PROPOSED REMEDIAL ACTION PLAN

Amtrak Sunnyside Yard
Operable Unit Number: 05
State Superfund Project
Long Island City, Queens County
Site No. 241006
February 2012

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Remedial Action Plan (PRAP). The disposal of hazardous wastes at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. The proposed remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for the preferred remedy.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

Queens Public Library
Sunnyside Branch
43-06 Greenpoint Avenue
Long Island City, NY 11101
Phone: (718) 784-3033

A public comment period has been set from:

2/17/2012 to 3/19/2012

A public meeting is scheduled for the following date:

3/8/2012 at 7:00 PM

Public meeting location:

NYSDEC Annex Bldg., 11-15 47th Ave., Long Island City, NY

At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 3/19/2012 to:

Hasan Ahmed
NYS Department of Environmental Conservation
Division of Environmental Remediation
One Hunters Point Plaza 47-40 21st Street
Long Island City, NY 11101
hrahmed@gw.dec.state.ny.us

The Department may modify the proposed remedy or select another of the alternatives presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:

Sunnyside Yard (the Site) is located at 39-29 Honeywell Street, Long Island City, Queens County, New York.

Site Features:
The Site is a railroad maintenance and storage facility that currently encompasses approximately 133 acres. Newtown Creek, which defines the border between Queens and Kings Counties, is located less than 0.5 mile south of the western portion of the Site. The Site is bordered by commercial/residential properties, with Northern Boulevard located to the north, 42nd Place located to the east, Thompson Avenue to the west, and Skillman Avenue located to the south.

Current Zoning/Use:
The Site is located in Manufacturing Zone (M1-1) and used as a railroad maintenance and storage facility

Historic Use:
The Yard was originally constructed in the early 1900's by the Pennsylvania Tunnel and Terminal Company, a subsidiary of Pennsylvania Railroad (later known as the Penn Central Transportation Company). On Aprill 1, 1976, the Consolidated Rail Corporation (Conrail) acquired the Site, and the same day conveyed it to AMTRAK, which has continued to operate it as a storage and maintenance facility for railroad rolling stock. Prior to September 29, 1961, a portion of the yard was owned by Long Island Rail Road (LIRR). Today, the LIRR maintains a right-of-way through the Yard. The Long Island Railroad (LIRR) is constructing tunnels through the Yard as part of its East Side Access (ESA) project. An extensive cleanup program was completed in 1996 to remove PCB contaminated sediment from impacted sewer manholes with subsequent sampling to identify sewer segments and manholes with recurring PCB contaminated sediment impacts.

Operable Units:
The site is divided into six operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. The operable units for this site are:

Operable unit 1 (OU1) is the soil above the water table within the footprint of the High Speed Trainset Facility Service and Inspection (HSTF S and I) Building.

Operable unit 2 (OU2) is the soil above the water table within the footprint of the HSTF S and I Building ancillary structures.

Operable unit 3 (OU3) is the soil and separate phase petroleum hydrocarbon accumulation above the water table and soil below the water table within 8 acres in the north central portion of the Site.

Operable unit 4 (OU4) is the soil above the water table (unsaturated zone) at the Site, excluding OU-1, OU-2, and OU-3.

Operable unit 5 (OU5) is the sewer system (water and sediment) beneath the Site.

Operable unit 6 (OU6) is the groundwater and saturated soil beneath the Site.

Site Geology and Hydrology:
Historic fill on the Site is predominantly comprised of reworked glacial deposits (unstratified sand, silt, clay and gravel) and railroad ballast, with lesser amounts of ash, cinders and construction debris. With the exception of paved areas, land occupied by buildings, and vegetated areas, the railroad ballast is ubiquitous at the land surface throughout the Site.

Groundwater beneath the Site occurs in fill deposits, wetlands, or the Upper Pleistocene glacial deposits. The saturated Upper Pleistocene deposits comprise the Upper Glacial aquifer. The depth to groundwater across the Site varies from one to fifteen feet below ground surface.

Groundwater within the shallow deposits flows predominantly west across the Site. However, groundwater between Queens Boulevard and Honeywell Street flows northerly and northwesterly toward the buried flow path of the Dutch Kills Creek and/or East River. In the deeper deposits, groundwater predominantly flows west across the Site.

Operable Unit (OU) Number 05 is the subject of this document.

A Record of Decision was issued previously for OU 01,02,03,04,06.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to industrial use as described in Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

Amtrak and New Jersey Transit Corp

A Remedial Design/Remedial Action Order on Consent and Administrative Settlement lndex No. W2-0081-08-10 was executed on April 15, 2010, which supersedes the Remedial Investigation/Feasibility Study Order on Consent, Index No. W2-008187-06 dated September 21, 1989, amended August 25, 1993 and February 4, 1998.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Information

The analytical data collected on this site includes data for:

- sediment

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified for this Operable Unit at this site is/are:

Polychlorinated Biphenyls (PCB)

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

- sediment

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

IRM Manhole MH-6

In October of 2011, remediation and rehabilitation activities in MH-6 was undertaken. This work included the removal of sediment and water through the use of a vacuum truck. Further, all relic, inactive pipes entering MH-6 were sealed using inflatable packers followed by plugging with concrete. Additionally, cracks within MH-6 were sealed in an effort to reduce groundwater infiltration into the manhole. A post remediation water sample was collected from the bottom of MH-6 and submitted for PCB analysis. PCBs were not detected in this sample, confirming that remediation activities in MH-6 were effective.

