samples were homogenized and transferred to glass jars.

Two samples were analyzed for PCBs according to U.S.E.P.A. SW846, Method 8080.

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation

Number: 159925-1
Date: 03/17/93

RESULTS

Soil Samples Analyzed for PCBs

DATE: March 8, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb
159925-1-SPCB-8 (Hole 8)	10 ft. west of sample 159925-SPCB/PHC-3, 5 ft. south of access road	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 11500
159925-1-SPCB-9 (Hole 9)	10 ft. east of sample 159925-SPCB/PHC-3, 5 ft. south of access road	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 10230

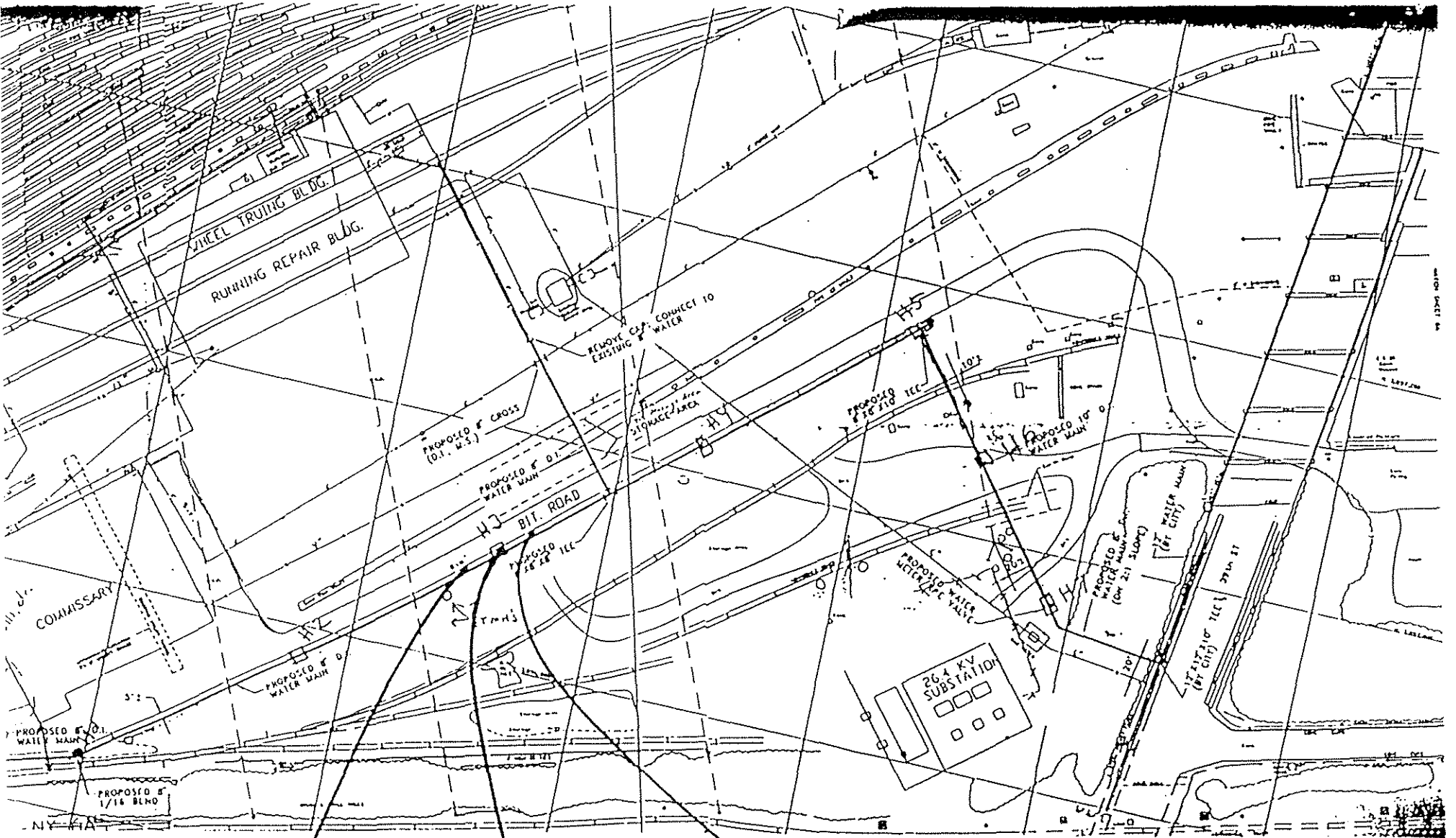
ND - None Detected

DISCUSSION

Two soil samples for PCBs were collected along the proposed water main 10 feet to the east and west of sample 159925-SPCB/PHC-3 at the Sunnyside Railyard. The intention of the sampling was to extract a core sample to a depth 6 inches from the top of the surface. All samples collected were found to contain concentrations of AROCLOR-1260.

CONCLUSION

Soil samples were determined to contain AROCLOR-1260 at concentrations ranging from 10230 to 11500 parts per billion.



159925-1-SPCB-8 (Hole 8)

159925-SPCB/PIC-3 (Hole 3)

159925-1-SPCB-9 (Hole 9)

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

A PETROLEUM HYDROCARBON
& PCBs IN SOIL SAMPLING SURVEY

conducted at:

Running Repair Building Extension
Sunnyside Railyard
Queens, New York

performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

submitted to:

Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

DATE: March 17, 1993

REPORT OF TEST NO. 159967

PREPARED BY

Gary Wyrwa
Scientist
GW:rp

SIGNED FOR THE COMPANY BY

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

Number: 159967
Date: 03/17/93

SUBJECT

A soil sampling survey for petroleum hydrocarbons and PCBs was performed at the proposed Running Repair Building extension area at Sunnyside Railyard, Queens, New York by the United States Testing Company, Inc. on March 8, 1993.

PROJECT

The purpose of this survey was to collect soil samples at various locations in the proposed building extension area at the railyard and analyze those samples for various contaminants including PCBs and petroleum hydrocarbons. Samples were collected in the proposed Running Repair Building extension, and paved areas for PCB and petroleum hydrocarbon analysis.

PROCEDURE

Four soil samples were collected at the proposed Running Repair Building extension and paved areas, beginning in the west proposed paved area (northwest corner of the existing commissary) and heading east, through the proposed Running Repair Building area and finishing in the east proposed paved area (approximately 240 feet northeast of the existing commissary). Sampling was performed utilizing a soil borer providing a core sample from 8 to 10 inches in depth.

All samples were homogenized and transferred to glass jars.

Four samples were analyzed for PCBs according to U.S.E.P.A. SW846, Method 8080.

Four samples were analyzed for petroleum hydrocarbons in accordance with the procedures outlined in "Methods for Chemical Analysis of Water and Wastes, 1978". Method 418.1 (Modified for Soils).

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation

Number: 159967
Date: 03/17/93

RESULTS

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: March 8, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. ppm
159967-SPCB/PHC-1 (Hole RR1)	300 feet west of existing Running Repair Building, 20 feet south of west proposed paved area	10"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 3600	430
159967-SPCB/PHC-2 (Hole RR2)	200 feet west of existing Running Repair Building, in center of two outer (southern) tracks	8"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2600	270
159967-SPCB/PHC-3 (Hole RR3)	100 feet west of existing Running Repair Building, in center of two outer (southern) tracks	10"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 5600	1020
159967-SPCB/PHC-4 (Hole RR4)	120 feet east of existing Running Repair Building, 3 feet south of track (east proposed paved area)	9"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 5500	310

ND - None Detected

Client: Amtrak National Railroad Passenger Corporation

Number: 159967
Date: 03/17/93

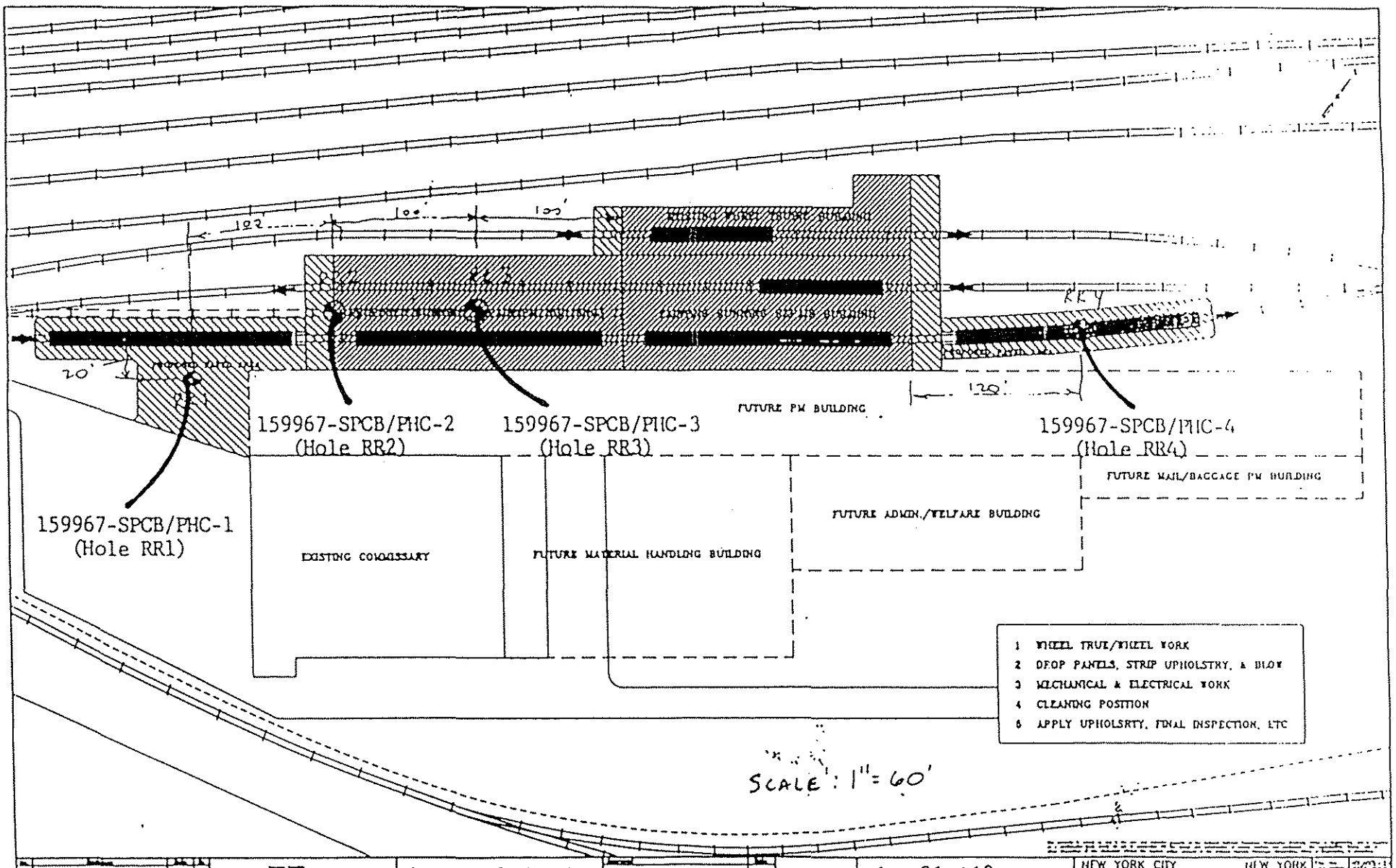
DISCUSSION

Four soil samples for petroleum hydrocarbons and PCBs were collected at the proposed Running Repair Building extension area at the Sunnyside Railyard. The intention of the sampling was to extract a core sample to a depth of 8 to 10 inches from the top of the surface. All samples collected were found to contain concentrations of AROCLOR-1260 ranging from 2600 to 5600 parts per billion and petroleum hydrocarbons ranging from 270 to 1020 parts per million.

