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ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES INC

ROUX

1377 MOTOR PARKWAY
ISLANDIA, NEW YORK 11788
TEL 516 232-2600 FAX 516 232-9898

May 19, 1998

Mr. Hari O. Agrawal, P.E.
Environmental Engineer
New York State Department of Environmental Conservation
Hazardous Waste Remediation - Region 2
27-20 21st Street
Long Island City, NY 11101

Re: Results of Soil Samples Collected from Operable Unit 4, Sunnyside Yard, Queens, New York

Dear Mr. Agrawal:

As specified in our November 21, 1997 letter to the New York State Department of Environmental Conservation (NYSDEC), Roux Associates, Inc. (Roux Associates), on behalf of Amtrak, completed a total of 38 soil borings (Plate 1) in Operable Unit 4 (OU-4) in conjunction with the High Speed Trainset Facility (HSTF) Service and Inspection (S&I) Building construction project at the Sunnyside Yard, Queens, New York (Yard). Samples were collected in accordance with the NYSDEC-approved August 6, 1997 document titled "General Sampling and Analysis Plan to Support High Speed Trainset Facility Activities in Operable Unit 4" (Plan) to characterize soil in the construction area, including in-situ characterization of the ballast interval. Additionally, as specified in the Plan, exceedances of the NYSDEC-recommended soil cleanup levels for the Yard (found only in the ballast interval) were delineated to a point where concentrations were below the respective cleanup level and the contaminated soil was excavated and disposed off site. This letter report is provided to the NYSDEC as a summary of the OU-4 sampling program and subsequent remedial action.

Methods of Investigation

The soil characterization boring and sampling program was conducted on December 8 through 10, 1997 by Roux Associates personnel using hand tools (i.e., shovel and posthole digger). Further delineation of identified hot spot areas was conducted on January 12 and 22, 1998 and February 20, 1998. All downhole equipment was decontaminated prior to beginning each soil boring and between sampling intervals. In accordance with the Plan, characterization samples were analyzed for the three

contaminants of concern at the Yard (i.e., polychlorinated biphenyls [PCBs], carcinogenic polycyclic aromatic hydrocarbons [cPAHs], and lead) and subsequent delineation samples were analyzed only for the contaminant which exceeded the NYSDEC-recommended soil cleanup level. The analytical program was completed by Industrial Corrosion Management, Inc. (ICM) laboratory Randolph, New Jersey, following 1995 NYSDEC Analytical Services Protocols.

Results and Discussion

The analytical results are presented in Tables 1 through 3 and are summarized below. A data quality and usability report was completed and is included as Appendix A.

Polychlorinated Biphenyls

The results of the PCB analyses are presented in Table 1. As shown in the table, PCB concentrations ranged from not detected to a high of 58,000 micrograms per kilogram (µg/kg) in the ballast interval [0 to 1-foot below land surface (bls)] at characterization sample location SS-22. Only the ballast interval at two sample locations, SS-19 and SS-22 (Plate 1), contained concentrations above the NYSDEC-recommended PCB soil cleanup level for the Yard of 25,000 µg/kg. Both of these exceedances were subsequently delineated to locations where the PCB concentrations were below the respective soil cleanup level. The PCB-contaminated soil from these two locations (approximately 67 tons) was excavated on March 30, 1998 (Plate 1) and disposed at an approved hazardous waste landfill. Disposal manifests are included in Appendix B.

Carcinogenic Polycyclic Aromatic Hydrocarbons

The results of the cPAH analyses are presented in Table 2. As shown in the table, concentrations of cPAHs ranged from not detected to a high of 22,320 µg/kg, all below the NYSDEC-recommended cPAH soil cleanup for the Yard of 25,000 µg/kg.

Lead

The results of the lead analyses are presented in Table 3. As shown in the table, lead concentrations ranged from a low of 2 milligrams per kilogram (mg/kg) to a high of 3,590 mg/kg in the ballast interval sample at location SS-5 (Plate 1), which is the only exceedance of the NYSDEC-recommended lead soil cleanup for the Yard of 1,000 mg/kg. The exceedance was delineated to locations where the lead concentrations were below the respective soil cleanup level. The lead-contaminated soil (approximately 22 tons) was excavated on March 24, 1998 (Plate 1) and disposed on April 15, 1998 at an approved non-hazardous waste landfill. The disposal manifest is included in Appendix B.

Summary and Conclusions

In summary, the analytical results for soil characterization in the HSTF-related work area of OU-4 indicate only three locations where the NYSDEC-recommended soil cleanup levels for the Yard were exceeded. All three exceedances were delineated (Plate 1), and the contaminated soil was excavated and properly disposed offsite. A review of the analytical results, with respect to the Yard-specific soil cleanup levels for the contaminants of concern, indicates that the remaining material may either be left in place, or used as fill material elsewhere in the Yard.

If you have any questions or comments regarding this sampling event, please do not hesitate to call.

Sincerely,

ROUX ASSOCIATES, INC.

Harry Gregory
Project Hydrogeologist/Project Manager

Joseph D. Duminuco
Principal Hydrogeologist

cc: R. Gardineer, P.E., NYSDEC
R. Rusinko, Esq., NYSDEC
R. Mohlenhoff, P.E., Amtrak
C. Warren, Esq., Robinson, Silverman, et al.

TABLES

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-1** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/8/97**	**SS-1** **1-2** **12/8/97**	**SS-2** **0-1** **12/8/97**	**SS-2** **1-2** **12/8/97**	**SS-3** **0-1** **12/8/97**	**SS-3** **1-2** **12/8/97**	**SS-4** **0-1** **12/8/97**	**SS-4** **1-2** **12/8/97**
Aroclor-1016		40 U	35 U	38 U	36 U	37 U	35 U	37 U	38 U
Aroclor-1221		40 U	35 U	38 U	36 U	37 U	35 U	37 U	38 U
Aroclor-1232		40 U	35 U	38 U	36 U	37 U	35 U	37 U	38 U
Aroclor-1242		40 U	35 U	38 U	36 U	37 U	35 U	37 U	38 U
Aroclor-1248		40 U	35 U	38 U	36 U	37 U	35 U	37 U	38 U
Aroclor-1254		40 U	35 U	38 U	36 U	**2400**	35 U	37 U	38 U
Aroclor-1260		**400**	**180**	**2300**	36 U	**3300**	**290**	**360**	38 U
Total Aroclors	25,000	**400**	**180**	**2,300**	0	**5,700**	**290**	**360**	0

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-5** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/8/97**	**SS-5** **1-2** **12/8/97**	**SS-6** **0-1** **12/8/97**	**SS-6** **1-2** **12/8/97**	**SS-7** **0-1** **12/9/97**	**SS-7** **1-2** **12/9/97**	**SS-7DUP** **0-1** **12/9/97**	**SS-7DUP** **1-2** **12/9/97**
Aroclor-1016		39 U	37 U	39 U	40 U	37 U	35 U	38 U	33 U
Aroclor-1221		39 U	37 U	39 U	40 U	37 U	35 U	38 U	33 U
Aroclor-1232		39 U	37 U	39 U	40 U	37 U	35 U	38 U	33 U
Aroclor-1242		39 U	37 U	39 U	40 U	37 U	35 U	38 U	33 U
Aroclor-1248		39 U	37 U	39 U	40 U	37 U	35 U	38 U	33 U
Aroclor-1254		39 U	37 U	**220**	40 U	37 U	35 U	38 U	33 U
Aroclor-1260		**640**	37 U	**200**	**42**	**3200**	35 U	**2500**	33 U
Total Aroclors	25,000	**640**	0	**420**	**42**	**3,200**	0	**2,500**	0

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-8** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/9/97**	**SS-8** **1-2** **12/9/97**	**SS-9** **0-1** **12/9/97**	**SS-9** **1-2** **12/9/97**	**SS-10** **0-1** **12/9/97**	**SS-10** **1-2** **12/9/97**	**SS-11** **0-1** **12/9/97**	**SS-11** **1-2** **12/9/97**
Aroclor-1016		37 U	35 U	37 U	36 U	39 U	38 U	41 U	36 U
Aroclor-1221		37 U	35 U	37 U	36 U	39 U	38 U	41 U	36 U
Aroclor-1232		37 U	35 U	37 U	36 U	39 U	38 U	41 U	36 U
Aroclor-1242		37 U	35 U	37 U	36 U	39 U	38 U	41 U	36 U
Aroclor-1248		37 U	35 U	37 U	36 U	39 U	38 U	41 U	36 U
Aroclor-1254		37 U	35 U	37 U	36 U	39 U	38 U	41 U	36 U
Aroclor-1260		**3800**	**230**	**97**	**160**	**3900**	**120**	**3600**	**100**
Total Aroclors	25,000	**3,800**	**230**	**97**	**160**	**3,900**	**120**	**3,600**	**100**