6.3: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Groundwater in the area of the site is not used as a source of potable water. Access to the site is controlled, preventing trespassers from coming in contact with contaminated soils.

6.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 05.

Nature and Extent of Contamination:

Operable Unit 5:

Sewer Sediment: PCBs were detected in 29 samples of sediment from the sewers at concentrations ranging from 0.053 mg/kg at MH-69 to 120 mg/kg at MH-6. PCB concentrations at MH-6 (one sample) and MH-38 (two samples) exceeded the 25 mg/kg NYSDEC-approved site specific soil cleanup level. MH-6 has been remediated as an IRM in October 2011.

Sewer Water: Discrete water samples (filtered and unfiltered) were collected from 12 manhole locations and analyzed for PCBs during performance of the OU-5 RI. PCBs were detected in 17 of 39 unfiltered samples with concentrations ranging from 0.14 ug/L to a high of 83 ug/L. Five of the unfiltered samples, one from MH-3, three from MH-6 and one from MH-40 exceeded the 1 ug/L waste water effluent limit. The waste water effluent limit is appropriate since the sewer discharges to a Waste Water Treatment Plant. Only one of the 39 filtered samples (MH-3) contained PCBs at a concentration (1.8 ug/L) slightly exceeding the 1 ug/L waste water effluent limit.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Sediment

RAOs for Public Health Protection

- Prevent direct contact with contaminated sediments.

RAOs for Environmental Protection

- Restore sediments to pre-release/background conditions to the extent feasible.

SECTION 7: SUMMARY OF THE PROPOSED REMEDY

To be selected, the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. The remedy must also attain the remedial action objectives identified for the site, which are presented in

Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the FS report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved. A summary of the Remedial Alternatives Costs is included as Exhibit C.

The basis for the Department's proposed remedy is set forth at Exhibit D.

The estimated present worth cost to implement the remedy is $947,000. The cost to construct the remedy is estimated to be $927,000 and the estimated average annual cost is $20,000.

The elements of the proposed remedy are as follows:

1. Remedial Design:

A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Conserving and efficiently managing resources and materials;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Sediment and Sewer Water Removal:

A weir located in a vault nearby and just downstream of MH-40 serves as a sediment trap, collecting impacted sediments at this location. In addition, manhole MH-40 represents the collection point for the three sewer legs containing the manholes of concern and it is the furthest downstream manhole located in OU-5. This weir will continue to operate as a sediment trap. MH-38 and MH-40 are the key locations for remediation.

All sediment and water present within manholes MH-38 and MH-40 (including the aforementioned weir) will be removed using a combination of hydraulic jetting coupled with mechanical vacuum recovery. Hydraulic (jetting) of sewer manholes and sediment removal utilize high water velocity to clean the sewer interior walls and manhole structure. Hydraulic jetting directs a high pressure stream of water directly at the interior surfaces to be cleaned. Jetting equipment is most often teamed with a high-powered vacuum unit that mechanically

removes and containerizes the waste from the manhole location. Jetting is commonly used for relatively small diameter, low flow sewers.

Site-specific soil cleanup objectives (SCOs) relevant to the planned use of the site will be used to guide removal of contaminated sewer sediment. On-site sediment and water which exceed site-specific SCOs will be excavated and transported off-site for disposal. The site-specific SCOs are: 25 mg/kg for total PCBs in sediment and 1 µg/l for total PCBs in sewer water.

Approximately 11,000 gallons of PCB contaminated sediment and water will be removed and disposed of in accordance with all federal, state and local rules and regulations.

3. Institutional Control:

Imposition of an institutional control in the form of an environmental easement, upon remediation of the entire site, to include the controlled property that:

- requires the site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYC DOH;
- prohibits agriculture or vegetable gardens on the controlled property; and
- requires compliance with the Department approved Site Management Plan.

4. Site Management Plan:

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed above, notification to all parties of contamination existing in the sewers.

Engineering Controls: The existing site perimeter fence and gate with guard and maintenance of Manhole covers to restrict access to the Site.

This plan includes, but may not be limited to:

- a Sediment Removal Plan which details the provisions for management of future sediment removal in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of sewer water and sediment PCB content to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department.

Exhibit A

NATURE AND EXTENT OF CONTAMINATION

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. For comparison purposes, the SCGs are provided for each medium.

Waste/Source Areas

As described in the RI report, waste/source materials were identified at the site and are impacting water and sediment in the combined sewers within the Yard.