CONCLUSION

Soil samples were determined to contain AROCLOR-1260 at concentrations ranging from 2600 to 5,600 parts per billion. Soil samples were determined to contain petroleum hydrocarbons at concentrations ranging from 270 to 1,020 parts per million.

(0)



Amtrak

Office of Engineering
Engineering Design

CAR 92-042
W.O. C42010

NEW YORK CITY, NEW YORK
RUNNING REPAIR BUILDING EXTENSION
120 DAY PM OPERATION, SUPERVISOR TANK
WORK FLOW PLAN

WF 1

RECEIVED
SAFETY AND ENVIRONMENTAL CONTROL
MAR 29 1993
AMTRAK

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

A PETROLEUM HYDROCARBON
& PCBs IN SOIL SAMPLING SURVEY

conducted at:

Coach Facility
Service Facilities Construction Project
Sunnyside Railyard
Queens, New York

performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

submitted to:

Amtrak National Railroad Passenger Corporation
30th Street, 4th Floor South
Philadelphia, PA 19104

DATE: June 3, 1993

REPORT OF TEST NO. 160092

PREPARED BY

John B. Shaw
Environmental Scientist
JBS:ntd

SIGNED FOR THE COMPANY BY

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

Number: 160092
Date: 06/03/93

SUBJECT

A soil sampling survey for petroleum hydrocarbons and PCBs was performed by the United States Testing Company, Inc. at specific sites designated by Norman Satterthwaite of Amtrak for the Service Facilities construction project located at Sunnyside Railyard, Queens, New York on May 18, 1993.

PROJECT

The purpose of this survey was to collect soil samples at various locations for the Service Facilities construction project at Sunnyside Railyard and analyze those samples for PCBs and petroleum hydrocarbons.

PROCEDURE

Seventeen soil samples were collected at the Sunnyside Railyard for the Service Facilities construction project. See enclosed Diagram ST-2 of site as provided by Norman Satterthwaite. Sampling was performed utilizing a soil borer and hand trowel providing a core sample from 6 to 28 inches in depth.

All samples were homogenized and transferred to glass jars.

Seventeen samples were analyzed for PCBs according to U.S.E.P.A. SW846, Method 8080.

Seventeen samples were analyzed for petroleum hydrocarbons in accordance with the procedures outlined in "Methods for Chemical Analysis of Water and Wastes, 1978". Method 418.1 (Modified for Soils).

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation

Number: 160092
Date: 06/03/93

RESULTS

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: May 18, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
160092-SPCB/PHC-1 (Hole 1) Corresponds with Location 5 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 1.40	540
160092-SPCB/PHC-2 (Hole 2) Corresponds to Location 4 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 1.70	99
160092-SPCB/PHC-3 (Hole 3) Corresponds to Location 3 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 7.60	440
160092-SPCB/PHC-4 (Hole 4) Corresponds to Location 2 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 1.30	180

ND - None Detected
ppm - parts per million

Client: Amtrak National Railroad Passenger Corporation

Number: 160092
Date: 06/03/93

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: May 18, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
160092-SPCB/PHC-5 (Hole 5) Corresponds to Location 1 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 3.00	420
160092-SPCB/PHC-6 (Hole 6) Corresponds to Location 16 on Diagram	Old Track 35 See Diagram ST-2	1.8'	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.35	900
160092-SPCB/PHC-7 (Hole 7) Corresponds to Location 12 on Diagram	Old Track 31 See Diagram ST-2	1.7'	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.22	2900
160092-SPCB/PHC-8 (Hole 8) Corresponds to Location 14 on Diagram	See Diagram ST-2	1.7'	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.90	590

ND - None Detected
ppm - parts per million

Client: Amtrak National Railroad Passenger Corporation

Number: 160092
Date: 06/03/93

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: May 18, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
160092-SPCB/PHC-9 (Hole 9) Corresponds to Location 13 on Diagram	See Diagram ST-2	1.7'	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.80	1800
160092-SPCB/PHC-10 (Hole 10) Corresponds to Location 17 on Diagram	See Diagram ST-2	1'	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.78	440
160092-SPCB/PHC-11 (Hole 11) Corresponds to Location 15 on Diagram	See Diagram ST-2	1.2'	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 12.40	1000
160092-SPCB/PHC-12 (Hole 12) Corresponds to Locaiton 18 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 14.00	210

ND - None Detected
ppm - parts per million

Client: Amtrak National Railroad Passenger Corporation

Number: 160092
Date: 06/03/93

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: May 18, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
160092-SPCB/PHC-13 (Hole 13) Corresponds to Location 7 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.63	1600
160092-SPCB/PHC-14 (Hole 14) Corresponds to Location 11 on Diagram	Location 11 has been moved on the Diagram from Track 29 to Track 28 See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.44	400
160092-SPCB/PHC-15 (Hole 15) Corresponds to Location 9 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 3.10	2100
160092-SPCB/PHC-16 (Hole 16) Corresponds to Location 8 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2.50	2400

ND - None Detected
ppm - parts per million

Client: Amtrak National Railroad Passenger Corporation

Number: 160092
Date: 06/03/93

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: May 18, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
160092-SPCB/PHC-17 (Hole 17) Corresponds to Location 6 on Diagram	See Diagram ST-2	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 23.70	3100

ND - None Detected
ppm - parts per million

Client: Amtrak National Railroad Passenger Corporation

Number: 160092
Date: 06/03/93

DISCUSSION

Seventeen soil samples for petroleum hydrocarbons and PCBs were collected at the Service Facilities construction project site at the Sunnyside Railyard. The intention of the sampling was to extract a core sample to a depth of 6 to 28 inches from the top of the surface. All samples collected were found to contain concentrations of AROCLOR-1260 ranging from 0.22 to 23.70 parts per million and petroleum hydrocarbons ranging from 99 to 3100 parts per million.

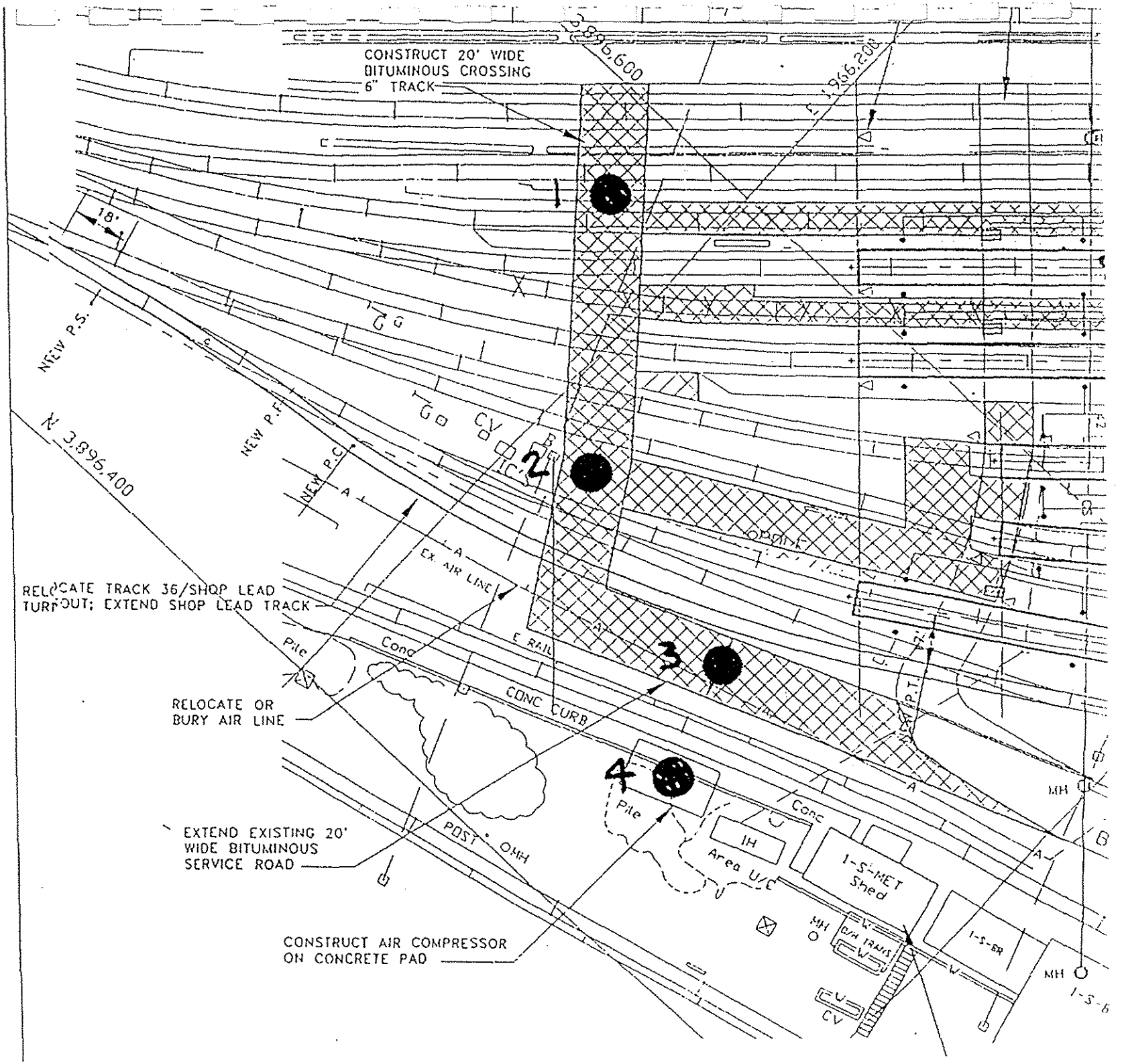
CONCLUSION

Soil samples were determined to contain AROCLOR-1260 at concentrations ranging from 0.22 to 23.70 parts per million. Soil samples were determined to contain petroleum hydrocarbons at concentrations ranging from 99 to 3100 parts per million.