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-12** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/9/97**	**SS-12** **1-2** **12/9/97**	**SS-13** **0-1** **12/9/97**	**SS-13** **1-2** **12/9/97**	**SS-14** **0-1** **12/9/97**	**SS-14** **1-2** **12/9/97**	**SS-15** **0-1** **12/9/97**	**SS-15** **1-2** **12/9/97**
Aroclor-1016		46 U	35 U	41 U	35 U	35 U	35 U	39 U	37 U
Aroclor-1221		46 U	35 U	41 U	35 U	35 U	35 U	39 U	37 U
Aroclor-1232		46 U	35 U	41 U	35 U	35 U	35 U	39 U	37 U
Aroclor-1242		46 U	35 U	41 U	35 U	35 U	35 U	39 U	37 U
Aroclor-1248		46 U	35 U	41 U	35 U	35 U	35 U	39 U	37 U
Aroclor-1254		46 U	35 U	**6300**	**110**	**75**	35 U	**2200**	**68**
Aroclor-1260		**5300**	**110**	**7400**	**140**	**200**	35 U	**2500**	**75**
Total Aroclors	25,000	**5,300**	**110**	**13,700**	**250**	**275**	0	**4,700**	**143**

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-16** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/9/97**	**SS-16** **1-2** **12/9/97**	**SS-17** **0-1** **12/9/97**	**SS-17** **1-2** **12/9/97**	**SS-18** **0-1** **12/9/97**	**SS-18** **1-2** **12/9/97**	**SS-19** **0-1** **12/9/97**	**SS-19** **1-2** **12/9/97**
Aroclor-1016		36 U	34 U	39 U	35 U	36 U	35 U	39 U	36 U
Aroclor-1221		36 U	34 U	39 U	35 U	36 U	35 U	39 U	36 U
Aroclor-1232		36 U	34 U	39 U	35 U	36 U	35 U	39 U	36 U
Aroclor-1242		36 U	34 U	39 U	35 U	36 U	35 U	39 U	36 U
Aroclor-1248		36 U	34 U	39 U	35 U	36 U	35 U	39 U	36 U
Aroclor-1254		36 U	34 U	39 U	35 U	36 U	35 U	**14000**	36 U
Aroclor-1260		**1300**	34 U	**5400**	**53**	**180**	**97**	**23000**	**57**
Total Aroclors	25,000	**1,300**	0	**5,400**	**53**	**180**	**97**	**37,000**	**57**

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-19E15** **Sample Depth (ft bls):** **0-1** **Sample Date:** **1/22/98**	**SS-19E30** **0-1** **1/22/98**	**SS-19W15** **0-1** **1/22/98**	**SS-19W30** **0-1** **1/22/98**	**SS-20** **0-1** **12/9/97**	**SS-20** **1-2** **12/9/97**	**SS-21** **0-1** **12/9/97**	**SS-21** **1-2** **12/9/97**
Aroclor-1016		38 U	37 U	39 U	39 U	40 U	36 U	39 U	33 U
Aroclor-1221		38 U	37 U	39 U	39 U	40 U	36 U	39 U	33 U
Aroclor-1232		38 U	37 U	39 U	39 U	40 U	36 U	39 U	33 U
Aroclor-1242		38 U	37 U	39 U	39 U	40 U	36 U	39 U	33 U
Aroclor-1248		38 U	37 U	39 U	39 U	40 U	36 U	39 U	33 U
Aroclor-1254		**1600**	**3900**	**9200**	**4600**	40 U	36 U	39 U	33 U
Aroclor-1260		**2700**	**5600**	**7000**	**7400**	**540**	36 U	**750**	33 U
Total Aroclors	25,000	**4,300**	**9,500**	**16,200**	**12,000**	**540**	0	**750**	0

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-22** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/9/97**	**SS-22** **1-2** **12/9/97**	**SS-22E15** **0-1** **1/22/98**	**SS-22E30** **0-1** **1/22/98**	**SS-22W15** **0-1** **1/22/98**	**SS-22W30** **0-1** **1/22/98**	**SS-22W40** **0-1** **2/20/98**	**SS-23** **0-1** **12/10/97**
Aroclor-1016		40 U	36 U	38 U	36 U	39 U	37 U	40 U	37 U
Aroclor-1221		40 U	36 U	38 U	36 U	39 U	37 U	40 U	37 U
Aroclor-1232		40 U	36 U	38 U	36 U	39 U	37 U	40 U	37 U
Aroclor-1242		40 U	36 U	38 U	36 U	39 U	37 U	40 U	37 U
Aroclor-1248		40 U	36 U	38 U	36 U	39 U	37 U	40 U	37 U
Aroclor-1254		**25000**	36 U	**11000**	**6700**	**3500**	**9600**	**1100**	**790**
Aroclor-1260		**33000**	**610**	**18000**	**11000**	**6200**	**17000**	**2100**	**1600**
Total Aroclors	25,000	**58,000**	**610**	**29,000**	**17,700**	**9,700**	**26,600**	**3,200**	**2,390**

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-23** **Sample Depth (ft bls):** **1-2** **Sample Date:** **12/10/97**	**SS-24** **0-1** **12/9/97**	**SS-24** **1-2** **12/9/97**	**SS-25** **0-1** **12/10/97**	**SS-25** **1-2** **12/10/97**	**SS-26** **0-1** **12/10/97**	**SS-26** **1-2** **12/10/97**	**SS-27** **0-1** **12/10/97**	**SS-27** **1-2** **12/10/97**
Aroclor-1016		36 U	40 U	33 U	40 U	37 U	38 U	38 U	37 U	38 U
Aroclor-1221		36 U	40 U	33 U	40 U	37 U	38 U	38 U	37 U	38 U
Aroclor-1232		36 U	40 U	33 U	40 U	37 U	38 U	38 U	37 U	38 U
Aroclor-1242		36 U	40 U	33 U	40 U	37 U	38 U	38 U	37 U	38 U
Aroclor-1248		36 U	40 U	33 U	40 U	37 U	38 U	38 U	37 U	38 U
Aroclor-1254		36 U	**9000**	33 U	**1900**	37 U	**5000**	**330**	37 U	38 U
Aroclor-1260		**41**	**13000**	33 U	**2800**	37 U	**5500**	**440**	**290**	38 U
Total Aroclors	25,000	**41**	**22,000**	0	**4,700**	0	**10,500**	**770**	**290**	0

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-28** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/10/97**	**SS-28** **1-2** **12/10/97**	**SS-29** **0-1** **12/10/97**	**SS-29** **1-2** **12/10/97**	**SS-30** **0-1** **12/10/97**	**SS-30** **1-2** **12/10/97**	**SS-31** **0-1** **12/10/97**	**SS-31** **1-2** **12/10/97**
Aroclor-1016		36 U	38 U	41 U	38 U	40 U	36 U	41 U	36 U
Aroclor-1221		36 U	38 U	41 U	38 U	40 U	36 U	41 U	36 U
Aroclor-1232		36 U	38 U	41 U	38 U	40 U	36 U	41 U	36 U
Aroclor-1242		36 U	38 U	41 U	38 U	40 U	36 U	41 U	36 U
Aroclor-1248		36 U	38 U	41 U	38 U	40 U	36 U	41 U	36 U
Aroclor-1254		**290**	38 U	41 U	38 U	40 U	36 U	**720**	36 U
Aroclor-1260		**410**	38 U	**310**	**73**	**10000**	**32 J**	**3600**	**100**
Total Aroclors	25,000	**700**	0	**310**	**73**	**10,000**	**32 J**	**4,320**	**100**