Wastes are defined in 6 NYCRR Part 375-1.2 (aw) and include solid, industrial and/or hazardous wastes. Source Areas are defined in 6 NYCRR Part 375 (au). Source areas are areas of concern at a site were substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium. Wastes and Source areas were identified at the site include,

Remedial investigations (RIs) performed in OU-3, OU-4, and OU-5 have determined that PCBs are the primary contaminant of concern (COC) at the Yard, and the potential sources of PCB contamination that would impact the primary sewer system are:

1) The primary sewer system (OU5) is partially located beneath OU-3, and historically PCBs were the primary COC found in OU-3 (i.e., historically the PCB-containing mobile SPH plume and surface runoff could have impacted the primary sewer system).
2) The majority of stationary PCB-containing transformers that are known to have leaked are located within the body tracks (equipped with track drains). Trains equipped with PCB-containing transformers were stored on the body tracks and represent an additional source of PCBs to the primary sewer system via the track drains.

The waste/source areas identified will be addressed in the remedy selection process.

Sewer Water

Starting on October 11, 2010 through March 17, 2011, the OU-5 RI sewer water sampling plan was implemented. In all, 78 discrete water samples (39 filtered and 39 unfiltered) were collected from 12 manhole locations and analyzed for PCBs during performance of the OU-5 RI. PCBs were detected in 17 of 39 unfiltered samples with concentrations ranging from 0.14 µg/L to a high of 83 µg/L.

Five of these unfiltered samples, one from MH-3, three from MH-6 and one from MH-40 exceeded the 1 µg/L waste water effluent limit. Only one of the 39 filtered samples (MH-3) contained PCBs at a concentration (1.8 µg/L) slightly exceeding the 1 µg/L waste water effluent limit.

Table 1 - Sewer Water

Detected Constituents	Concentration Range Detected (µg/l or ppb)[a]	SCG[b] (µg/l or ppb)	Frequency Exceeding SCG
Total PCBs	0.14 to 83	1.0	Unfiltered: 5 out of 39 Filtered: 1 out of 39

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.
b-SCG: The NYCDEP Effluent Limit for the sewer system that ultimately discharges to Bowery Bay Wastewater Treatment Plant

Based on the findings of the Remedial Investigation, the presence of PCBs has resulted in the contamination of sewer water. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of sewer water to be addressed by the remedy selection process are PCBs.

Sewer Sediments

Along with the sewer water samples, 32 discrete sediment samples were collected from 12 manhole locations and analyzed for PCBs during performance of the OU-5 RI. PCBs were detected in 29 of these samples at concentrations ranging from 0.153 mg/kg at manhole MH-69 to 120mg/kg at manhole MH-6.

PCB concentrations at MH-6 (one sample) and MH-38 (two samples) exceeded the 25 mg/kg NYSDEC-recommended soil cleanup level for the Yard.

Table 2 – Sewer Sediment

Detected Constituents	Concentration Range Detected (mg/kg or ppm)[a]	SCG[b] (mg/kg or ppm)	Frequency Exceeding SCG
Total PCBs	0.053 to 120	25	3 out of 32

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in sediment;
b - SCG: The 6NYCRR375-6.8 Industrial Soil Cleanup Objective.

Based on the findings of the Remedial Investigation, the presence of PCBs has resulted in the contamination of sediment. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of sediment to be addressed by the remedy selection process are PCBs

Exhibit B

DESCRIPTION OF REMEDIAL ALTERNATIVES

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

Alternative 1: No Further Action

The No Further Action Alternative recognizes the remediation of the site completed by the IRM(s) described in Section 6.2. This alternative leaves the site in its present condition and does not provide any additional protection of the environment.

A no action alternative is evaluated to provide a baseline for comparison of potential risks posed if no remedial action were performed. For this remedial alternative, all sewer sediment and water with PCB concentrations exceeding the Site-specific soil cleanup level would remain in place.

Alternative 2: Sewer System Monitoring and Deferred Cleanout of Sewer Manholes of Concern (Post OU-3 and OU-4 Remediation and ESA Construction)

This alternative would include periodic monitoring of the manhole MH-40 and identifying trends in PCB occurrence in sewer sediment and water and future cleaning of the sewer manhole. The rationale for selecting MH-38 and MH-40 as key locations for remediation as part of this Remedial Alternative is provided below:

MH-38
Manholes MH-38 and MH-6 were the only manholes to contain sediment that exceeded the SCG during the 2010/2011 OU-5 RI sampling events. Amtrak has already remediated MH-6 as an IRM completed in October 2011. Therefore, MH-38 is the only location with a remaining, recent exceedance of the sediment SCG

MH-40
The cleanout of MH-40 would be the key component of this Remedial Alternative. As described in the OU-5 RI Report, in 1997 the New York City Transit Authority (NYCTA) installed a weir within MH-40. This weir was installed as part of the construction of a new offsite sewer siphon located downstream of MH-40. The sewer siphon was part of a NYCTA subway expansion project, completely independent and unrelated to Amtrak's Sunnyside Yard. Although the NYCTA's project is unrelated to Sunnyside Yard, the weir installed by NYCTA in MH-40 serves as a sediment trap, removing impacted sediments at this location. In addition, MH-40 represents the collection point for the three sewer legs containing the manholes of concern and it is the furthest downstream manhole in located in OU-5.