Appendix A

Plan

06-03-1993 07:46AM FROM AMTRAK ENG DESIGN & CONST TO P.02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6" TRACK
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18'
NEW P.S.
NEW P.C.
N 3,895,400
Ex. AIR LINE
RELOCATE TRACK 36/SHOP LEAD
TURNOUT; EXTEND SHOP LEAD TRACK
Pile
Conc
E RAIL
CONC CURB
RELOCATE OR
BURY AIR LINE
EXTEND EXISTING 20'
WIDE BITUMINOUS
SERVICE ROAD
POST
OMH
CONSTRUCT AIR COMPRESSOR
ON CONCRETE PAD
IH
Area U/E
I-S-MET
Shed
I-S-BR
MH
I-S-6
CV
1
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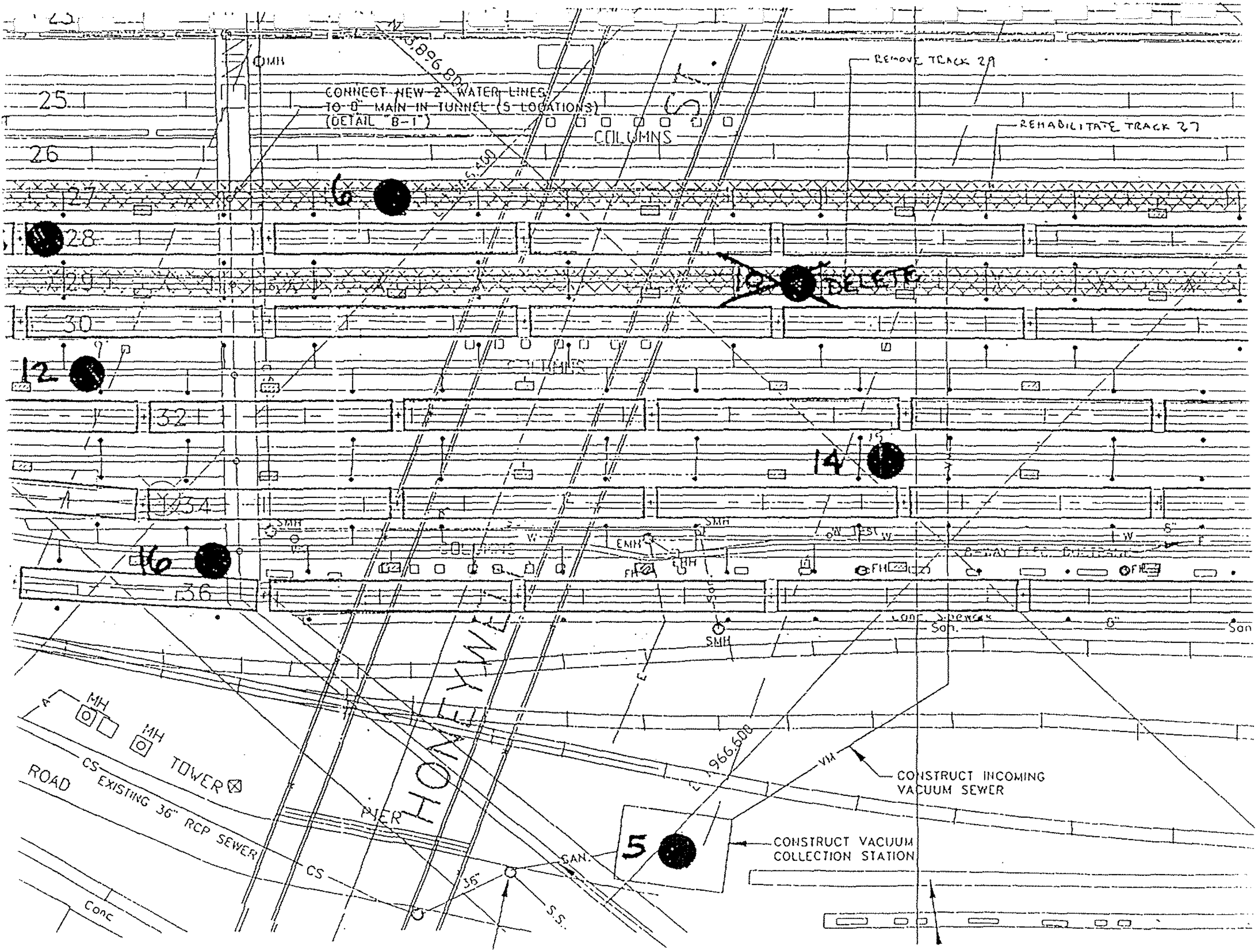
TOTAL P.02



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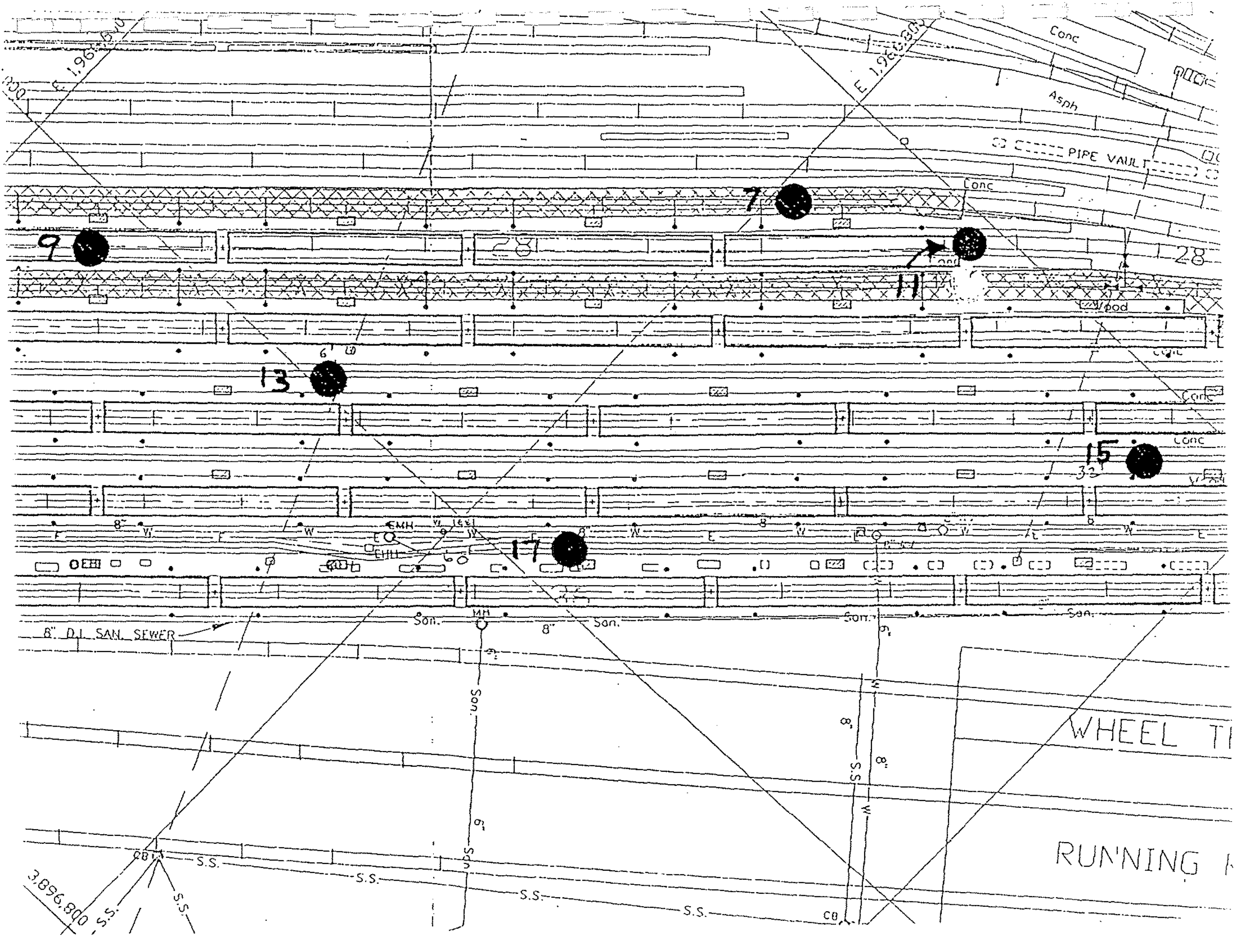
36
CONNECT NEW 2" WATER LINES
TO 8" MAIN IN TUNNEL (5 LOCATIONS)
(DETAIL "B-1")
COLUMNS
REMOVE TRACK 29
REHABILITATE TRACK 27
6
DELETE
12
14
16
SMH
FH
MH
TOWER
ROAD
EXISTING 36" RCP SEWER
CS
PIER
SAN.
S.S.
Conc
5
CONSTRUCT INCOMING
VACUUM SEWER
CONSTRUCT VACUUM
COLLECTION STATION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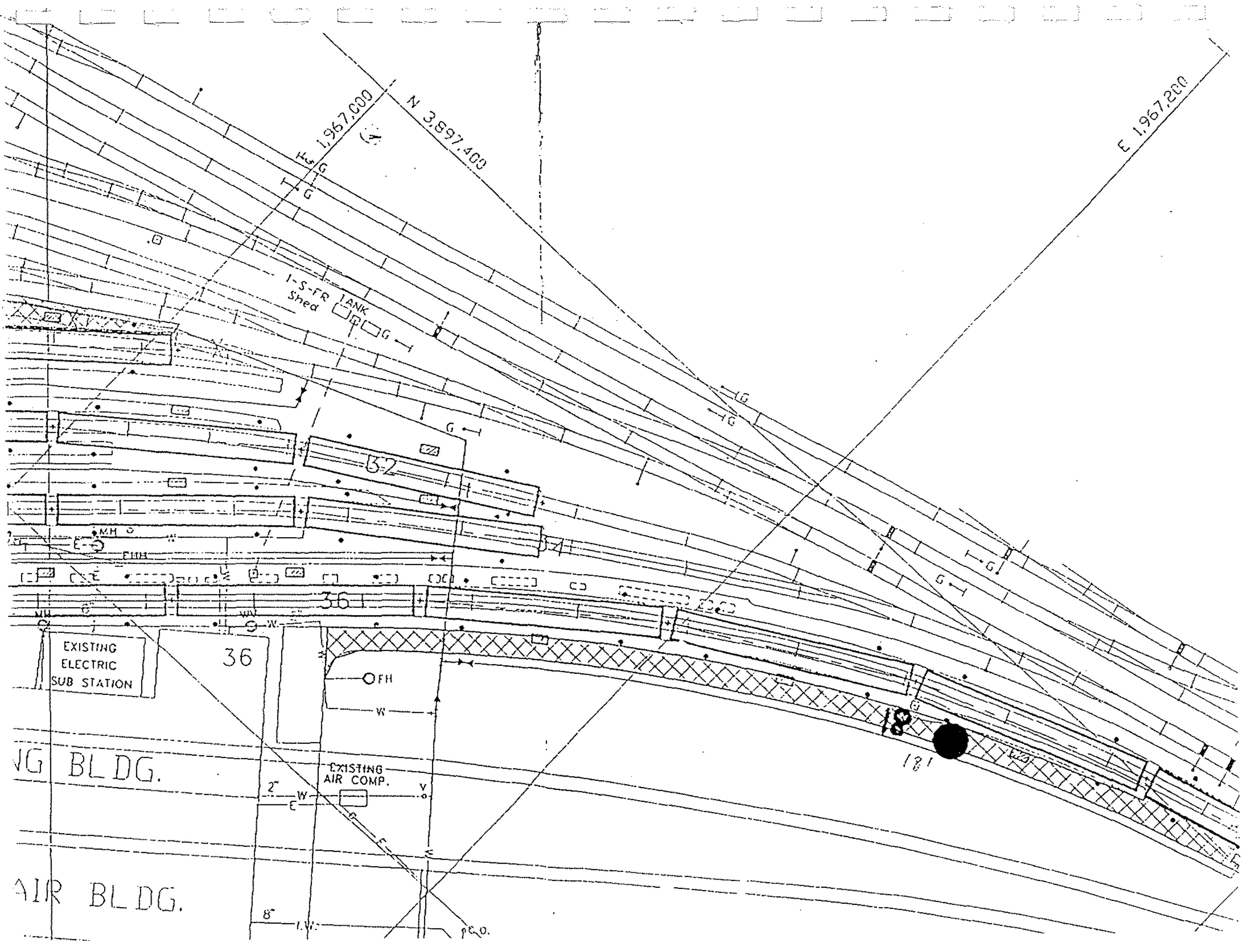
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36
EXISTING
ELECTRIC
SUB STATION
FH
NG BLDG.
EXISTING
AIR COMP.
AIR BLDG.
18

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

A PETROLEUM HYDROCARBON
PCBs IN SOIL SAMPLING SURVEY

conducted at:

Metal Shed Demolition Site
Sunnyside Railyard
Queens, New York

performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

submitted to:

Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

DATE: June 17, 1993

REPORT OF TEST NO. 160110

PREPARED BY

John B. Shaw (K.C.)
John B. Shaw
Environmental Scientist
JBS:ntd

SIGNED FOR THE COMPANY BY

Christopher Pope
Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104

Number: 160110
Date: 06/17/93

SUBJECT

A soil sampling survey for petroleum hydrocarbons and PCBs was performed at the metal shed demolition site at Sunnyside Railyard, Queens, New York by the United States Testing Company, Inc. on June 2, 1993.

PROJECT

The purpose of this survey was to collect two soil samples at the railyard and analyze those samples for various contaminants including petroleum hydrocarbons and PCBs. Samples were collected in the vicinity of the proposed metal shed demolition site for hydrocarbon and PCB analysis.

PROCEDURE

Two soil samples were collected in the vicinity of the proposed metal shed demolition site. Sampling was performed utilizing a hand trowel providing a core sample 6 inches in depth.

Both samples were homogenized and transferred to glass jars.

Two samples were analyzed for PCBs according to U.S.E.P.A. SW846, Method 8080.