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-32** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/10/97**	**SS-32** **1-2** **12/10/97**	**SS-33** **0-1** **12/10/97**	**SS-33** **1-2** **12/10/97**	**SS-34** **0-1** **12/10/97**	**SS-34** **1-2** **12/10/97**	**SS-35** **0-1** **12/10/97**	**SS-35** **1-2** **12/10/97**
Aroclor-1016		40 U	36 U	41 U	36 U	400 U	35 U	39 U	37 U
Aroclor-1221		40 U	36 U	41 U	36 U	400 U	35 U	39 U	37 U
Aroclor-1232		40 U	36 U	41 U	36 U	400 U	35 U	39 U	37 U
Aroclor-1242		40 U	36 U	41 U	36 U	400 U	35 U	39 U	37 U
Aroclor-1248		40 U	36 U	41 U	36 U	400 U	35 U	39 U	37 U
Aroclor-1254		**490**	36 U	**700**	36 U	400 U	35 U	39 U	37 U
Aroclor-1260		**3000**	36 U	**2600**	**71**	**11000**	**70**	**330**	**24 J**
Total Aroclors	25,000	**3,490**	0	**3,300**	**71**	**11,000**	**70**	**330**	**24 J**

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 1. Summary of Polychlorinated Biphenyl Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-36** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/10/97**	**SS-36** **1-2** **12/10/97**	**SS-37** **0-1** **12/10/97**	**SS-37** **1-2** **12/10/97**	**SS-37DUP** **0-1** **12/10/97**	**SS-37DUP** **1-2** **12/10/97**	**SS-38** **0-1** **12/10/97**	**SS-38** **1-2** **12/10/97**
Aroclor-1016		38 U	35 U	41 U	37 U	39 U	37 U	37 U	36 U
Aroclor-1221		38 U	35 U	41 U	37 U	39 U	37 U	37 U	36 U
Aroclor-1232		38 U	35 U	41 U	37 U	39 U	37 U	37 U	36 U
Aroclor-1242		38 U	35 U	41 U	37 U	39 U	37 U	37 U	36 U
Aroclor-1248		38 U	35 U	41 U	37 U	39 U	37 U	37 U	36 U
Aroclor-1254		**850**	35 U	**390**	**140**	**130**	**160**	**390**	**110**
Aroclor-1260		**520**	35 U	**680**	**330**	**270**	**340**	**1200**	**280**
Total Aroclors	25,000	**1,370**	0	**1,070**	**470**	**400**	**500**	**1,590**	**390**

µg/kg - Micrograms per kilogram
U - Compound was analyzed for but not detected
J - Estimated value