Sewer water and sediment samples would be collected from manhole MH-40 every two years and submitted for PCB analysis. During each event, samples would be collected both during dry conditions and during post-precipitation conditions. The monitoring program would continue until remediation efforts in OU-3 and OU-4 are completed and East Side Access (ESA) Construction is completed, at which time cleaning of the sewer manholes MH-38 and MH-40 would be performed. All sediment and water present within manholes MH-38 and MH-40 would be removed using a combination of hydraulic jetting coupled with mechanical vacuum recovery. The manhole interior would be thoroughly washed and rinsed to remove adhered sediment. The sediment and wash water generated during the cleaning of these manholes would be collected using a vacuum truck and containerized for offsite disposal. A gravity separator would likely be required to separate solids and water prior

to disposal of both media. Waste material would be sampled for waste characterization and disposed of accordingly.

Following the cleaning of MH-38 and MH-40, a routine monitoring plan consisting of sampling MH-40 and identifying trends in PCB occurrence in sewer sediment and water would commence.

Sewer water and sediment samples would be collected every two years and submitted for PCB analysis. During each event, samples would be collected both during dry conditions and during post-precipitation conditions. The monitoring program would continue until remediation efforts in OU-3 and OU-4 are completed, ESA construction is completed, and two consecutive rounds of data are obtained from MH-40 without any exceedances of the sediment or water SCGs. This approach will ensure that any PCB-containing sediment located in sewer legs between manholes will ultimately be recovered from the sediment trap in MH-40. Should monitoring identify an exceedance of either the sediment or water SCG, additional cleanout of MH-40 will be completed and continued monitoring will be required.

Present Worth: *$967,414*
Capital Cost: *$927,201*
Annual Costs: *$40,213*

Alternative 3: Cleaning of Manholes MH-38 and MH-40 and Sewer System Monitoring

This alternative consists of the same elements as Remedial Alternative 2, however rather than defer OU-5 sewer system remediation until after the completion of OU-3 and OU-4 remediation and completion of ESA construction OU-5 remediation would begin immediately. In the near term, manholes MH-38 and MH-40 will be accessed and cleaned using similar method as Alternative 2. The rationale for selecting MH-38 and MH-40 as key locations for remediation and the cleaning and monitoring plans which are part of this Remedial Alternative are provided below:

MH-38
Manholes MH-38 and MH-6 were the only manholes to contain sediment that exceeded the SCG during the 2010/2011 OU-5 RI sampling events. Amtrak has already remediated MH-6 as an IRM completed in October 2011. Therefore, MH-38 is the only location with a remaining, recent exceedance of the sediment SCG. In the interest of proactively remediating this exceedance and preventing potential migration, the prompt remediation of MH-38 was included as a component to this Remedial Alternative.

MH-40
The cleanout of MH-40 would be the key component of this Remedial Alternative. As described in the OU-5 RI Report, in 1997 the New York City Transit Authority (NYCTA) installed a weir within MH-40. This weir was installed as part of the construction of a new offsite sewer siphon located downstream of MH-40. The sewer siphon was part of a NYCTA subway expansion project, completely independent and unrelated to Amtrak's Sunnyside Yard. Although the NYCTA's project is unrelated to Sunnyside Yard, the weir installed by NYCTA in MH-40 serves as a sediment trap, removing impacted sediments at this location. In addition, MH-40 represents the collection point for the three sewer legs containing the manholes of concern and it is the furthest downstream manhole in located in OU-5.

All sediment and water present within manholes MH-38 and MH-40 would be removed using a combination of hydraulic jetting coupled with mechanical vacuum recovery. The manhole interior would be thoroughly washed

and rinsed to remove adhered sediment. The sediment and wash water generated during the cleaning of these manholes would be collected using a vacuum truck and containerized for offsite disposal. A gravity separator would likely be required to separate solids and water prior to disposal of both media. Waste material would be sampled for waste characterization and disposed of accordingly.

Following the cleaning of MH-38 and MH-40, a routine monitoring plan consisting of sampling MH-40 and identifying trends in PCB occurrence in sewer sediment and water would commence.

Sewer water and sediment samples would be collected every two years and submitted for PCB analysis. During each event, samples would be collected both during dry conditions and during post-precipitation conditions. The monitoring program would continue until remediation efforts in OU-3 and OU-4 are completed, ESA construction is completed, and two consecutive rounds of data are obtained from MH-40 without any exceedances of the sediment or water SCGs. This approach will ensure that any PCB-containing sediment located in sewer legs between manholes will ultimately be recovered from the sediment trap in MH-40. Should monitoring identify an exceedance of either the sediment or water SCG, additional cleanout of MH-40 will be completed and continued monitoring will be required.