Two samples were analyzed for petroleum hydrocarbons in accordance with the procedures outlined in "Methods for chemical analysis of water and wastes, 1978". Method 4181 (Modified for Soils).

Client: Amtrak National Railroad Passenger Corporation

Number: 160110
Date: 06/17/93

RESULTS

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: June 2, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppb	PHC Conc. mg/Kg
160110-PCB/PHC-1	Center of mow track in front of middle of metal shed west of substation 1A corresponding to #19 on client submitted map	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2.5	5600
160110-PCB/PHC-2	End of service road leading to yard covering south of shop lead - 13' south of center line of the shop lead 1.5 feet west of the end of the asphalt corresponding to #20 on client submitted map	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 4.9	700

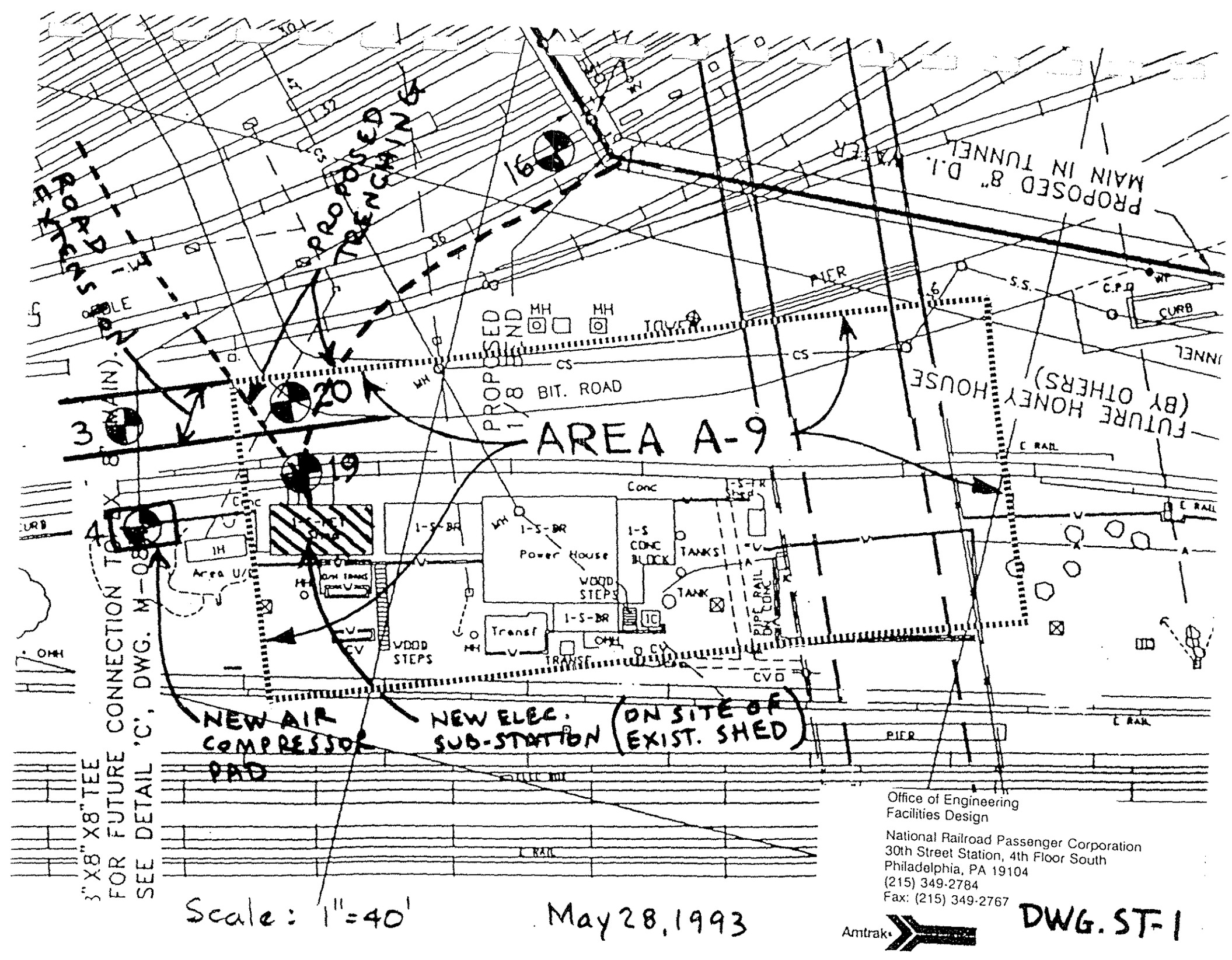
ND - None Detected

DISCUSSION

Two soil samples for petroleum hydrocarbons and PCBs were collected along the proposed metal shed demolition site at the Sunnyside Railyard. The intention of the sampling was to extract a core sample to a depth 6 inches from the top of the surface. All samples collected were found to contain concentrations of AROCLOR-1260 and hydrocarbons.

CONCLUSION

Soil samples were determined to contain AROCLOR-1260 at concentrations ranging from 2.5 to 4.9 parts per million (ppm). Soil samples were determined to contain petroleum hydrocarbons at concentrations ranging from 700 to 5600 ug/Kg.



Office of Engineering
Facilities Design

National Railroad Passenger Corporation
30th Street Station, 4th Floor South
Philadelphia, PA 19104
(215) 349-2784
Fax: (215) 349-2767

Amtrak

MATERIALS TESTING LAB INC.

130-07 26th AVENUE
SUITE 100
FLUSHING, NEW YORK 11354

(718) 445-1474
FAX: (718) 359-8648

001-1-5

CLIENT: SSV & K INC.
225 PARK AVE. SOUTH
NEW YORK, NEW YORK 10003

REPORT NO.: 93-001
DATE: 07/14/93

PROJECT: REHABILITATION OF 39TH STREET BRIDGE OVER LIRR & AMTRAK YARD, SUNNYSIDE CONTRACT NO. HBQ413

SAMPLE: SOIL
TEST: TOTAL PETROLEUM HYDROCARBONS (TPH) & PCBs
METHOD: SW-846/9073 & 8080
SAMPLED BY: MATERIAL TESTING LAB. INC.

DATE DELIVERED: 06/30/93
07/01/93
DELIVERED BY: MTL

Sample No.	Location	TPH (ug/g)	PCBs (ug/g)
1A	Boring #1, Pier 10W, E. Side, 0'-3'	30.2	0.52
2A	Boring #2, Pier 10N, E. Side, 0'-3'	<10.0	0.93
3A	Boring #3, Pier 10N, W. Side, 0'-3'	64.9	0.80
3B	Boring #3, Pier 10N, W. Side, 6'	52.3	0.06
4A	Boring #4, Pier 12W, W. Side, 0'-3'	18.6	0.11
5A	Boring #5, Pier 13W. W. Side, 0'-3'	35.4	0.28
5B	Boring #5, Pier 13W. W. Side, 6'	14.4	0.05

RECEIVED
JUL 16 1993
FIELD OFF. SSV & K INC.

334-6
334-7 > ND PCB

092-12 14 ppm PCB
210 ppm TPH

RECEIVED

JUL 26 1993

MATERIALS TESTING LAB INC.
130-07 26th AVENUE
SUITE 100
FLUSHING, NEW YORK 11354

FIELD OFF. SSV & K INC. (718) 445-1474
FAX: (718) 359-8046

CO2 - 6 → 14

CLIENT: SSV & K INC.
225 PARK AVE. SOUTH
NEW YORK, NEW YORK 10003

REPORT NO.: 93-002
DATE: 07/23/93

PROJECT: REHABILITATION OF 39TH STREET BRIDGE OVER LIRR & AMTRAK YARD, SUNNYSIDE
CONTRACT NO. HBQ113

SAMPLE: SOIL
TEST: TOTAL PETROLEUM HYDROCARBONS (TPH) & PCBs
METHOD: SW-846/9073 & 8080
SAMPLED BY: MATERIAL TESTING LAB. INC.

DATE DELIVERED: 07/14/93

DELIVERED BY: MTL

Sample No.	Location	TPH (ug/g)	PCBs (ug/g)
6A	Pier 2S, W. Side, 2' Deep	21.5	0.19
6B	Pier 2S, W. Side, 7' Deep	23.1	0.30
7A	Pier 5S, W. Side, 2' Deep	67.5	0.64
7B	Pier 5S, W. Side, 6' Deep	15.0	0.45
8A	Pier 5S, E. Side, 3' Deep	16.1	0.27
8A	Pier 5S, E. Side, 6' Deep	10.3	0.08
9A	Pier 7S, W. Side, 2' Deep	30.4	0.74
9A	Pier 7S, W. Side, 6' Deep	72.7	0.06
10A	Pier 7S, E. Side, 3' Deep	17.0	0.09
10B	Pier 7S, E. Side, 8' Deep	10.3	0.29
11A	Pier 8S, E. Side, 2' Deep	11.0	0.49
11B	Pier 8S, E. Side, 11' Deep	30.6	0.42
12A	Pier 8S, W. Side, 3' Deep	21.2	0.14
12B	Pier 8S, W. Side, 8' Deep	23.1	0.45
13A	Pier 6S, W. Side, 3' Deep	24.5	0.09
13B	Pier 6S, W. Side, 7' Deep	16.9	0.26
14A	Pier 6S, E. Side, 3' Deep	20.6	0.90
14B	Pier 6S, E. Side, 6' Deep	13.6	0.48

United States Testing Company, Inc.

1415 PARK AVENUE • HOBOKEN, NEW JERSEY 07030 • 201-792-2400 • Fax: 201-656-0636

REPORT OF TEST

AN ASBESTOS AND PCBs IN SOIL SAMPLING SURVEY

At:

Track 14 -West End
Track 13-East End and West End
Amtrak
Penn Station
New York, New York

Performed by:

United States Testing Company, Inc.
Environmental Services Department
1415 Park Avenue
Hoboken, New Jersey 07030

For:

Amtrak Safety and Environmental Control
Amtrak Penn Station
31st Street & 8th Avenue
New York, New York 10001

RECEIVED
..TY AND ENVIRONMENTAL CONTROL
SEP 10 1993
NEV

DATE: September 01, 1993

REPORT OF TEST NO.: 160246

PREPARED BY:

Gary Wyrwa
Environmental Scientist
GW:nv

SIGNED FOR THE COMPANY BY:

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control
Amtrak Penn Station
31st Street & 8th Avenue
New York, New York 10001

Number: 160246
Date: 09/01/93

SUBJECT

A soil sampling survey for asbestos and PCBs was performed at Track 14-west end, and Track 13-east and west ends at Penn Station, New York, New York by the United States Testing Company, Inc. on August 19, 1993

PROJECT

The purpose of this survey was to collect core samples from between the tracks and to analyze those samples for asbestos and PCBs.

PROCEDURE

Soil samples were collected from Track 14-west end and Track 13-east and west ends. At the west end of Track 14, sampling was performed from 36 feet east of signal 64-L to 38 feet east of signal 46E. At the east end of Track 13, sampling was performed from signal 54-L to 39 railroad ties east of signal 54-L. At the west end of Track 14, sampling was performed at signal 58 W to 70 railroad ties east of signal 58W. Soil samples were collected to a depth of 6 to 10 inches from the bottom of the railroad tie. Soil samples were collected using a hand operated soil borer. The core samples for each location were homogenized and transferred to glass jars. All sampling equipment was cleaned between samples.

All soil samples to be analyzed for asbestos were first homogenized and then ashed in a high temperature furnace at 400°C for 12 hours. The soil samples were then pulverized and analyzed for suspect fibers utilizing a stereobinocular microscope.

Sample analysis of soil materials was performed in accordance with procedures described in Appendix A, "Interim Method for the Determination of Asbestiform Minerals in Bulk Insulation Samples", Section 1 and Section 2, published in the Federal Register, Volume 47, No. 103, May 27, 1982. The procedure involves examination of the samples with a petrographic microscope utilizing polarized light, a procedure commonly known as polarized light microscopy (PLM).