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:**	SS-1	SS-1	SS-2	SS-2	SS-3	SS-3	SS-4	SS-4	SS-5
		Sample depth (ft bls):	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1
		Sample Date:	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97
Benzo(a)anthracene			**620**	**63 J**	**700**	360 U	**640**	**29 J**	**110 J**	380 U	**490**
Benzo(a)pyrene			**780**	**73 J**	**740**	360 U	**690**	350 U	**110 J**	380 U	**590**
Benzo(b)fluoranthene			**1800**	**170 J**	1600	**44 J**	**1900**	**100 J**	**370**	**23 J**	**1900**
Benzo(k)fluoranthene			400 U	350 U	380 U	360 U	370 U	350 U	370 U	380 U	390 U
Chrysene			**710**	**70 J**	**800**	**18 J**	**830**	**40 J**	**160 J**	380 U	**780**
Dibenzo(a,h)anthracene			**150 J**	350 U	**120 J**	360 U	**220 J**	350 U	370 U	380 U	**91 J**
Indeno(1,2,3-cd)pyrene			**870**	**40 J**	**510**	360 U	**1000**	**22 J**	**86 J**	380 U	**470**
Total cPAHs	25,000		**4,930 J**	**416 J**	**2,870 J**	**62 J**	**5,280 J**	**191 J**	**1,206 J**	**23 J**	**4,321 J**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:**	**SS-5**	**SS-6**	**SS-6**	**SS-7**	**SS-7**	**SS-7DUP**	**SS-7DUP**	**SS-8**	**SS-8**
		Sample depth (ft bls):	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**
		Sample Date:	**12/8/97**	**12/8/97**	**12/8/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**
Benzo(a)anthracene			**23 J**	**48 J**	**36 J**	**690**	360 U	**1500**	370 U	**480**	**38 J**
Benzo(a)pyrene			370 U	390 U	400 U	**1200**	360 U	**1500**	370 U	**470**	**90 J**
Benzo(b)fluoranthene			**52 J**	**180 J**	**80 J**	**2000**	360 U	**2400**	370 U	**1600**	**160 J**
Benzo(k)fluoranthene			370 U	390 U	400 U	370 U	360 U	380 U	**20 J**	370 U	**160 J**
Chrysene			**23 J**	**81 J**	**27 J**	**960**	360 U	**1600**	370 U	**610**	**59 J**
Dibenzo(a,h)anthracene			370 U	390 U	400 U	**150 J**	360 U	**210 J**	370 U	**140 J**	**18 J**
Indeno(1,2,3-cd)pyrene			370 U	**60 J**	400 U	**320 J**	360 U	**450**	370 U	**300 J**	**39 J**
Total cPAHs	25,000		**98 J**	**369 J**	**143 J**	**5,320 J**	0	**7,660 J**	**20 J**	**3,600 J**	**564 J**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:**	**SS-9**	**SS-9**	**SS-10**	**SS-10**	**SS-11**	**SS-11**	**SS-12**	**SS-12**	**SS-13**
		Sample depth (ft bls):	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**
		Sample Date:	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**
Benzo(a)anthracene			**270 J**	**110 J**	**960**	**64 J**	**2000**	**67 J**	**600**	**81 J**	**1600**
Benzo(a)pyrene			**260 J**	**110 J**	**860**	**120 J**	**3200**	**130 J**	**550**	**23 J**	**2400**
Benzo(b)fluoranthene			**1200**	**500**	**2000**	**230 J**	**3200**	**230 J**	**2700**	**300 J**	2400
Benzo(k)fluoranthene			370 U	360 U	**1800**	380 U	**2500**	360 U	460 U	350 U	**2800**
Chrysene			**380**	**150 J**	**1400**	**110 J**	**2400**	**97 J**	**930**	**120 J**	2200
Dibenzo(a,h)anthracene			**78 J**	**46 J**	**260 J**	**27 J**	**680**	**37 J**	**200 J**	**19 J**	**370 J**
Indeno(1,2,3-cd)pyrene			**170 J**	**110 J**	**560**	**60 J**	**1400**	**72 J**	**440 J**	**41 J**	920
Total cPAHs	25,000		**2,358 J**	**1,026 J**	**7,840 J**	**611 J**	**15,380**	**633 J**	**5,420 J**	**584 J**	**7,170 J**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-13** **Sample depth (ft bls):** **1-2** **Sample Date:** **12/9/97**	**SS-14** **0-1** **12/9/97**	**SS-14** **1-2** **12/9/97**	**SS-15** **0-1** **12/9/97**	**SS-15** **1-2** **12/9/97**	**SS-16** **0-1** **12/9/97**	**SS-16** **1-2** **12/9/97**	**SS-17** **0-1** **12/9/97**	**SS-17** **1-2** **12/9/97**
Benzo(a)anthracene		**97 J**	**90 J**	350 U	**740**	**52 J**	**260 J**	340 U	**1200**	**29 J**
Benzo(a)pyrene		**180 J**	**74 J**	350 U	**1500**	**64 J**	**210 J**	340 U	**2900**	**27 J**
Benzo(b)fluoranthene		**330 J**	**260 J**	350 U	**1600**	**220 J**	**68 J**	340 U	**3000**	**190 J**
Benzo(k)fluoranthene		**330 J**	350 U	350 U	390 U	370 U	360 U	340 U	**2200**	350 U
Chrysene		**130 J**	**120 J**	350 U	1000	**80 J**	**530**	340 U	1900	**57 J**
Dibenzo(a,h)anthracene		**42 J**	**30 J**	350 U	**190 J**	**24 J**	**72 J**	340 U	**370 J**	**18 J**
Indeno(1,2,3-cd)pyrene		**110 J**	**59 J**	350 U	**400**	**48 J**	**160 J**	340 U	**810**	**39 J**
Total cPAHs	25,000	**1,219 J**	**633 J**	0	**4,430 J**	**488 J**	**1,300 J**	0	**10,480 J**	**360 J**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:**	**SS-18**	**SS-18**	**SS-19**	**SS-19**	**SS-20**	**SS-20**	**SS-21**	**SS-21**	**SS-22**
		Sample depth (ft bls):	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**
		Sample Date:	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**	**12/9/97**
Benzo(a)anthracene			**210 J**	**92 J**	**1200**	**51 J**	**780**	**64 J**	**440**	**30 J**	**1100**
Benzo(a)pyrene			**190 J**	**220 J**	**720**	360 U	**770**	360 U	**1200**	360 U	**950**
Benzo(b)fluoranthene			**870**	**490**	**2900**	**110 J**	**2200**	**140 J**	**1700**	**64 J**	**2800**
Benzo(k)fluoranthene			360 U	350 U	**2400**	**59 J**	**1300**	**91 J**	**660**	**35 J**	**2100**
Chrysene			**280 J**	**140 J**	**1600**	**54 J**	**1300**	**92 J**	**870**	**46 J**	**2000**
Dibenzo(a,h)anthracene			**79 J**	**44 J**	**420**	360 U	**540**	360 U	**320 J**	360 U	**780**
Indeno(1,2,3-cd)pyrene			**150 J**	**83 J**	**930**	**130 J**	**1400**	**62 J**	**860**	360 U	**2200**
Total cPAHs	25,000		**1,779 J**	**1,069 J**	**10,170**	**404 J**	**8,290**	**449 J**	**6,050 J**	**175 J**	**11,930**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:** **SS-22** **Sample depth (ft bls):** **1-2** **Sample Date:** **12/9/97**	**SS-23** **0-1** **12/10/97**	**SS-23** **1-2** **12/10/97**	**SS-24** **0-1** **12/9/97**	**SS-24** **1-2** **12/9/97**	**SS-25** **0-1** **12/10/97**	**SS-25** **1-2** **12/10/97**	**SS-26** **0-1** **12/10/97**	**SS-26** **1-2** **12/10/97**
Benzo(a)anthracene		**100 J**	**250 J**	**160 J**	**1600**	380 U	**1300**	370 U	**450**	380 U
Benzo(a)pyrene		360 U	**480**	140	**1500**	380 U	**1400**	370 U	**480**	**54 J**
Benzo(b)fluoranthene		**550**	**1100**	**360 J**	**3000**	380 U	**2900**	370 U	**1800**	**66 J**
Benzo(k)fluoranthene		**260 J**	370 U	55	**2600**	380 U	**3100**	370 U	380 U	380 U
Chrysene		**210 J**	**480**	**190 J**	**2900**	380 U	**1700**	370 U	**670**	**29 J**
Dibenzo(a,h)anthracene		360 U	**68 J**	**31 J**	**1100**	380 U	**370 J**	370 U	**130 J**	380 U
Indeno(1,2,3-cd)pyrene		**250 J**	**140 J**	60	**3000**	380 U	**750**	370 U	**270 J**	**24 J**
Total cPAHs	25,000	**1,370 J**	**2,518 J**	**741 J**	**15,700**	0	**11,520 J**	0	**3,800 J**	**173 J**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:**	SS-27	SS-27	SS-28	SS-28	SS-29	SS-29	SS-30	SS-30	SS-31
		Sample depth (ft bls):	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1
		Sample Date:	12/10/97	12/10/97	12/10/97	12/10/97	12/10/97	12/10/97	12/10/97	12/10/97	12/10/97
Benzo(a)anthracene			**78 J**	380 U	**400**	380 U	**430**	**45 J**	**1700**	**22 J**	**1400**
Benzo(a)pyrene			**120 J**	380 U	**730**	380 U	**410 J**	**42 J**	**530**	**42 J**	**1200**
Benzo(b)fluoranthene			**250 J**	380 U	**1600**	380 U	**1800**	**180 J**	**2700**	**78 J**	**2900**
Benzo(k)fluoranthene			**33 J**	380 U	360 U	380 U	410 U	380 U	**3200**	350 U	**2700**
Chrysene			**130 J**	380 U	**570**	380 U	**650**	**84 J**	**1900**	**31 J**	**1900**
Dibenzo(a,h)anthracene			**21 J**	380 U	**160 J**	380 U	**110 J**	**19 J**	**380 J**	350 U	**370 J**
Indeno(1,2,3-cd)pyrene			**42 J**	380 U	**310 J**	380 U	**230 J**	**39 J**	**890**	**25 J**	**800**
Total cPAHs	25,000		**674 J**	0	**3,770 J**	0	**3,630 J**	**409 J**	**11,300 J**	**198 J**	**11,270 J**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:**	**SS-31**	**SS-32**	**SS-32**	**SS-33**	**SS-33**	**SS-34**	**SS-34**	**SS-35**	**SS-35**
		Sample depth (ft bls):	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**
		Sample Date:	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**
Benzo(a)anthracene			**71 J**	**1100**	350 U	**3900 JD**	**140 J**	**2300**	**75 J**	**250 J**	370 U
Benzo(a)pyrene			**88 J**	**330 J**	350 U	**2200**	**170 J**	**2000**	**98 J**	**250 J**	370 U
Benzo(b)fluoranthene			**170 J**	**2200**	350 U	**8600 D**	**350 J**	**6600 D**	**190 J**	**750**	370 U
Benzo(k)fluoranthene			350 U	**2900**	350 U	**1000 JD**	350 U	400 U	350 U	390 U	**24 J**
Chrysene			**120 J**	**1300**	350 U	**5000 D**	**200 J**	**2600**	**100 J**	**310 J**	370 U
Dibenzo(a,h)anthracene			**20 J**	**340 J**	350 U	**520**	**39 J**	**450**	**25 J**	**76 J**	370 U
Indeno(1,2,3-cd)pyrene			**38 J**	**670**	350 U	**1100**	**74 J**	**880**	**48 J**	**150 J**	370 U
Total cPAHs	25,000		**507 J**	**8,840 J**	0	**22,320 D**	**973 J**	**14,830 D**	**536 J**	**1,786 J**	**24 J**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 2. Summary of Carcinogenic Polycyclic Aromatic Hydrocarbon Compound Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in µg/kg)	NYSDEC - Recommended Soil Cleanup Level (µg/kg)	**Sample Designation:**	**SS-36**	**SS-36**	**SS-37**	**SS-37**	**SS-37DUP**	**SS-37DUP**	**SS-38**	**SS-38**
		Sample depth (ft bls):	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**
		Sample Date:	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**
Benzo(a)anthracene			**490**	350 U	**280 J**	**120 J**	**260 J**	**190 J**	**500**	**210 J**
Benzo(a)pyrene			**120 J**	350 U	**260 J**	**110 J**	**240 J**	**200 J**	**500**	**70 J**
Benzo(b)fluoranthene			**1000**	350 U	**630**	**340 J**	**600**	**490**	**1300**	**550**
Benzo(k)fluoranthene			380 U	**20 J**	**85 J**	370 U	390 U	360 U	370 U	360 U
Chrysene			**490**	350 U	**340 J**	**160 J**	**300 J**	**240 J**	**530**	**240 J**
Dibenzo(a,h)anthracene			**77 J**	350 U	**66 J**	**28 J**	**60 J**	**39 J**	**120 J**	**55 J**
Indeno(1,2,3-cd)pyrene			**150 J**	350 U	**130 J**	**58 J**	**120 J**	**80 J**	**250 J**	**120 J**
Total cPAHs	25,000		**2,327 J**	**20 J**	**1,706 J**	**816 J**	**1,580 J**	**1,239 J**	**3,200 J**	**1,245 J**

µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
U - Compound was analyzed for but not detected
J - Estimated value
D - Sample reanalyzed due to one or more compounds having concentrations above the calibration range; compound(s) reported at higher dilution and designated D.
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