Present Worth: *$946,976*
Capital Cost: *$927,201*
Annual Costs: *$19,775*

Exhibit C

REMEDIAL ALTERNATIVE COSTS

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
Alternative 1: No Further Action	0	0	0
Alternative 2: Sewer System Monitoring and Deferred Cleanout of Sewer Manholes of Concern (Post OU-3 and OU-4 Remediation and ESA Construction)	$927,000	$40,000	$967,000
Alternative 3: Cleaning of MH-38 and MH-40 and Sewer System Monitoring	$927,000	$20,000	$947,000

Exhibit D

SUMMARY OF THE PROPOSED REMEDY

The Department is proposing Alternative 3, Cleaning of MH-38 and MH-40 and Sewer System Monitoring as the remedy for this site. Alternative 3 would achieve the remediation goals for the site by removing all contaminated water and sediments from the sewer. The elements of this remedy are described in Section 7.

Basis for Selection

The proposed remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

With the exception of the timing of cleaning of manholes MH-38 and MH-40, Remedial Alternative 2 and 3 are very similar in their approach. Therefore, an in-depth comparison of these two alternatives is not provided below. Alternative 3 provides a more immediate removal of PCB-impacted sediments posing a threat to offsite migration within the sewer system compared to Alternative 2. Alternative 3 therefore, more fully satisfies the criteria of overall protection of the environment and reduction of toxicity and mobility.

The detailed comparison of the Alternatives is given below:

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

The proposed Alternative #3 would satisfy this criterion by removing sewer media exhibiting hazardous concentrations and exceeding chemical-specific SCGs; and preventing offsite migration. Protection is provided by removing PCB-impacted sewer sediment and water exceeding the chemical-specific SCGs. Institutional and engineering controls would not be required to provide future protection to humans and the environment. Sediment exhibiting hazardous concentrations would be scheduled for removal immediately, followed by monitoring and additional cleanout (if required). This would continue until the completion of the OU-3 and OU-4 remediation, and ESA construction, and until two consecutive rounds of monitoring confirms no exceedances of the SCGs in MH-40. Therefore, the risk for impacts to OU-5 and offsite migration via the sewer system would be completely removed.

Alternative 2 has the same elements as Alternative 3, and would also satisfy this criterion. Alternative 1 does not provide any protection to public health and the environment and will not be evaluated further.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

The proposed remedy Alternative 3 would comply with the applicable chemical and action-specific SCGs for the media of concern.

Specifically, Remedial Alternative 3 would:

- Satisfy the 6 NYCRR Part 375 goal to eliminate or mitigate all significant threats to
- public health and the environment;
- Effectively remove “consequential” amounts of NYS listed hazardous waste in
- accordance with 6 NYCRR Part 375;
- Comply with all TSCA low occupancy PCB Remediation cleanup requirements; and
- Comply with removing impacted media exceeding the chemical-specific SCGs.

Alternative 2 would also comply with the applicable chemical and action specific SCGs. Because Alternatives 2 and 3satisfy the threshold criteria, the remaining criteria are particularly important in selecting a final remedy for the site.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

The proposed remedy Alternative 3 provides long-term effectiveness through the permanent removal of PCB-impacted sewer sediment and water. All material would be transferred to an offsite disposal facility equipped to properly manage this material.

Alternative 2 also provides long-term effectiveness and permanence however at an undefined point in the future.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternatives 2 and 3 would remove hazardous concentrations of PCBs in the near term and alleviate mobility concerns. Sediment removal and sewer cleaning would effectively reduce the toxicity, mobility, and volume of sediment with PCB concentrations exceeding the Yard soil cleanup levels. As demonstrated by the OU-5 RI, PCB-impacted sewer water is attributed to suspended sediment in the water samples. Therefore, the toxicity, mobility, and volume of impacted sewer water will also be reduced via sediment removal and sewer cleaning, with this reduction occurring immediately for Alternative 3 rather than at an undefined future time for Alternative 2.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

A moderate level of short-term effects to remedial workers during sewer cleaning activities is associated with Alternative 3. Remedial workers will be required to perform confined space entry and will be in direct contact with sewer water, sediment, and vapors. Health and safety concerns would be reduced through verification that

all remedial workers possess up to date confined space entry training, personal protective equipment is used at all times (e.g., safety harnesses, respiratory protection), and use of mechanical equipment for cleaning as much as possible. A limited scope CAMP would be employed to monitor VOCs at the work area and site perimeter. Alternative 3 poses minimal short term risks to community. Waste materials will be contained in tanks or within vacuum trucks upon removal and throughout the transportation process to the disposal facility.

Alternative 2 would not be as effective in the short-term, since it delays the implementation of the remedy for at up to 10 years.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

The sewer cleaning methods to be used for this remedial alternative are readily available. Experienced remedial contractors, specialized sewer contractors, and mechanical equipment are readily available to implement the remedial activities associated with this alternative.

Implementability concerns that do exist for this remedial alternative include access to MH-38 and MH-40. Personnel confined space access will most likely be required for cleanout of these manholes. Since the primary sewer system is a combined sewer system, there is the potential to encounter a significant volume of combined waste, which increases health and safety precautions. Although it is expected that mechanical equipment will be used for waste removal, vapors may be present causing an increased time to perform the work and increased personnel to account for shorter shifts while performing confined space entry work.