Dispersion staining is a technique that is used in conjunction with PLM. This technique allows the analysts to measure the refractive index of the fiber by producing colors through the dispersion of refractive index of the fiber as it relates to the dispersion index of the mounting liquid. A more positive identification of asbestos can be made when both PLM and dispersion staining are utilized.

Twelve soil samples were analyzed for PCB's according to U.S.E.P.A.- SW 846, Method 8080.

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 160246
Date: 09/01/93

RESULTS

Soil Samples Analyzed for Asbestos

DATE: August 19, 1993

Sample #	Sample ID*	Type of Asbestos Present	Total Percentage by Volume	Other Materials Present	Gross Appearance
22496	160246-SABS-1	None Detected	-	Cellulose 4% Plant parts 3% Non-Fibrous 93%	Soil Sample
22497	160246-SASB-2	None Detected	-	Cellulose 2% Plant parts 3% Non-Fibrous 93%	Soil Sample
22498	160246-SASB-3	None Detected	-	Cellulose 3% Non-Fibrous 97%	Soil Sample
22499	160246-SASB-4	None Detected	-	Cellulose 3% Man-Made 3% Plant Parts 3%	Soil Sample
22500	160246-SASB-5	None Detected	-	Cellulose 2% Plant Parts 3% Non-Fibrous 95%	Soil Sample
22501	160246-SASB-6	None Detected	-	Cellulose 3% Man-Made 3% Plant Parts 3%	Soil Sample

* - The asbestos sample location is the same as the coinciding PCB sample location for the same sample ID number.

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 160246
Date: 09/01/93

RSULTS

Soil Samples Analyzed for Asbestos

DATE: August 19, 1993

Sample #	Sample ID*	Type of Asbestos Present	Total Percentage by Volume	Other Materials Present	Gross Appearance
22502	160246-SASB-7	None Detected	-	Cellulose 4% Man-Made 2% Plant Parts 2%	Soil Sample
22703	160246-SASB-8	None Detected	-	Cellulose 2% Plant Parts 2% Non-Fibrous 96%	Soil Sample
22704	160246-SASB-9	None Detected	-	Cellulose 2% Plant Parts 4% Non-Fibrous 94%	Soil Sample
22705	160246-SASB-10	None Detected	-	Cellulose 3% Plant Parts 3% Non-Fibrous 94%	Soil Sample
22706	160246-SASB-11	None Detected	-	Fib. Glass 2% Plant Parts 2% Cellulose 2%	Soil Sample
22707	160246-SASB-12	None Detected	-	Man Made 2% Plant Parts 2% Non-Fibrous 96%	Soil Sample

* - The asbestos sample location is the same as the coinciding PCB sample location for the same sample ID number.

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 160246
Date: 09/01/93

RESULTS (continued)

Soil Samples Analyzed for PCBs

DATE: August 19, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160246-SPCB-1	Track 14-west end 36 feet east of signal 64-L	8" below RR Tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 14.5
160246-SPCB-2	Track 14-west end 90 RR Ties East of Sample 1, 17 feet East of Switch 27	8" Below RR Tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 15.4
160246-SPCB-3	Track 14-west end 90 RR Ties East of Sample 2, Adjacent Relay Box A3EN-W	10" Below RR Tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 4.9

Sample results reported in parts per million (ppm)

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 160246
Date: 09/01/93

RESULTS (continued)

DATE: August 19, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160246-SPCB-4	Track 14-west end 90 RR Ties east of Sample 3, 38 feet east of signal 46-E Additional soil collected adjacent/north of Track 14 (train interference)	6" Below RR Ties	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 10.9
160246-SPCB-5	Track 13-east end at signal 54-L: collected adjacent/north of Track 13-too much balast between rails	8" Below RR Ties	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2.4
160246-PCB-6	Track 13-east end 13 RR ties east of sample 5	8" Below RR Ties	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 3.9

Sample results reported in parts per million (ppm)

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 160246
Date: 09/01/93

RESULTS (cont'd)

DATE: August 19, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160246-SPCB-7	Track 13-east end 13 RR ties east of sample 6, adjacent/north of Track 13-too much balast between rails.	8" Below RR tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2.7
160246-SPCB-8	Track 13-east end 13 RR ties east of Sample 7	10" Below RR tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2.5
160246-SPCB-9	Track 13-west end at signal 58W	8" Below RR tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 15.2

Sample results reported in parts per million (ppm)

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control

Number: 160246
Date: 09/01/93

RESULTS (cont'd)

DATE: August 19, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160246-SPCB-10	Track 13-west end 20 RR ties east of Sample 9	6/7" Below RR tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 522.3
160246-SPCB-11	Track 13-west end 20 RR ties east of sample 10	6" Below RR tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 12.8
160246-SPCB-12	Track 13-west end 30 RR ties east of sample 11	8" Below RR tie	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 8.1

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160246
Date: 09/01/93

DISCUSSION

Twelve soil samples for asbestos and PCB analyses were collected from Track 14-west end and Track 13-east end and west end.

No asbestos was detected in any of the twelve analyzed samples.

All of the twelve soil samples analyzed for PCBs were found to contain some concentration of AROCLOR-1260. Concentrations of AROCLOR-1260 in eleven of the twelve samples ranged from 2.4 to 15.4 parts per million (ppm). However, sample 160246-SPCB-10 was found to contain AROCLOR-1260 concentration of 522.3 ppm.

United States Testing Company, Inc.
1415 PARK AVENUE • HOBOKEN, NEW JERSEY 07030 • 201-792-2400 • Fax: 201-656-0636

REPORT OF TEST

CCL - note + File RN 1/3/94

PCBs IN SOIL SAMPLING SURVEY

At:

Track 28
Sunny Side Rail Yard
Queens, New York

Performed by:

United States Testing Company, Inc.
Environmental Services Department
1415 Park Avenue
Hoboken, New Jersey 07030

For:

Amtrak Safety and Environmental Control
Amtrak Penn Station
31st Street & 8th Avenue
New York, New York 10001

DATE: January 4, 1994

REPORT OF TEST NO.: 160427

PREPARED BY:

Christopher Pope
Project Manager
CP:jmz

SIGNED FOR THE COMPANY BY:

John H. Chiaviello
Project Manager

United States Testing Company, Inc.

Client: Amtrak Safety and Environmental Control
Amtrak Penn Station
31st Street & 8th Avenue
New York, New York 10001

Number: 160427
Date: 01/04/94

SUBJECT

A soil sampling survey for PCBs was performed at Track 28, Sunny Side Rail Yard, Queens, New York by the United States Testing Company, Inc. on December 17, 1993.

PROJECT

The purpose of this survey was to collect core samples from the center line between the rails of Track 28 at 50 foot intervals and to analyze those samples for PCBs.

PROCEDURE

Twenty two soil samples were collected from the center line of Track 28 to a depth of 12 to 18 inches from the top of the tie. Samples were collected at 50 foot intervals from the Track 29 crossover to the Track 27 crossover. Soil samples were collected using a hand operated soil borer. The core samples for each location were homogenized and transferred to glass jars. All sampling equipment was cleaned between samples.

Twenty two soil samples were analyzed for PCB's according to U.S.E.P.A.- SW 846, Method 8080.

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

RESULTS (continued)

Soil Samples Analyzed for PCBs

DATE: December 17, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160427-PCB-1	Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-2	50 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-3	100 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

RESULTS (continued)

DATE: December 17, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160427-PCB-4	150 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-5	200 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-6	250 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

RESULTS (cont'd)

DATE: December 17, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160427-PCB-7	300 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-8	350 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.6
160427-PCB-9	400 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

RESULTS (cont'd)

DATE: December 17, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160427-PCB-10	450 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 1.7
160427-PCB-11	500 feet east of Track 29 crossover	16"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-12	550 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

RESULTS (cont'd)

DATE: December 17, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160427-PCB-13	600 feet east of Track 29 crossover	14"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.3
160427-PCB-14	650 feet east of Track 29 crossover	14"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.9
160427-PCB-15	700 feet east of Track 29 crossover	17"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.4

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

RESULTS (cont'd)

DATE: December 17, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160427-PCB-16	750 feet east of Track 29 crossover	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-17	800 feet east of Track 29 crossover	17"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-18	850 feet east of Track 29 crossover	12"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 0.8

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

RESULTS (cont'd)

DATE: December 17, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160427-PCB-19	900 feet east of Track 29 crossover	16"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-20	950 feet east of Track 29 crossover	15"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND
160427-PCB-21	1000 feet east of Track 29 crossover	15"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND ND

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

RESULTS (cont'd)

DATE: December 17, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm
160427-PCB-22	1050 feet east of Track 29 crossover (Track 27 crossover)	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 1.0

Sample results reported in parts per million (ppm)

Client: Amtrak Safety and Environmental Control

Number: 160427
Date: 01/04/94

CONCLUSION

Twenty two soil samples were collected from track 29 and analyzed for PCB's.

No PCBs were detected in 16 of the twenty-two samples AROCLOR-1260 was detected in the remaining 6 samples at concentrations ranging from 0.3 t 1.7 parts per million.

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

AN ASBESTOS AND PCBs IN SOIL SAMPLING SURVEY

Conducted at:

Track #14
Sunnyside Railyard
Queens, New York

Performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

Submitted to:

Amtrak Safety Department
8th Avenue and 31st Street
New York, New York 10001

DATE: January 14, 1993

REPORT OF TEST NO.: 159692-E

PREPARED BY

Rajesh Ashar
Associate Scientist
RA:nt

SIGNED FOR THE COMPANY BY

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak Safety Department
8th Avenue and 31st Street
New York, New York 10001

Number: 159692-E
Date: 01/14/93

SUBJECT

A soil sampling survey for asbestos and PCBs was performed at Track #14 in the Sunnyside Railyard in Queens, New York, beginning at the east interlock of Tracks #14 and #15 and continuing for 1025 feet west of the interlock. The sampling was performed by the United States Testing Company, Inc., on November 24 and December 19, 1992.

PROJECT

The purpose of this survey was to collect core samples from the railyard track and to analyze those samples for the presence of asbestos and PCBS.

PROCEDURE

Soil samples were collected beginning at the east interlock of Tracks #14 and #15. The samples were taken approximately every 150 feet ending 1,025 feet west of the interlock. Samples were taken using a hand operated soil borer to a depth of 18 inches below the top of the rail tie. A pick and shovel was also used when necessary, to remove stones that interfered with the soil boring process. The samples were homogenized and transferred to glass jars. All sampling equipment was cleaned between samples.

Five soil samples to be analyzed for asbestos were first homogenized and then ashed in a high temperature furnace at 400° C for 8 to 12 hours. The soil samples were then pulverized and analyzed for suspect fibers utilizing a stereobinocular microscope.

Sample analysis of soil materials was performed in accordance with procedures described in Appendix A, "Interim Method for the Determination of Asbestiform Minerals in Bulk Insulation Sample," Section 1 and Section 2, published in the Federal Register, Volume 47, No. 103, May 27, 1982. The procedure involves examination of the samples with a petrographic microscope utilizing polarized light, a procedure commonly known as polarized light microscopy (PCM).

Dispersion staining is a technique that is used in conjunction with PLM. This technique allows the analyst to measure the refractive index of the fiber by producing colors through the dispersion of refractive index of the fiber as it relates to the refractive index of the mounting medium. A more positive identification of asbestos can be made when both PLM and dispersion staining are utilized.

Eight soil samples were analyzed for PCB's according to U.S. E.P.A. - SW 846, Method 8080.

United States Testing Company, Inc.