	Sample Designation:	SS-1	SS-1	SS-2	SS-2	SS-3	SS-3	SS-4	SS-4
	Sample Depth (ft bls):	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2
	Sample Date:	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97
Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)								
Lead	1,000	**865**	**55**	**387**	**8**	**36**	**72.5**	**257**	**13**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-5** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/8/97**	**SS-5** **1-2** **12/8/97**	**SS-5A** **0-1** **12/8/97**	**SS-5B** **0-1** **12/8/97**	**SS-5C** **0-1** **12/8/97**	**SS-5D** **0-1** **12/8/97**	**SS-6** **0-1** **12/8/97**	**SS-6** **1-2** **12/8/97**
Lead	1,000	**3,590**	**55**	**93**	**401**	**460**	**106**	**254**	**11.6**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-7** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/9/97**	**SS-7** **1-2** **12/9/97**	**SS-7DUP** **0-1** **12/9/97**	**SS-7DUP** **1-2** **12/9/97**	**SS-8** **0-1** **12/9/97**	**SS-8** **1-2** **12/9/97**	**SS-9** **0-1** **12/9/97**	**SS-9** **1-2** **12/9/97**
Lead	1,000	**246**	**5.4**	**169**	**5.3**	**299**	**58**	**78**	**30**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-10** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/9/97**	**SS-10** **1-2** **12/9/97**	**SS-11** **0-1** **12/9/97**	**SS-11** **1-2** **12/9/97**	**SS-12** **0-1** **12/9/97**	**SS-12** **1-2** **12/9/97**	**SS-13** **0-1** **12/9/97**	**SS-13** **1-2** **12/9/97**
Lead	1,000	**202**	**31.7**	**430**	**94.6**	**870**	**36**	**502**	**55**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-14** **Sample Depth (ft bls):** **0-1** **Sample Date:** **12/9/97**	**SS-14** **1-2** **12/9/97**	**SS-14** **0-1** **12/9/97**	**SS-15** **0-1** **12/9/97**	**SS-15** **1-2** **12/9/97**	**SS-16** **0-1** **12/9/97**	**SS-16** **1-2** **12/9/97**	**SS-17** **0-1** **12/9/97**
Lead	1,000	**14**	**79**	**14**	**166**	**22.9**	**158**	**3**	**341**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-17** **Sample Depth (ft bls):** **1-2** **Sample Date:** **12/9/97**	**SS-18** **0-1** **12/9/97**	**SS-18** **1-2** **12/9/97**	**SS-19** **0-1** **12/9/97**	**SS-19** **1-2** **12/9/97**	**SS-20** **0-1** **12/9/97**	**SS-20** **1-2** **12/9/97**	**SS-21** **0-1** **12/9/97**
Lead	1,000	**28**	**65**	**21**	**155**	**4.8**	**548**	**10**	**410**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-21** **Sample Depth (ft bls):** **1-2** **Sample Date:** **12/9/97**	**SS-22** **0-1** **12/9/97**	**SS-22** **1-2** **12/9/97**	**SS-23** **0-1** **12/10/97**	**SS-23** **1-2** **12/10/97**	**SS-24** **0-1** **12/9/97**	**SS-24** **1-2** **12/9/97**	**SS-25** **0-1** **12/10/97**
Lead	1,000	**17.3**	**318**	**39**	**165**	**61**	**145**	**6**	**266**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-25** **Sample Depth (ft bls):** **1-2** **Sample Date:** **12/10/97**	**SS-26** **0-1** **12/10/97**	**SS-26** **1-2** **12/10/97**	**SS-27** **0-1** **12/10/97**	**SS-27** **1-2** **12/10/97**	**SS-28** **0-1** **12/10/97**	**SS-28** **1-2** **12/10/97**	**SS-29** **0-1** **12/10/97**
Lead	1,000	**6**	**145**	**101**	**454**	**11**	**98.8**	**17**	**205**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-29** **Sample Depth (ft bls):** **1-2** **Sample Date:** **12/10/97**	**SS-30** **0-1** **12/10/97**	**SS-30** **1-2** **12/10/97**	**SS-31** **0-1** **12/10/97**	**SS-31** **1-2** **12/10/97**	**SS-32** **0-1** **12/10/97**	**SS-32** **1-2** **12/10/97**	**SS-33** **0-1** **12/10/97**
Lead	1,000	**27**	**197**	**4**	**362**	**15.3**	**259**	**2**	**303**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)	**Sample Designation:** **SS-33** **Sample Depth (ft bls):** **1-2** **Sample Date:** **12/10/97**	**SS-34** **0-1** **12/10/97**	**SS-34** **1-2** **12/10/97**	**SS-35** **0-1** **12/10/97**	**SS-35** **1-2** **12/10/97**	**SS-36** **0-1** **12/10/97**	**SS-36** **1-2** **12/10/97**	**SS-37** **0-1** **12/10/97**
Lead	1,000	**12**	**306**	**21.8**	**99.1**	**6**	**28**	**5**	**243**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

Table 3. Summary of Lead Concentrations Detected in Soil Samples Collected in OU-4, Sunnyside Yard, Queens, New York.

	Sample Designation:	SS-37	SS-37DUP	SS-37DUP	SS-38	SS-38
	Sample Depth (ft bls):	**1-2**	**0-1**	**1-2**	**0-1**	**1-2**
	Sample Date:	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**	**12/10/97**
Parameter (Concentrations in mg/kg)	NYSDEC - Recommended Soil Cleanup Level (mg/kg)					
Lead	1,000	**24**	**216**	**36**	**136**	**22**

mg/kg - Milligrams per kilogram
ft bls - Feet below land surface
DUP - Duplicate sample

APPENDIX A

APPENDIX A

Data Quality and Usability Report

Data Quality and Usability

An evaluation of the overall quality and usability of the data generated by Industrial Corrosion Management, Inc. (ICM) of Randolph, New Jersey for Operable Unit 4 to support the High Speed Trainset construction at Sunnyside Yard, Queens, New York was completed. Thirty eight soil borings were sampled from each of three intervals (i.e., 0 to 1 foot, 1 to 2 feet, 2 to 3 feet) However, only seventy six samples were analyzed based on the delineation results (i.e., below the cleanup levels). The soil samples were analyzed for polycyclic aromatic hydrocarbons (PAHs) (New York State Department of Environmental Conservation [NYSDEC] Analytical Services Protocol [ASP] 95-2), polychlorinated biphenyls (PCBs) (NYSDEC ASP 95-3), and/or lead (USEPA Contract Laboratory Statement of Work). An additional nine samples were collected and analyzed for PCBs only for delineation.

1.0 DATA REVIEW

The data review is presented by sampling parameter and evaluates the following criteria based on the laboratory documentation provided.

- Holding Times;
- GC/MS Instrument Performance Check;
- Initial Calibration;
- Continuing Calibration;
- Blanks;
- Surrogate Spikes;
- Matrix Spikes/Matrix Spike Duplicates/Matrix Spike Blanks;
- Sample Duplicates (inorganics);
- Laboratory Control Samples; and
- Internal Standards.

Data were reviewed for laboratory precision, accuracy, and completeness in accordance with the National Functional Guidelines for Organic Data Review, and the National Functional Guidelines for Inorganic Data Review, as well as the Region II Standard Operating Procedures.

1.1 Polycyclic Aromatic Hydrocarbons

Holding times were met for all sample processing. Initial and continuing calibration standards were within the required limits. The matrix spike blanks were also within the recommended limits. Method blanks and instrument performance checks were compliant with the protocol requirements.

Sample matrix spikes and duplicates were performed on samples SS-6 (0-1), SS-7 (0-1), SS-17 (1-2), SS-23 (0-1), SS-24 (0-1), and SS-36 (0-1). All recoveries and duplicate correlation values were within recommended limits in all samples except SS-6(0-1). The percent recovery (140 percent) and relative percent difference (80 percent) for Acenaphthene were outside the QC limits in the matrix spike duplicate. [Note: The relative percent difference (RPD)for pyrene in SS-36 (0-1) and SS-7 (0-1) were reported outside control limits; however the calculations were incorrect. The RPDs are within the correct ranges.] No qualification is necessary based on the MS/MSD alone.

Surrogate recoveries were within the recommended limits with the exceptions noted below.

Sample Number	Compound (Surrogate)	% Recovery	Control Limits
SS-6 (0-1)	Nitrobenzene-d5	229	23-120
SS-6 (1-2)	Nitrobenzene-d5	852	23-120
SS-3 (0-1)RE	Terphenyl-d14	138	18-137
SS-1 (0-1) RE	Terphenyl-d14	141	18-137
SS-5 (0-1)RE	Terphenyl-d14	159	18-137
SS-6 (0-1)MS	Nitrobenzene-d5	185	23-120
SS-6 (0-1)MSD	2-Fluorobiphenyl 2-Fluorophenol 2,4,6-Tribromophenol	117 152 305	30-11 525-121 19-122
SS-11 (0-1)	Terphenyl-d14	146	18-137
SS-7 (0-1)MS	Terphenyl-d14	142	18-137
SS-11 (0-1)RE	Terphenyl-d14	138	18-137
SS-8 (0-1)RE	2,4,6-tribromophenol	13651	19-122