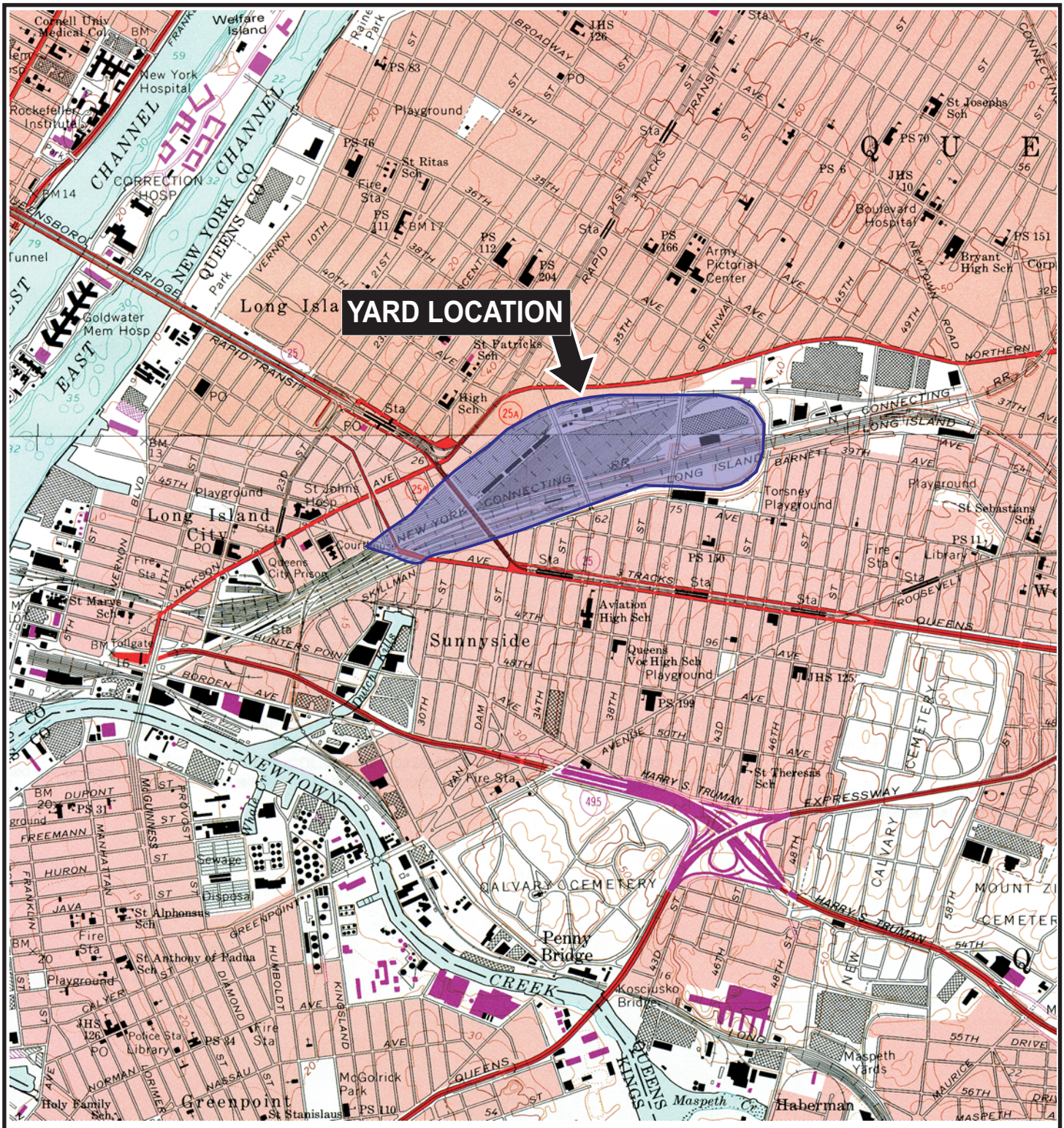
Access agreements would be required for cleaning of MH-40. Without an access agreement with MTA and possibly an off-site third party that allows a significant amount of work space for equipment and personnel, cleaning of this manhole in the near-term will not be possible. MH-38 is located within the body tracks. A significant level of coordination with Amtrak's Track Department will be required to arrange for trains to be removed from this area and ensure no damage to the tracks occurs during the cleaning. Mobilizing cleaning equipment to MH-38 will also require a significant amount of coordination and possibly mandate the use of specialized equipment (e.g., transport equipment via rail).

Implementability concerns posed by Alternative 1 do not exist since there would not be any actions performed.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

Although Alternative 3 is the most comprehensive alternative, it still has a lower cost than Alternative 2.

Since there are no remedial actions for Alternative 1, there is no capital cost associated this alternative.