Client: Amtrak Safety Department

Number: 159692
Date: 10/09/92

RESULTS

DATE: November 24, 1992

SOIL SAMPLES ANALYZED FOR ASBESTOS

Sample #	Sample ID	Type of Asbestos Present	Total Percentage by Volume	Other Materials Present	Gross Appearance
20810	159692-ASB-73 Track #14, at track #14 & #15 east interlock	None Detected	-	Cellulose 5% Carbonate 10% Quartz 10%	Soil Sample
20811	159692-ASB-74 Track #14, 150 feet west of track #14 & #15 east interlock	None Detected	-	Cellulose 5% Carbonate 10% Quartz 10%	Soil Sample
20812	159692-ASB-75 Track #14, 300 feet west of track #14 & #15 east interlock	Chrysotile	< 1%	Cellulose 10% Carbonate 10% Quartz 10%	Soil Sample

RESULTS FOR DATE OF: DECEMBER 19, 1992

20926	159692-ASB-83, 600' west of Tracks 14/15 east interlock - Track 14	Chrysotile	< 1%	Cellulose 20% Min. Wool 10% Carbonate 10%	Soil Sample
20927	159692-ASB-85, 900' west of Tracks 14/15 east interlock - Track 14	Chrysotile	< 1%	Cellulose 20% Carbonate 10% Quartz 10%	Soil Sample

Client: Amtrak Safety Department

Number: 159692
Date: 10/09/92

RESULTS ....continued

DATE: November 24, 1992

SOIL SAMPLES ANALYZED FOR PCB's

Amtrak - SunnySide Railyard

Sample #	Location	Sample Depth	PCB Type	PCB Concentration (PPB)
159692-PCB-73	Track 14 - at east interlock of Tracks #14 & #15	18"	AROCLOR-1260	370
159692-PCB-74	Track 14 - 150 ft. west of east interlock of Tracks #14 & #15	18"	AROCLOR-1260	740
159692-PCB-75	Track 15 - 300 ft. west of east interlock of Tracks #14 & #15	18"	AROCLOR-1260	5700

Date: December 19, 1992

Sample #	Location	Sample Depth	PCB Type	PCB Concentration (PPB)
159692-PCB-82	Track 14 - 400 ft. west of east interlock of Tracks #14 & #15	18"	AROCLOR-1260	320
159692-PCB-83	Track 14 - 600 ft. west of east interlock of Tracks #14 & #15	18"	AROCLOR-1260	300
159692-PCB-84	Track 14 - 750 ft. west of east interlock of Tracks #14 & #15	18"	AROCLOR-1260	310
159692-PCB-85	Track 14 - 900 ft. west of east interlock of Tracks #14 & #15	18"	AROCLOR-1260	3400
159692-PCB-86	Track 14 - 1,025 ft. west of east interlock of Tracks #14 & #15	18"	AROCLOR-1260	930

Client: Amtrak Safety Department

Number: 159692
Date: 10/09/92

DISCUSSION

Samples were collected of the soil at eight locations from the center of Track #14 at the SunnySide Railyard. Samples were collected to a depth of 18 inches from the top of the rail tie at approximately 150 foot intervals from the east interlock of Tracks #14 & #15.

A total of eight soil samples were collected for PCB analysis. All eight were found to contain AROCLOR-1260 at levels ranging from 300 to 5,700 parts per billion. No AROCLOR - 1016, 1221, 1232, 1242, 1248, or 1254 was detected.

A total of five soil samples were analyzed for asbestos. No asbestos was detected in two of the five samples. Three samples were found to contain less than one percent chrysotile asbestos.

CONCLUSION

Low levels of AROCLOR - 1260 was found in all eight collected soil samples. PCB concentrations ranged from 300 to 5700 parts per billion.

No asbestos was detected in two of the five collected soil samples. Three of the samples were found to contain less than one percent chrysotile asbestos.

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

A PETROLEUM HYDROCARBON
& PCBs IN SOIL SAMPLING SURVEY

conducted at:

Proposed Honey House Site
Sunnyside Railyard
Queens, New York

performed by:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

submitted to:

Amtrak National Railroad Passenger Corporation
3929 Honeywell Street
Long Island, New York 11101

DATE: June 3, 1993

REPORT OF TEST NO. 160093

PREPARED BY

John B. Shaw
Environmental Scientist
JBS:ntd

SIGNED FOR THE COMPANY BY

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation
3929 Honeywell Street
Long Island, New York 11101

Number: 160093
Date: 06/03/93

SUBJECT

A soil sampling survey for petroleum hydrocarbons and PCBs was performed at specific sites designated by Norman Satterthwaite of Amtrak for Karl Herzek of Amtrak at the proposed Honey House located at Sunnyside Railyard, Queens, New York by the United States Testing Company, Inc. on May 18, 1993.

PROJECT

The purpose of this survey was to collect soil samples at various locations at the proposed Honey House site at the railyard and analyze those samples for various contaminants including PCBs and petroleum hydrocarbons. Samples were collected at the proposed Honey House Site for PCB and petroleum hydrocarbon analysis.

PROCEDURE

Five soil samples were collected at the proposed Honey House Site beginning under the east side of Honeywell Street and proceeding east to a spot 11 feet west of the storage bin. See enclosed Diagram ST-1 of site as provided by Norman Satterthwaite. Sampling was performed utilizing a soil borer and hand trowel providing a core sample from 6 to 10 inches in depth.

All samples were homogenized and transferred to glass jars.

Five samples were analyzed for PCBs according to U.S.E.P.A. SW846, Method 8080.

Five samples were analyzed for petroleum hydrocarbons in accordance with the procedures outlined in "Methods for Chemical Analysis of Water and Wastes, 1978". Method 418.1 (Modified for Soils).

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation

Number: 160093
Date: 06/03/93

RESULTS

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: May 18, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
160093-SPCB/PHC-1 (Hole 1) Corresponds to Hole 1 on Diagram	South side of service road under Honeywell Street, 5 feet south of road drain (See Diagram ST-1)	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2.9	210
160093-SPCB/PHC-2 (Hole 2) Corresponds to Hole 2 on Diagram	South side of service road east side of Honeywell Street 5.2 feet east of road drain (See Diagram ST-1)	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 2.4	210
160093-SPCB/PHC-3 (Hole 3) Corresponds to Hole 3 on Diagram	South side of service road east of Honeywell Street 100 feet, 13 feet north of M.O.W. Track (See Diagram ST-1)	5"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 8.6	4500
160093-SPCB/PHC-4 (Hole 4) Corresponds to Hole 4 on Diagram	South side of service road east of Honeywell Street 33 feet north from center of M.O.W. Track (See Diagram ST-1)	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 4.3	720

ND - None Detected

Client: Amtrak National Railroad Passenger Corporation

Number: 160093
Date: 06/03/93

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE: May 18, 1993

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
160093-SPCB/PHC-5 (Hole 5) Corresponds to Hole 5 on Diagram	South side of service road 11 feet west of Storage Bin. 6 feet south of service road (See Diagram ST-1)	6"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	ND ND ND ND ND ND 3.1	690

ND - None Detected

Client: Amtrak National Railroad Passenger Corporation

Number: 160093
Date: 06/03/93

DISCUSSION

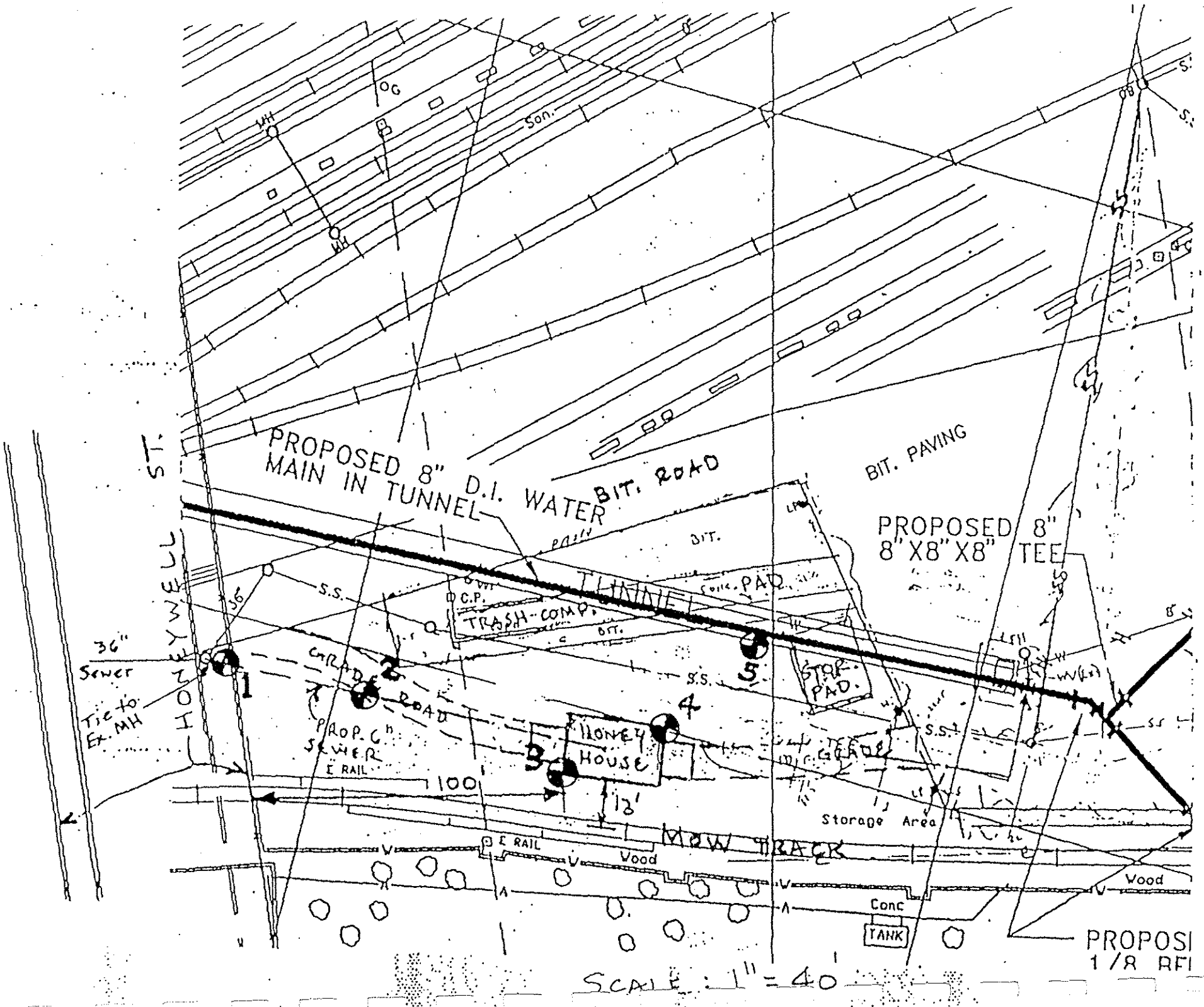
Five soil samples for petroleum hydrocarbons and PCBs were collected at the proposed Honey House site at the Sunnyside Railyard. The intention of the sampling was to extract a core sample to a depth of 6 to 10 inches from the top of the surface. All samples collected were found to contain concentrations of AROCLOR-1260 ranging from 2.4 to 8.6 parts per million and petroleum hydrocarbons ranging from 210 to 4500 parts per million.

CONCLUSION

Soil samples were determined to contain AROCLOR-1260 at concentrations ranging from 2.4 to 8.6 parts per million. Soil samples were determined to contain petroleum hydrocarbons at concentrations ranging from 210 to 4500 parts per million.

Appendix A

Plan


PROPOSED 8" D.I. WATER MAIN IN TUNNEL
BIT. ROAD
BIT. PAVING
PROPOSED 8" 8"X8"X8" TEE
TUNNEL
HOLLYWELL ST.
36" Sewer
Tie to Ex. MH
GRADE
ROAD
PROP. CH SEWER
E RAIL
100'
HONEY HOUSE
12'
TRASH-COMP. PAD.
STOR. PAD.
Storage Area
MOW TRACK
E RAIL
Wood
Conc
TANK
Son.
W
S.S.
C.P.
1
2
3
4
5
EXISTING GRADE
SCALE: 1" = 40'

United States Testing Company, Inc.