Sample Number	Compound (Surrogate)	% Recovery	Control Limits
SS-24 (1-2)MS	2,4,6-tribromophenol	126	19 -122
	Terphenyl-d14	143	18-137
SS-26 (1-2)	2,4,6-tribromophenol	132	19-122
SS-24 (1-2)	2,4,6-tribromophenol	127	19-122
	Terphenyl-d14	143	18-137
SS-23 (0-1)	2,4,6-tribromophenol	4990	19- 122
SS-25 (0-1)	2,4,6-tribromophenol	5205	19-122
SS-26 (0-1)	2,4,6-tribromophenol	5562	19-122
SS-30 (0-1)	2,4,6-tribromophenol	6233	19-122
	Terphenyl-d14	154	18-137
SS-29 (0-1)	2,4,6-tribromophenol	6137	19-122
	Terphenyl-d14	151	18-137
SS-28 (0-1)	2,4,6-tribromophenol	8069	19-122
SS-25 (0-1)RE	2,4,6-tribromophenol	11546	19-122
SS-26 (0-1)RE	2,4,6-tribromophenol	11265	19-122
SS-29 (0-1)RE	2,4,6-tribromophenol	12955	19-122
SS-30 (0-1)RE	2,4,6-tribromophenol	284	19-122
	Terphenyl-d14	165	18-137
SS-31 (1-2)	2,4,6-Tribromophenol	5877	19-122
SS-33 (1-2)	2,4,6-Tribromophenol	6846	19-122
SS-34 (1-2)	2,4,6-Tribromophenol	5862	19-122
SS-35 (1-2)	2,4,6-Tribromophenol	6301	19-122
SS-31 (0-1)	2,4,6-Tribromophenol	5651	19-122
SS-36 (1-2)	2,4,6-Tribromophenol	289	19-122
SS-37 (0-1)	2,4,6-Tribromophenol	294	19-122
SS-37 (0-1)D	2,4,6-Tribromophenol	333	19-122
SS-38 (1-2)	2,4,6-Tribromophenol	300	
SS-37 (1-2)	2,4,6-Tribromophenol	294	19-122
SS-37 (1-2)D	2,4,6-tribromophenol	305	19-122
SS-38 (0-1)	2,4,6-tribromophenol	250	19-122
SS-36 (0-1)	2,4,6-tribromophenol	318	19-122
SS-33 (0-1)	2,4,6-tribromophenol	343	19-122
	Terphenyl-d14	155	18-137
SS-32 (0-1)	2,4,6-tribromophenol	334	19-122
	Terphenyl-d14	147	18-137
SS-35 (0-1)	2,4,6-tribromophenol	321	19-122
	Terphenyl-d14	141	18-137
SS-34 (0-1)	2,4,6-tribromophenol	269	19-122
	Terphenyl-d14	148	18-137
SS-32 (1-2)	2,4,6-tribromophenol	76650	19-122
SS-33 (0-1)DL	2,4,6-tribromophenol	14744	19-122
SS-34 (0-1)DL	2,4,6-tribromophenol	57214	19-122
SS-36 (0-1)MS	2,4,6-tribromophenol	73937	19-122

Sample Number	Compound (Surrogate)	% Recovery	Control Limits
SS-36 (0-1)MSD	2,4,6-tribromophenol	67424	19-122
SS-31 (0-1)RE	2,4,6-tribromophenol	12513	19-122
SS-32 (0-1)RE	2,4,6-tribromophenol Terphenyl-d14	15166 176	19-122 18-137
SS-34 (0-1)RE	2,4,6-tribromophenol Terphenyl-d14	13895 176	19-122 18-137
SS-35 (0-1)RE	2,4,6-tribromophenol Terphenyl-d14	10175 170	19-122 18-137
SS-33 (0-1)RE	2,4,6-tribromophenol Terphenyl-d14	1604 206	19-122 18-137

Data are not qualified with respect to surrogate recovery unless two or more semivolatile surrogates within the same fraction are out of specification. As the acid extractable compounds are not required for this project, and no two base neutral surrogates are out of compliance, no action is required and the data are not qualified.

Standard area responses/retention times were within the recommended limits with the exceptions noted below.

Sample Number	Initial Analysis	Reanalysis
SS-7 (0-1)	chrysenes-d12/perylene-d12	perylene-d12
SS-7 (0-1)D	chrysene-d12/perylene-d12	perylene-d12/phenanthrene-d10
SS-9 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-8 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-11 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-12 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-7 (0-1)MSD	perylene-d12*	not reanalyzed (used as MSD)
SS-25 (0-1)	perylene-d12	perylene-d12
SS-26 (0-1)	perylene-d12	perylene-d12
SS-30 (0-1)	chrysene-d12/perylene-d12	perylene-d12*
SS-29 (0-1)	perylene-d12	perylene-d12
SS-13 (0-1)	chrysene-d12/perylene-d12	perylene-d12*
SS-15 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-16 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-17 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-19 (0-1)	perylene-d12	perylene-d12
SS-6(0-1)	perylene-d12*	chrysene-d12/perylene-d12*
SS-6 (1-2)	perylene-d12	naphthalene-d8/acenapththene-d10
SS-5 (0-1)	perylene-d12	perylene-d12
SS-1 (0-1)	chrysene-d12/perylene-d12	chrysene-d12/perylene-d12

Sample Number	Initial Analysis	Reanalysis
SS-2 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-3 (0-1)	chrysene-d12/perylene-d12	perylene-d12
SS-31 (0-1)	perylene-d12	perylene-d12
SS-33 (0-1)	perylene-d12	perylene-d12
SS-32 (0-1)	perylene-d12	perylene-d12*
SS-35 (0-1)	perylene-d12	perylene-d12*
SS-34 (0-1)	perylene-d12	perylene-d12*
*also included elevated standards for 1,4-dichlorobenzene-d4, naphthalene-d8, acenaphthene-d10, and/or phenanthrene-d10.		

The semivolatile analysis of samples produced depressed responses for internal standards indicating a matrix effect. These samples were reanalyzed and produced the same depressed responses. Detected values for these samples should be qualified as estimated and reported detection limits for these samples should be considered estimated, possibly biased low.

1.2 Polychlorinated biphenyls

Holding times were met for all sample processing. Method blank, initial and continuing calibration standards were compliant with protocol requirements. Sample matrix spikes and duplicates were performed on samples SS-23 (0-1), SS-16 (1-2), TTS-2, SS-20 (1-2), SS-5 (1-2) and SS-35 (1-2). All recoveries and duplicate correlation values were within recommended limits with the exceptions listed below.

Sample Number	Analyte	Percent Recovery MS/MSD	Control Limit
SS-23 (0-1)	Dieldrin	151/137	31-134
	Endrin	151	42-139
	4,4'-DDT	178/164	23-134
SS-16 (1-2)	gamma BHC	176/165	46-127
	Heptachlor	147/135	35-130
	Aldrin	159/147	34-132
	Dieldrin	168/158	31-134
	Endrin	197/188	42-139
	4,4'-DDT	194/179	23-134

Sample Number	Analyte	Percent Recovery MS/MSD	Control Limit
TTS-2	Aldrin	189/137	34-132
	Dieldrin	189/184	31-134
	Endrin	184/184	42-139
	4,4'-DDT	395/368	23-134
SS-20 (1-2)	gamma BHC	122/128	46-127
	Endrin	139/142	42-139
SS-22 (0-1)	Aldrin	95/140	34-132
	Dieldrin	182/213	31-134
	Endrin	121/141	42-139
	4,4'-DDT	141/172	23-134

No action is taken on the MS/MSD results alone, and pesticides are not constituents of concern; therefore, no qualification is necessary. Matrix spike blank and QC check standard recoveries were within the required range with the exception of the QA/QC samples for SS-16 (1-2) and SS-5 (1-2). The Aroclor 1260 recovery was 158 and 161, respectively which is outside the acceptable range (37-140).

Surrogate standard recoveries met protocol requirements with the exceptions provided.