Environmental Services

1415 Park Avenue
Hoboken, New Jersey 07030
Tel: 201-792-2400
Fax: 201-656-0636

REPORT OF TEST

A PETROLEUM HYDROCARBON
& PCBs IN SOIL SAMPLING SURVEY

Conducted At:

Coach Servicing Facilities Ducting Run
Sunnyside Railyard
Queens, New York

Performed By:

United States Testing Company, Inc.
1415 Park Avenue
Hoboken, New Jersey 07030

Submitted To:

Amtrak National Railroad Passenger Corporation
400 west 31st Street
New York, New York 10001

DATE: May 16, 1994

REPORT OF TEST NO. 700174

PREPARED BY

John B. Shaw
Environmental Scientist
JBS:jmz

SIGNED FOR THE COMPANY BY

Christopher Pope
Project Manager

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation
400 West 31st Street
New York, New York 10001

Number: 700174
Date: 05/16/94

SUBJECT

A soil sampling survey for petroleum hydrocarbons and PCBs was performed by the United States Testing Company, Inc. at the Coach Servicing Building project duct run, Sunnyside Railyard, Queens, New York on April 26, 1993. Sample collection areas were designated by Joe Hoffman of Amtrak.

PROJECT

The purpose of this survey was to collect soil samples along the proposed duct run route and analyze those samples for PCBs and petroleum hydrocarbons.

PROCEDURE

Twenty-one soil samples were collected at the Sunnyside Railyard. Sampling was performed utilizing a soil borer and hand trowel providing a core sample from 18 to 33 inches in depth.

All samples were homogenized and transferred to glass jars.

Twenty-one samples were analyzed for PCBs according to U.S.E.P.A. SW846, Method 8080.

Twenty-one samples were analyzed for petroleum hydrocarbons in accordance with the procedures outlined in "Methods for Chemical Analysis of Water and Wastes, 1978". Method 418.1 (Modified for Soils).

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation

Number: 700174
Date: 05/16/94

RESULTS

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE COLLECTED: April 26, 1994

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
700174-PCB/PHC-01	Sample is taken from 3' west of eastern most track (E-Rail) 10' north of switchbox 6E 0 + 00 Station	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.66 <0.66 <0.66 <0.66 <0.66 <0.66 1.30	430
700174-PCB/PHC-02	Sample collected 3' west of eastern most track (E-Rail) 10' west of signal box 6E 0 + 25'	23"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.68 <0.68 <0.68 <0.68 <0.68 0.81	790
700174-PCB/PHC-03	Sample collected 3' west of eastern most track (E-Rail) 0 + 50'	32"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.70 <0.70 <0.70 <0.70 <0.70 <0.70 2.40	540
700174-PCB/PHC-04	Sample collected 3' west of eastern most track (E-Rail) 0 + 75'	30"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.13 <0.13 <0.13 <0.13 <0.13 <0.13 0.32	1400

ND - None Detected
ppm - parts per million

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation

Number: 700174
Date: 05/16/94

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE COLLECTED: April 26, 1994

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
700174-PCB/PHC-05	Sample collected 3' west of eastern most track (E-Rail) across from north end compressor building 1 + 20'	26"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.70 <0.70 <0.70 <0.70 <0.70 <0.70 1.20	18000
700174-PCB/PHC-06	Sample collected 3' west of eastern most track (E-Rail) across from compressor building 1 + 50'	22"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.68 <0.68 <0.68 <0.68 <0.68 <0.68 <0.68	370
700174-PCB/PHC-07	Sample collected 3' west of eastern most track (E-Rail) 1 + 75'	22"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.60 <0.60 <0.60 <0.60 <0.60 <0.60 0.61	23000
700174-PCB/PHC-08	Sample collected 6' west of eastern most track (E-Rail) 2 + 00'	25"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.68 <0.68 <0.68 <0.68 <0.68 <0.68 <0.68	330

ND - None Detected
ppm - parts per million

Client: Amtrak National Railroad Passenger Corporation

Number: 700174
Date: 05/16/94

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE COLLECTED: April 26, 1994

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
700174-PCB/PHC-09	Sample collected 6' west of eastern most track (E-Rail) 2 + 25'	30"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.69 <0.69 <0.69 <0.69 <0.69 <0.69 1.10	280
700174-PCB/PHC-10	Sample collected 6' west of eastern most track (E-Rail) 2 + 50'	26"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.70 <0.70 <0.70 <0.70 <0.70 <0.70 <0.70	230
700174-PCB/PHC-11	Sample collected on dirt access road next to eastern most track (E-Rail) 6' west of track 39 2 + 75'	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.61 <0.61 <0.61 <0.61 <0.61 <0.61 3.90	410
700174-PCB/PHC-12	Sample collected on dirt access road next to eastern most track (E-Rail) 6' west of track 39 3 + 25'	22"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.64 <0.64 <0.64 <0.64 <0.64 <0.64 2.80	460

ND - None Detected
ppm - parts per million

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation

Number: 700174
Date: 05/16/94

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE COLLECTED: April 26, 1994

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
700174-PCB/PHC-13	Sample collected on dirt access road 6' west of track 39 3 + 75'	22"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.68 <0.68 <0.68 <0.68 <0.68 <0.68 0.79	320
700174-PCB/PHC-14	Sample collected on dirt access road 6' west of track 39	18"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.68 <0.68 <0.68 <0.68 <0.68 <0.68 1.40	630
700174-PCB/PHC-15	Sample collected on dirt road 6' west of track 39	22"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67	220
700174-PCB/PHC-16	Sample collected at south end of concrete pad between tracks 34 & 36 near steel column 6' west of track 34	30"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.69 <0.69 <0.69 <0.69 <0.69 <0.69 <0.69	170

ND - None Detected
ppm - parts per million

United States Testing Company, Inc.

Client: Amtrak National Railroad Passenger Corporation

Number: 700174
Date: 05/16/94

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE COLLECTED: April 26, 1994

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
700174-PCB/PHC-17	Sample collected at south end of concrete pad between tracks 32 & 30	26"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.13 <0.13 <0.13 <0.13 <0.13 <0.13 <0.13	82
700174-PCB/PHC-18	Sample collected at south end of concrete pad between tracks 30 & 29	22"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.68 <0.68 <0.68 <0.68 <0.68 <0.68 <0.68	250
700174-PCB/PHC-19	Sample collected at south end of concrete pad between tracks 28 & 27	33"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.61 <0.61 <0.61 <0.61 <0.61 <0.61 <0.61	180
700174-PCB/PHC-20	Sample collected at south end of concrete pad between tracks 27 & 26	25"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.57 <0.57 <0.57 <0.57 <0.57 <0.57 <0.57	320

ND - None Detected
ppm - parts per million

Client: Amtrak National Railroad Passenger Corporation

Number: 700174
Date: 05/16/94

RESULTS (continued)

Soil Samples Analyzed for PCBs and Petroleum Hydrocarbons (PHC)

DATE COLLECTED: April 26, 1994

Sample #	Location	Sample Depth	PCB Type	PCB Conc. ppm	PHC Conc. ppm
700174-PCB/PHC-21	Sample collected at track 25 between rails even with south end of concrete pad of track 24	25"	AROCLOR-1016 AROCLOR-1221 AROCLOR-1232 AROCLOR-1242 AROCLOR-1248 AROCLOR-1254 AROCLOR-1260	<0.69 <0.69 <0.69 <0.69 <0.69 <0.69 <0.69	920

ND - None Detected
ppm - parts per million

Client: Amtrak National Railroad Passenger Corporation

Number: 700174
Date: 05/16/94

DISCUSSION

Twenty-one soil samples for petroleum hydrocarbons and PCBs were collected at the Coach Servicing Facility project proposed duct run route, Sunnyside Railyard. Core samples to a depth of 18 to 33 inches from the top of the surface were collected along the proposed duct run route. All samples collected were found to contain petroleum hydrocarbons ranging in concentration from 82 to 23,000 parts per million. Eleven of the collected samples were found to contain AROCLOR-1260 at concentrations ranging 0.32 to 3.90 parts per million. The PCB concentration in the remaining ten samples was found to below lower detectable limits.

CONCLUSION

Soil samples were determined to contain petroleum hydrocarbons at concentrations ranging from 82 to 23,000 parts per million. Three of the collected samples were found to contain petroleum hydrocarbons at concentrations greater than 1000 parts per million (see samples 700174-PCB/PHC-04, -05 and -07).

Eleven of the twenty-one samples were found to contain detectable levels of PCBs. AROCLOR-1260 was detected at concentrations ranging from 0.32 to 3.90 parts per million.

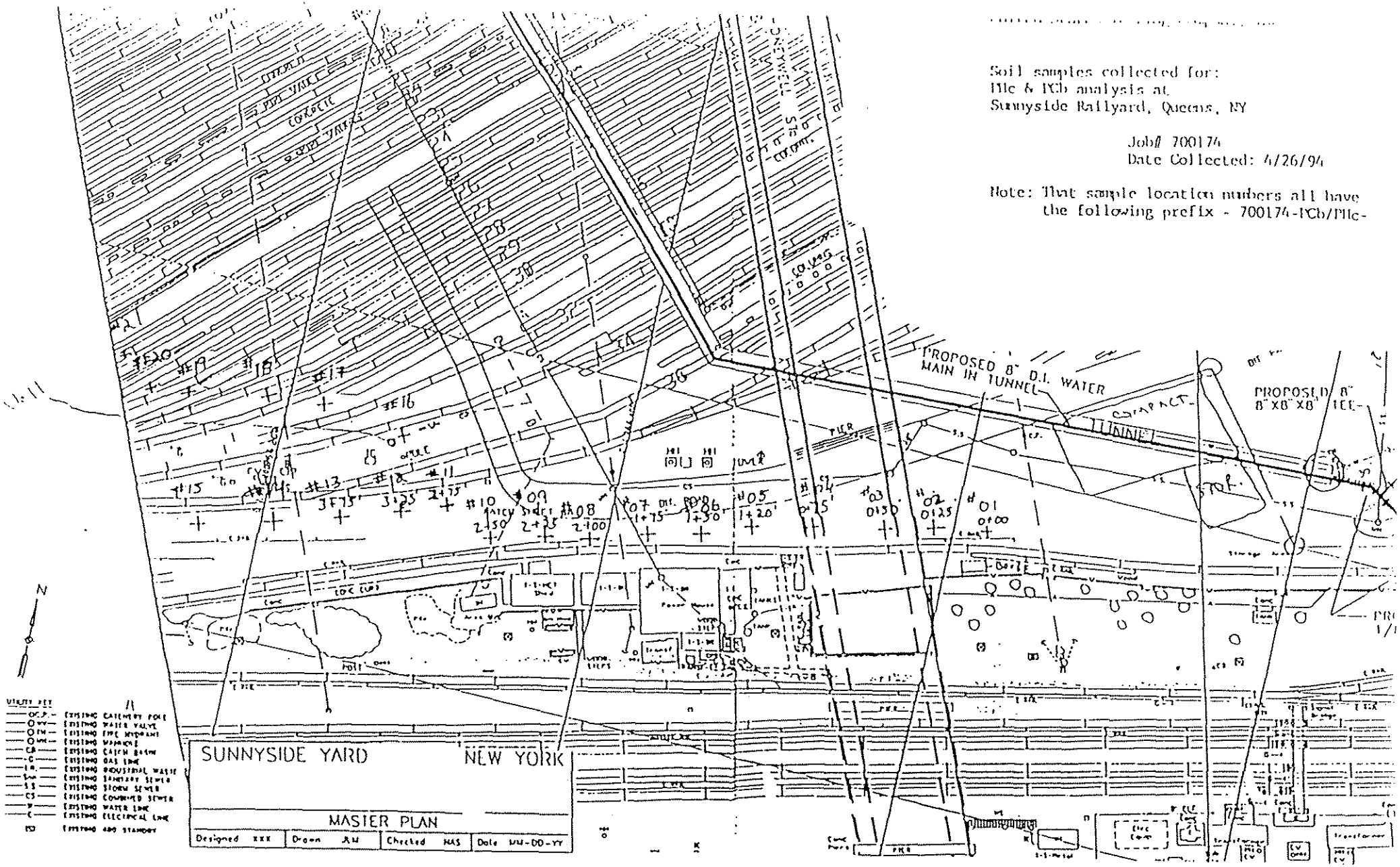
Appendix A

Plan

Soil samples collected for:
Tlc & PCb analysis at
Sunnyside Railyard, Queens, NY

Job# 700174
Date Collected: 4/26/94

Note: That sample location numbers all have the following prefix - 700174-PCb/Tlc-