Sample	Compound	% Recovery	Control Limits
SS-7-12	Tetrachloro-m-xylene (TCX)	561	30-150
SS-7-12D	TCX	351	30-150
SS-9 (0-1)	TCX	342	30-150
SS-9 (1-2)	TCX	635	30-150
SS-8 (1-2)	TCX	427	30-150
SS-10 (1-2)	TCX	349	30-150
SS-11 (1-2)	TCX	519	30-150
SS-12 (1-2)	TCX/DCB	630/154	30-150
SS-7 (0-1)	TCX	525	30-150
SS-7 (0-1) D	TCX	314	30-150
SS-8 (0-1)	TCX/DCB	682/167	30-150
SS-10 (0-1)	TCX	609	30-150
SS-11 (0-1)	TCX	391/226*	30-150
SS-12 (0-1)	TCX/DCB	342/207	30-150
SS-7 (0-1) DL	TCX/DCB	443/164	30-150
SS-7D (0-1) DL	TCX/DCB	274/167	30-150
SS-8 (0-1) DL	TCX	631	30-150
	DCB	210/155*	

Sample	Compound	% Recovery	Control Limits
SS-11 (0-1) DL	TCX DCB	350 268/375*	30-150
SS-10 (0-1) DL	TCX	534	30-150
SS-12 (0-1) DL	TCX DCB	317 281/327*	30-150
Blank Spike	TCX	324	30-150
SS-25 (1-2)	TCX	29	30-150
SS-27 (0-1)	TCX	24/19*	30-150
SS-29 (0-1)	TCX DCB	163/159* 177/169*	30-150
SS-29 (1-2)	TCX	155/151*	30-150
SS-25 (0-1)	DCB	157/156*	30-150
SS-26 (0-1)	DCB	163	30-150
SS-28 (0-1)	DCB	155	30-150
SS-25 (0-1) DL	DCB	173	30-150
SS-30 (0-1)	DCB	179	30-150
SS-23 (MS)	TCX DCB	169/169* 178/172*	30-150
SS-23 (MSD)	TCX DCB	169/163* 192/169*	30-150
SS-13 (1-2)	TCX	157/156*	30-150
SS-14 (1-2)	TCX	151/152*	30-150
SS-18 (0-1)	TCX	151	30-150
SS-13 (0-1) DL	TCX DCB	168 269/223*	30-150
SS-15 (0-1) DL	TCX DCB	169 204/162*	30-150
SS-16 (0-1) DL	TCX DCB	151 159	30-150
SS-17 (0-1) DL	TCX DCB	204/158* 347/319*	30-150
SS-19 (0-1) DL	DCB	757	30-150
SS-15 (0-1)	TCX DCB	171/167* 166/177*	30-150
SS-16 (0-1)	DCB	179/173*	30-150
SS-13 (0-1)	DCB	210/235*	30-150
SS-17 (0-1)	TCX DCB	174/173* 280/341*	30-150
SS-19 (0-1)	TCX DCB	153/153* 208/235*	30-150
SS-22 E 15	DCB	159/179	30-150
SS-22 E 30	DCB	218/200	30-150
SS-19 W 30 DL	DCB	153	30-150

Sample	Compound	% Recovery	Control Limits
SS-22 W 30 DL	DCB	195	30-150
SS-22 E 15 DL	DCB	201/198	30-150
SS-22 E 30 DL	DCB	217/202	30-150
PBLK	TCX DCB	264/297* 229/236*	30-150
SS-20 (0-1)	TCX DCB	225/208 189	30-150
SS-22 (0-1)	TCX DCB	448/572 460	30-150
SS-24 (0-1)	TCX DCB	625/513* 417/197*	30-150
SS-22 (0-1) DL	TCX DCB	500 442	30-150
SS-24 (0-1) DL	TCX DCB	661/158* 637	30-150
Blank Spike	TCX	339	30-150
QA/QC	TCX DCB	730/166* 158	30-150
SS-1 (0-1)	TCX DCB	13 26/18*	30-150
SS-3 (0-1) DL	DCB	160/174*	30-150
SS-2 (0-1) DL	DCB	156	30-150
SS-3 (0-1) DL	DCB	200/173*	30-150
SS-38 (1-2)	TCX	21	30-150
SS-35 (2-3)	TCX DCB	2/2* 13/12*	30-150
SS-33 (1-2)	TCX	28	30-150
SS-34 (1-2)	TCX	5/5*	30-150
SS-35 (0-1)	TCX	17/16	30-150
SS-31 (0-1)	DCB	247/260	30-150
SS-32 (0-1)	DCB	308/242*	30-150
SS-33 (0-1)	DCB	234/286*	30-150
SS-31 (0-1) DL	DCB	355/283	30-150
SS-34 (0-1)	TCX DCB	164 509/0*	30-150
SS-32 (0-1) DL	DCB	497/287	30-150
SS-33 (0-1) DL	DCB	453/429*	30-150
SS-34 (0-1) DL	TCX DCB	186 547/154*	30-150
*Both columns			

The high recoveries of these surrogates indicates a high bias due to co-eluting interferences. All detected PCBs are qualified as estimated; nondetects are not qualified. All retention times were within the control limits.

1.3 Lead

Holding times, calibration criteria, method blanks, laboratory control samples, and sample duplicates were compliant with protocol requirements. Matrix spike recoveries met protocol requirements with the following exceptions:

Sample Number	Percent Recovery	Relative Percent Difference	Control Limits
SS-12 (1-2)	1078.4	2.1	75-125
SS-14 (0-1)	431.5	29	75-125
SS-30 (0-1)	40.2	0.8	75-125
SS-37 (0-1)	48.2	1.4	75-125
SS-38 (0-1)	71.5	1.5	75-125

In accordance with the Region II SOWs, the spike recovery limits do not apply when sample concentrations exceed the spike concentration by a factor of four or greater. Data shall be reported unflagged even when the percent recovery does not meet acceptance criteria.

2.0 OVERALL DATA QUALITY/USABILITY ASSESSMENT

Based upon the evaluation of the data, and a review of laboratory and field QA/QC, the chemical data generated have generally met the data quality objectives established for the sampling.

2.1 Precision

The overall precision review was based upon laboratory samples. A review of laboratory duplicate samples, as measured by the sample duplicates SS-7 (0-1), SS-7 (1-2), SS-37 (0-1), and SS-37 (1-2), and MS/MSD results demonstrates adequate reproduction of all sample results when detectable concentrations of analytes were present. Only one field duplicate sample (SS-37 [0-1]) exceeded 50 percent difference for Aroclor 1254 (66.7%) and Aroclor 1260 (60%). However, no qualification is required.

2.2 Accuracy

The accuracy of the chemical data generated was reviewed based on the results for holding times, laboratory control samples, calibration criteria, spiked samples, and surrogate standards. Based upon this review, the accuracy of the chemical analyses is acceptable.

2.3 Completeness

The data completeness as measured by the percentage of overall usable data is considered acceptable based on the data review.

APPENDIX B

APPENDIX B

Disposal Manifests

42-14-1 (9/94)—7f

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS SUBSTANCES REGULATION

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type. Do not Staple.

Form Approved. OMB No. 2050-0039. Expires 9-30-96

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.Y. Dept. of Environmental Conservation (518) 457-7362.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No.: NYD078516895 Manifest Document No.: 15316
2. Page 1 of 1
Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address: National Railroad Passenger Corp.
400 W. 31st Street
Sixth Floor
New York, NY 10002
Attn: R. Mohlenhoff

4. Generator's Phone (212) 630-6215

A. State Manifest Document No. NY B 801651 6

B. Generator's ID: 39-29 Honeywell Street, Long Island City, NY

5. Transporter 1 (Company Name): Horwith Trucks Inc
6. US EPA ID Number: PAD 146714878

C. State Transporter's ID: [illegible]
D. Transporter's Phone: [illegible]

7. Transporter 2 (Company Name)
8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address:
CWM Chemical Services LLC
1550 Balmer Road
Model City, NY 14107

10. US EPA ID Number: NYD049836679

G. State Facility's ID
H. Facility's Phone: 716 754-8231

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS, MIXTURE, 9, UN2315, PGIII (SOLID)	001	DT	20000	K	EPA: NONE; STATE: B007
b.					EPA; STATE
c.					EPA; STATE
d.					EPA; STATE

J. Additional Descriptions for Materials listed Above: (a) PCB Cont. Soil (>50ppm PCB, NOKEF PCB2)

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information:
11a BS1293 ERG# 171 IN CASE OF SPILL, DIKE AND CONTAIN.
Out of Service Date: 03/30/98 IN CASE OF EMERGENCY, CALL: 1-800-645-8265
Slot # 427672-3 CD REQUIRED WO# HS5247
81483195

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR If I am a small generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: [illegible] Signature: [signature] Mo. Day Year: [illegible] 98

17. Transporter 1 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: FRANK MARZIANI Signature: [signature] Mo. Day Year: 033098

18. Transporter 2 (Acknowledgement or Receipt of Materials)
Printed/Typed Name Signature Mo. Day Year

19. Discrepancy Indication Space: wt est generator revised actual recvd 15840K Item K-[illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: EILEEN CARTER Signature: [signature] Mo. Day Year: 033198

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

COPY 5—Generator—mailed by TSD facility

48-14-1 (9/94)—7f

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS SUBSTANCES REGULATION

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type. Do not Staple.