INDEPENDENT TESTING LABORATORIES INC.
"SERVING INDUSTRY WORLDWIDE SINCE 1976"
129-11 18th Avenue - College Point, N.Y. 11356
(718) 961-8550 Fax (718) 762-1684

JUL 29 1994

June 27, 1994

Seelye Stevenson Value & Knech
225 Park Avenue South
New York, New York 10003

Job No.:122892
Report No.:FLTR-1
ELAP No.:11032
Lab. Control No.:a0974

Attention: Mr. Hans Tippmann

Re: Two (2) Soil samples were taken from Honey Street Bridge for Laboratory Analysis - 1 Pier 10 West End and 2 Pier 10 East End

Dear Mr. Tippman:

On June 10, 1994, Mr. Fazad Khan of Independent Testing Labs., Inc., delivered two (2) soil samples to Independent Testing Labs., Inc. to be tested for TPH and PCB from the above referenced project location. The samples were taken by Mr. Khan on June 10, 1994, at 8:45 a.m., from the specific location (Pier 10 west and east end and 4 1/2' below grade). The tests were performed in accordance with EPA 418 and EPA 608. The following are the results of the tests:

RESULTS OF LABORATORY ANALYSIS

SAMPLE #	TPH RESULTS	PCB RESULTS
A0974 - 1 W	3600 ppm	25 ppm
A0974 - 2 E	1200 ppm	390 ppm

NOTE: 1. The report on the sample by Independent Testing Lab., Inc. applies only to the lot sampled.

Jack Ventimiglia, Laboratory Manager
Independent Testing Laboratories, Incorporated

United States Testing Company, Inc.
1415 PARK AVENUE • HOBOKEN, NEW JERSEY 07030 • 201-792-2400 • Fax: 201-656-0636

REPORT OF TEST

SOIL SAMPLING AND ANALYSIS FOR POLYCHLORINATED BIPHENYLS

Conducted:

Along 1500 Linear Feet of Pipe Insulation
Next to AMTRAK Engine House and
Along the first third of the Cobra Crossing
Between Tracks 3 and 4, 7 and 8, 9 and 10
Sunnyside Yard
Long Island City, New York

Performed by:

Environmental Services Department

Submitted to:

AMTRAK
National Railroad Passenger Corporation
400 West 31st Street
New York, New York 10001

DATE: September 15, 1994

REPORT OF TEST NO.: 700334

PREPARED BY

Gary E. Wyrwa
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SIGNED FOR THE COMPANY BY

Christopher Pope
Manager

GEW/nt

United States Testing Company, Inc.

Client: AMTRAK
National Railroad Passenger Corporation
400 West 31st Street
New York, New York 10001

Report No.: 700334
Date: 09/15/94

SUBJECT

Soil sampling for PCBs was performed by the United States Testing Company, Inc. on August 31, 1994, at the Sunnyside Yard, Long Island City, New York. Samples were collected along 1500 linear feet of pipe insulation next to AMTRAK Engine House and along the first third of the Cobra Crossing between Tracks 3 and 4, 7 and 8, 9 and 10.

PROJECT

The purpose of this survey was to collect soil samples along 1500 linear feet of pipe insulation next to the the AMTRAK Engine House and along the first third of the Cobra Crossing between Tracks 3 and 4, 7 and 8, and 9 and 10. The soil samples were analyzed for PCB content.

PROCEDURE

Twelve soil samples were collected by using a stainless steel regular soil auger bucket which rendered a core sample to a depth of 6 inches. The core sample was mixed in a stainless steel bowl utilizing a hand trowel to make the sample homogeneous. Each homogenized sample was transferred to glass jars which were labeled with a unique identification number.

The twelve soil samples were analyzed for PCBs in accordance with the USEPA SW 846, Method 8080.

United States Testing Company, Inc.

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RESULTS

Soil Samples Analyzed for Polychlorinated Biphenyls (PCB)

Date Collected: August 31, 1994

Location: Along 1500 Linear Feet of Pipe Insulation Next to AMTRAK Engine House

Sample #	Location	Sample Depth	PCB Type	PCB Concentration (ppm)
700334-SPCB-02	150' East of West end, 8" north of pipe insulation	6"	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<0.95 <0.95 <0.95 <0.95 <0.95 <0.95 1.5
700334-SPCB-03	230' East of sample -02, 12" south of pipe insulation	6"	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<0.98 <0.98 <0.98 <0.98 <0.98 <0.98 2.8
700334-SPCB-04	230' East of sample-03, directly below north side of pipe insulation, against concrete	6"	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<0.55 <0.55 <0.55 <0.55 <0.55 <0.55 <0.55
700334-SPCB-05	230' east of sample-04, 8" south of pipe insulation	6"	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<5.7 <5.7 <5.7 <5.7 <5.7 <5.7 8.8

< - less than the value shown
ppm - parts per million

United States Testing Company, Inc.

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Date: 09/15/94

RESULTS (cont.)

Soil Samples Analyzed for Polychlorinated Biphenyls (PCB)

Date Collected: August 31, 1994

Location: Along 1500 Linear Feet of Pipe Insulation Next to AMTRAK Engine House

Sample #	Location	Sample Depth	PCB Type	PCB Concentration (ppm)
700334-SPCB-06	230' East of sample-05, 8" north of pipe insulation	6"	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<0.43 <0.43 <0.43 <0.43 <0.43 <0.43 <0.43
700334-SPCB-07	230' East of sample-06, 8" north of pipe insulation	6"	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<0.44 <0.44 <0.44 <0.44 <0.44 <0.44 <0.44

< - less than the value shown
ppm - parts per million

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RESULTS (cont.)

Soil Samples Analyzed for Polychlorinated Biphenyls (PCB)

Date Collected: August 31, 1994

Location: Along the First Third of the Cobra Crossing Between Tracks 3 and 4, 7 and 8, and 9 and 10

Sample #	Location	Sample Depth	PCB Type	PCB Concentration (ppm)
700334-SPCB-08	Between Tracks 3 and 4, 100' West of Cobra Crossing	N/A	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<19.0 <19.0 <19.0 <19.0 <19.0 <19.0 24.0
700334-SPCB-09	Between Tracks 3 and 4, 295' West of Cobra Crossing	N/A	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<51.0 <51.0 <51.0 <51.0 <51.0 <51.0 69.0
700334-SPCB-10	Between Tracks 7 and 8, 100' West of Cobra Crossing	N/A	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<1.7 <1.7 <1.7 <1.7 <1.7 <1.7 69.0
700334-SPCB-11	Between Tracks 9 and 10, 275' West of Cobra Crossing	N/A	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<1.1 <1.1 <1.1 <1.1 <1.1 <1.1 2.1

< - less than the value shown
ppm - parts per million
N/A - not applicable

United States Testing Company, Inc.

Client: AMTRAK

Report No.: 700334
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RESULTS (cont.)

Soil Samples Analyzed for Polychlorinated Biphenyls (PCB)

Date Collected: August 31, 1994

Location: Along the First Third of the Cobra Crossing Between Tracks 3 and 4, 7 and 8, and 9 and 10

Sample #	Location	Sample Depth	PCB Type	PCB Concentration (ppm)
700334-SPCB-12	Between Tracks 9 and 10, 271' West of Cobra Crossing	6"	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<1.8 <1.8 <1.8 <1.8 <1.8 <1.8 3.3
700334-SPCB-13	Between Tracks 9 and 10, 100' West of Cobra Crossing	6"	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<1.4 <1.4 <1.4 <1.4 <1.4 <1.4 2.6

< - less than the value shown
ppm - parts per million

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Date: 09/15/94

RESULTS (cont.)

Soil Samples Analyzed for Polychlorinated Biphenyls (PCB)

Date Collected: August 31, 1994

Location: Water Blanks Analyzed for Polychlorinated Biphenyls (PCBs)

Sample #	Location	Sample Depth	PCB Type	PCB Concentration (ppm)
700334-SPCB-01	Field Blank	N/A	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0
700334-SPCB-14	Field Blank	N/A	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	<1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0

N/A - not applicable
< - less than the value shown
ppm - parts per million

DISCUSSION

Soil samples were collected and analyzed for Polychlorinated Biphenyls (PCBs). Work was performed at the Sunnyside Yard, Long Island City, New York. Samples were collected along 1500 linear feet of pipe insulation next to the AMTRAK Engine House and along the first third of the Cobra Crossing, between Tracks 3 and 4, 7 and 8, 9 and 10. All work was performed by USTC personnel on August 31, 1994.

CONCLUSION

Twelve soil samples were analyzed for Polychlorinated biphenyls (PCBs) Nine of the twelve soil samples were found to contain detectable levels of PCBs. AROCLOR-1260 was detected at concentrations ranging from 1.5 to 69.0 pats per million. The three remaining samples had PCB concentrations below the lower detection limit of the analytical method.

N

A-1
UNDERGROUND STORAGE TANK
AND FUELING AREA

A-6
DRUM STORAGE
AREA

TFRM 24

TFRM 22-23

A-4 FUEL OIL
TANK AREA

TFRM 41-43

TFRM 44

TFRM 38, 40
TFRM 39

TFRM 16-18

A-2
MATERIAL
CONTROL
AREA

A-3
GAS TANK
AREA

TFRM 14-15

TFRM 45-46

A-5
TRANSFORMER
AREA

A-7
STORAGE
AREA

TFRM 25,
48, 49
TFRM 47

TFRM 31, 32, 37
TFRM 35-36
TFRM 33
TFRM 34; NS

A-8A
A-8B
A-8C

TFRM 29-30
TFRM 28

TRANSFORMER
AREAS

TFRM 26
TFRM 27

A-9
COMPRESSOR
AREA

TFRM 8-10

TFRM 1-7
& 11-13

A-10
TRANSFORMER
AREA

TFRM 50-58, 60-61
TFRM 59
TFRM 62-69; NA

A-11
EMPTY
DRUM AREA

A-14
EMPTY DRUM
AREA

A-13
FORMER
STORAGE
AREA

A-17
STORAGE
AREA

TFRM 19-21

A-12
CAR WASHER
AREA

A-15
EMPTY DRUM
AREA

A-16
UNDERGROUND
STORAGE TANK
AREA

200' 0 200'

LEGEND

AREAS OF CONCERN

TFRM 19-21 ■ LOCATION AND DESIGNATION(S) OF TRANSFORMERS

BLUE INDICATES PCB CONCENTRATIONS < 50 PARTS PER MILLION(ppm)

ORANGE INDICATES PCB CONCENTRATIONS 50-449(ppm)

RED INDICATES PCB CONCENTRATIONS ≥ 500(ppm)

NS = NOT SAMPLED

NA = DATA NOT AVAILABLE

LOCATION OF TFRM 70 UNKNOWN

Title:

LOCATION AND DESIGNATION
OF TRANSFORMERS

Prepared For:
SUNNYSIDE YARD, QUEENS, NEW YORK

ROUX ASSOCIATES INC
Environmental Consulting & Management

Compiled by: L.W.	Date: 4/96	PLATE
Prepared by: G.M.	Scale: SHOWN	1
Project Mgr: J.D.D.	Revision:	
File No: 05545008	Project No.: 05545Y02	