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No. NYD078516895 Manifest Document No. 18577
2. Page 1 of 1

Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address: National Railroad Passenger Corp. Attn: R. Mohlenhoff, 400 W. 31st Street, Sixth Floor, New York, NY 10002

A. State Manifest Document No. NY B 801657 9

B. Generator's ID: 39-29 Honeywell Street, Long Island City, NY

4. Generator's Phone (212) 630-6215

5. Transporter 1 (Company Name): Horwith Trucks Inc
6. US EPA ID Number: PAD146714878

C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 (Company Name)
8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address: CWM Chemical Services LLC, 1550 Balmer Road, Model City, NY 14107
10. US EPA ID Number: NYD049836679

G. State Facility's ID
H. Facility's Phone (716) 754-8231

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS, MIXTURE, 9, UN2315, PGIII (SOLID)	001	DT	30000	K	EPA: NONE; STATE: B007
b.					EPA; STATE
c.					EPA; STATE
d.					EPA; STATE

J. Additional Descriptions for Materials listed Above: (SA) PCB Cont. Soil (>50ppm PCB, NODEF PCB2)

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information:
11a BS1293 ERG# 171 IN CASE OF SPILL, DIKE AND CONTAIN.
Out of Service Date: 03/30/98 IN CASE OF EMERGENCY, CALL: 1-800-645-8265.
Slot # 427672-2 CD REQUIRED WO# MS5247

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: MP MARINO Signature: [signature] Mo. Day Year: 3 30 98

17. Transporter 1 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: RAymond S Beck Signature: Raymond S Beck Mo. Day Year: 03 30 98

18. Transporter 2 (Acknowledgement or Receipt of Materials)
Printed/Typed Name Signature Mo. Day Year

19. Discrepancy Indication Space: out. est quantity received actual received 22444K

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: ELLEN CARTER Signature: Ellen Carter Mo. Day Year: 03 31 98

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.Y. Dept. of Environmental Conservation (518) 457-7362.

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

COPY 5—Generator—mailed by TSD facility

46-14-1 (9/94)—7f

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS SUBSTANCES REGULATION

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type. Do not Staple.

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No.: NYD#785168895 — Manifest Document No.: 15561
2. Page 1 of 1

Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address: National Railroad Passenger Corp., Attn: R. Mohlenhoff, 400 W. 31st Street, Sixth Floor, New York, NY 10002
4. Generator's Phone (212) 630-6215

A. State Manifest Document No.: NY B 801656 1

B. Generator's ID: 39-29 Honeywell Street, Long Island City, NY

5. Transporter 1 (Company Name): Horwith Trucks Inc.
6. US EPA ID Number: PAD146714878

C. State Transporter's ID: TG7705 PA

D. Transporter's Phone: 610-261-[illegible]

7. Transporter 2 (Company Name):
8. US EPA ID Number:

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: CWM Chemical Services LLC, 1550 Balmer Road, Model City, NY 14107
10. US EPA ID Number: NYD#49836679

G. State Facility's ID

H. Facility's Phone: 716 754-8231

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS, MIXTURE, 9, UN2315, PGIII (SOLID)	001	DT	20000	K	EPA: NONE; STATE: B007
b.					EPA / STATE
c.					EPA / STATE
d.					EPA / STATE

J. Additional Descriptions for Materials listed Above: (S-T) PCB Cont. Soil (>50ppm PCB, MODEF PCB2)

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information:
11a BS1293 ERG# 171 IN CASE OF SPILL, DIKE AND CONTAIN.
Out of Service Date: 03/30/98 IN CASE OF EMERGENCY, CALL: 1-800-645-8265.
Slot # 427672 CD REQUIRED WO# HS5247
8143172

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: [illegible] — Signature: [signature] — Mo. Day Year: 03 30 98

17. Transporter 1 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: Richard Kall — Signature: [signature] — Mo. Day Year: 03 30 98

18. Transporter 2 (Acknowledgement or Receipt of Materials)
Printed/Typed Name — Signature — Mo. Day Year

19. Discrepancy Indication Space: [illegible] actual recd 22353K item K-1a

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Eileen Carter — Signature: Eileen Carter — Mo. Day Year: 03 31 98

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.Y. Dept. of Environmental Conservation (518) 457-7362.

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

COPY 5—Generator—mailed by TSD facility

APPROVAL NUMBER: _____ MANIFEST NUMBER: 34533

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane • P.O. Box 1049
New Castle, Delaware 19720-1049
Ph: 302.427.6633 • Fax: 302.427.6634
An Equal Opportunity Employer

MS5294

(TYPE OR PRINT CLEARLY)

Non-Hazardous Material Manifest

GENERATOR'S NAME & MAILING ADDRESS: ~~NATIONAL RAILROAD MAILING CORP.~~

400 WEST 31ST ST., 6TH FLOOR

NEW YORK, NY 10001

~~212 630-6215~~

GENERATOR'S PHONE: (212) 630-6215

GENERATOR'S SITE ADDRESS:

~~39-29 HONEYWELL ST.~~

~~LONG ISLAND CITY, NY 11101~~

DESCRIPTION OF MATERIAL:

Non DOT Regulated - RCRA Non-Hazardous
Petroleum Hydrocarbon Contaminated Soil

Quantity (estimated per truck) 22 Tons

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR Part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is property classified and packaged for transportation in accordance with applicable regulations.

Name: Augustine Juliano Title: Sr. Project Engineer

Signature: _____ Date: 4/15/98

TRANSPORTER

Company: Hal Nab Phone Number: _____

Address: Seaford De.

Driver: ADAM (TYPE OR PRINT CLEARLY) DE SW Haulers Permit # SW DE 070

I hereby certify that the above named material was picked up at the site listed above

Driver Signature: _____ Date: 4-15-98

DESTINATION

I hereby certify that the above named material was delivered without incident to the Clean Earth of New Castle, Inc. facility at Pyles Lane, New Castle, Delaware.

Driver Signature: _____ Date: 4/15/98

I hereby certify that the above named material has been accepted at Clean Earth of New Castle, Inc.

Authorized Signature: _____ Date: 4/15/98

Gross Weight: 87940 lb 02:09 PM 04/15/98

Tare Weight: ~~26340 lb 02:27 PM~~ 04/15/98

Net Weight In Tons: 30.80

CLEAN EARTH OF NEW CASTLE, INC.
[illegible] Pyles Lane
New Castle, DE 19720
(302) 427-[illegible]

INCOMING LOAD TICKET

Date	4/15/98
Time	2:05 PM
Ticket #	38872
Approval #	970518

Type of Material	Gross	Tare	Net Tons	#Drums
WASTE OIL CONTAMINATION	87,940	26,540	30.80	

WM ID#	48	JOSH LEONARD
Bill of Lading#		
Manifest#	34535	
St. Manifest#		

Signature: [signature]

Trans. ID#	32	
Transporter	HAB NAB TRUCKING, INC.	DE-Sw Permit # 070
Trans. Addr.	P.O.BOX 420 1129A BRICKYARD ROAD SEAFORD, DE 19973	

Driver	BASSUTO	Truck #	1
Customer	CLEAN HARBORS		
Generator	NATIONAL RAILROAD PASSENGER CORP.		
Generator Site	39-29 HONEYWELL STREET LONG ISLAND CITY, NY 11101		
Contact 1	LARRY PEDERSEN	908-248-1997	
Contact 2			
NOTES 1:			
NOTES 2:			

THANK YOU

PLATES

HONEYWELL STREET

SS-1
SS-2
SS-3
SS-4
SS-5
SS-6
SS-7
SS-8
SS-9
SS-10
SS-11
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SS-37
SS-38

GATE

43RD STREET

39TH STREET

SKILLMAN AVENUE

N

100' 0 100'

LEGEND

SS-37 ● LOCATION AND DESIGNATION OF SOIL SAMPLE

AREA REMEDIATED

OUTLINE OF OPERABLE UNITS 1 THROUGH 3

Title:

SUMMARY OF SOIL SAMPLE AND REMEDIATION LOCATIONS IN OPERABLE UNIT 4

SUNNYSIDE YARD
QUEENS, NEW YORK

Prepared For:

AMTRAK

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: H.G.	Date: 5/98	PLATE
Prepared by: G.M.	Scale: AS SHOWN	1
Project Mgr: H.G.	Office: NY	
File No: A5217601	Project: 05552Y04	