SOURCE:
CENTRAL PARK AND BROOKLYN, NEW YORK
QUADRANGLE 7.5 MINUTE SERIES (TOPOGRAPHIC)

QUADRANGLE LOCATION

N

0 2000’

Title:

LOCATION OF SITE

OU-5 FEASIBILITY STUDY

Prepared for:

AMTRAK

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: H.G.	Date: 17NOV11	FIGURE
Prepared by: J.A.D.	Scale: AS SHOWN	1
Project Mgr.: H.G.	Project No.: 0055.0050Y006	
File: 0055.0050Y125.05.CDR		

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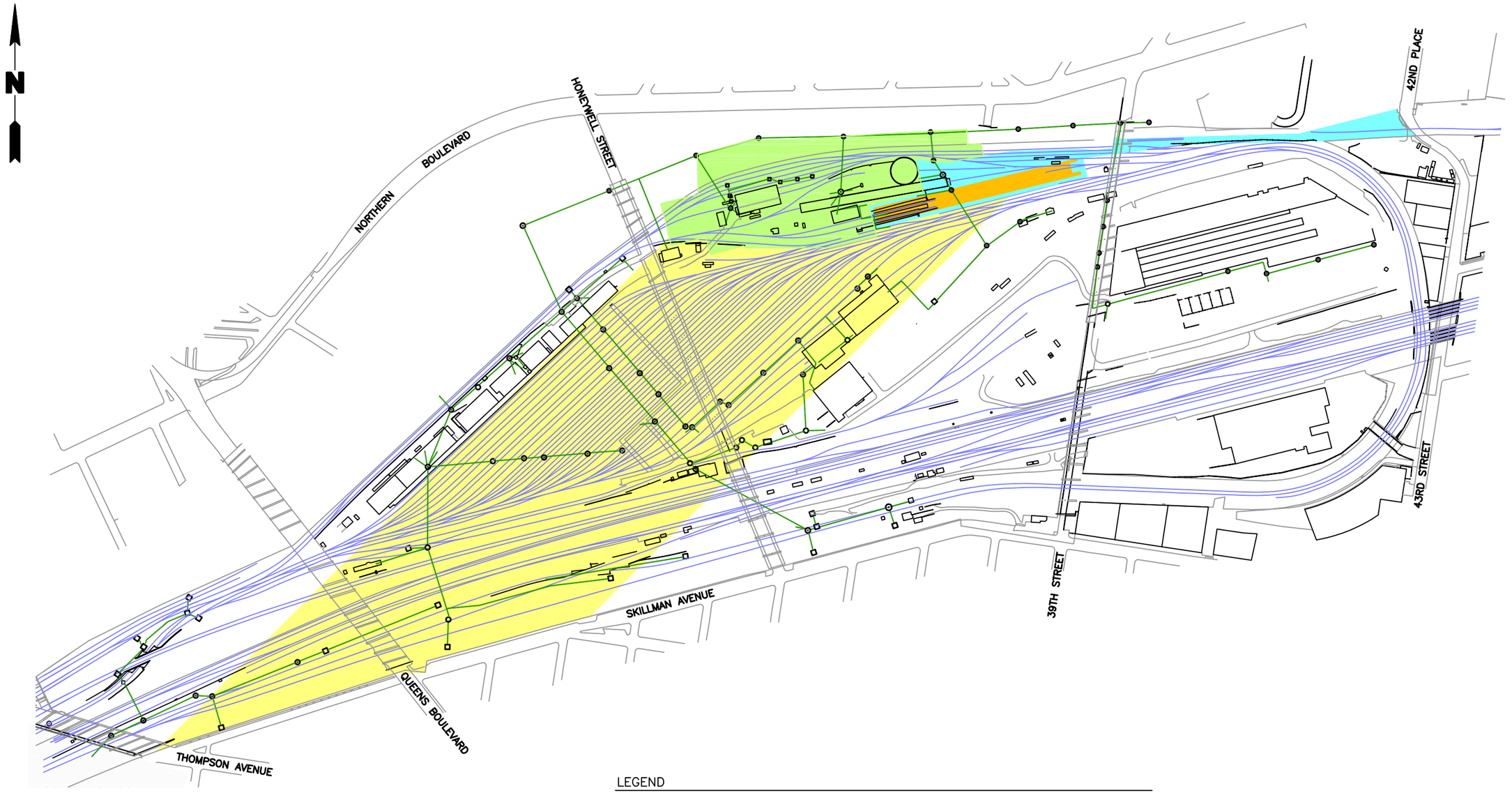

NOTES

1. LOCATIONS OF SEWER COMPONENTS BASED UPON A REVIEW OF AMTRAK–SUPPLIED ENGINEERING DIAGRAMS AND LIMITED FIELD SURVEY.
2. OU–6, GROUNDWATER BENEATH THE YARD (UNDERLIES ALL OTHER OU's)
3. LIRR – LONG ISLAND RAIL ROAD

LEGEND

- LOCATION OF RAILROAD TRACK
- APPROXIMATE LOCATION OF SEWER
- GRATE COVER CATCH BASIN LOCATION
- SOLID COVER MANHOLE LOCATION
- GRATE COVER MANHOLE LOCATION
- APPROXIMATE PROPERTY BOUNDARY

- OU–1
- OU–2
- OU–3
- OU–4
- OU–5

OU–6, GROUNDWATER BENEATH THE YARD (UNDERLIES ALL OTHER OU's)

400' 0 400'

Title:

AMTRAK YARD LAYOUT

OU–5 FEASIBILITY STUDY

Prepared For:

AMTRAK

ROUX ASSOCIATES, INC.
Environmental Consulting and Management

Compiled by: H.G.	Date: 29NOV11	FIGURE
Prepared by: J.A.D.	Scale: AS SHOWN	2
Project Mgr: H.G.	Project: 0055.0050Y006	
File: 0055.0050Y125.06.DWG		

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Designation	MHW-3	MHW-3	MHWF-3	MHW-3	MHWF-3	MHW-3	MHWF-3	MHW-3	MHWF-3
Date	2/8/93	7/26/96	7/26/96	10/11/10	10/11/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	ND	0.89	0.017	0.18 JV	ND	ND	ND	2.8	1.8

Designation	MHS-3	MH-3	MHS-3	MHS-3
Date	2/8/93	11/13/96	3/11/97	10/11/10
Total PCBs	54000	32500	1380	ND

Designation	MHS-6	MHS-6	MHS-6
Date	10/11/10	3/16/11	3/17/11
Total PCBs	120000 D	21000	15000 JV

Designation	CB-4
Date	11/2/96
Total PCBs	7390

Designation	MHW-6	MHW-6	MHW-6	MHWF-6	MHW-6	MHWF-6	MHW-6	MHWF-6
Date	2/8/93	7/26/96	10/11/10	10/11/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	ND	0.015	83 D	ND	12	ND	16 JV	ND

Designation	MHW-40 (4x8)S	MHW-40 (48)E	MHWF-40 (48)E	MHW-40	MHWF-40	MHW-40	MHWF-40	MHW-40	MHWF-40	MHW-40	MHWF-40
Date	4/25/94	4/25/94	4/25/94	7/26/96	7/26/96	10/12/10	10/12/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	ND	0.51	ND	0.62	0.015	2.1	ND	ND	ND	ND	ND

Designation	MHS-40 (4x8)S	MHS-40 (48)E	MHS-40	MH-40	MHS-40	MHS-40	MHS-40
Date	4/25/94	4/25/94	7/26/96	11/13/96	10/12/10	3/16/11	3/17/11
Total PCBs	15100	16200	148900	160000	ND	65	130

Designation	MHW-39	MHW-39 (24)S
Date	4/26/94	4/26/94
Total PCBs	0.20	ND

Designation	MHW-2	MHW-2 (4x8)N	MHWF-2 (4x8)N	MHW-2	MHWF-2	MHW-2 FROM MH-41	MHWF-2 FROM MH-41	MHW-2 FROM MH-55	MHWF-2 FROM MH-55
Date	2/9/93	4/26/94	4/26/94	7/26/96	7/26/96	10/12/10	10/12/10	10/12/10	10/12/10
Total PCBs	2.3	0.66	ND	0.224	0.1	0.26	ND	0.22 JV	ND

Designation	MHW-2 FROM MH-41	MHWF-2 FROM MH-41	MHW-2 FROM MH-55	MHWF-2 FROM MH-55	MHW-2 FROM MH-41	MHWF-2 FROM MH-41	MHW-2 FROM MH-55	MHWF-2 FROM MH-55
Date	3/16/11	3/16/11	3/16/11	3/16/11	3/17/11	3/17/11	3/17/11	3/17/11
Total PCBs	0.84	ND	0.72	ND	ND	ND	ND	ND

Designation	MHS-2	MHS-2	MHS-2 DL	MH-2	MHS-2 FROM MH-41	MHS-2 FROM MH-55	MHS-2FROM MH-41	MHS-2 FROM MH-55	MHS-2 FROM MH-41	MHS-2 FROM MH-55
Date	2/9/93	4/26/94	7/26/96	11/12/96	10/12/10	10/12/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	82000	11900	54100	8760	1800	510	1200	2600 JV	920	1100

Designation	MHS-38	MHS-38	MHS-38
Date	10/12/10	3/16/11	3/17/11
Total PCBs	7800 D	30000	83000 JV

Designation	MHW-38	MHWF-38	MHW-38	MHWF-38	MHW-38	MHWF-38
Date	10/12/10	10/12/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	ND	ND	0.92	ND	ND	ND

Designation	MHS-55	MH-55
Date	4/26/94	11/12/96
Total PCBs	25000	4300

Designation	MHS-52	MH-52	MHS-52	MHS-52	MHS-52	MHS-52
Date	4/26/94	11/12/96	3/11/97	10/12/10	3/16/11	3/17/11
Total PCBs	2900	8600	91100	540	340	310

Designation	MHW-52 (10)N	MHW-52 (18)SE	MHW-52 (42)SW	MHWF-52 (42)SW	MHW-52	MHW-52	MHWF-52	MHW-52	MHWF-52	MHW-52	MHWF-52
Date	4/26/94	4/26/94	4/26/94	4/26/94	7/26/96	10/12/10	10/12/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	ND	ND	ND	ND	0.29	0.14 JV	ND	0.59	ND	ND	ND

Designation	MHW-51	MHWF-51	MHW-51	MHWF-51	MHW-51	MHWF-51
Date	10/12/10	10/12/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	ND	ND	ND	ND	ND	ND

Designation	MHW-7
Date	2/8/93
Total PCBs	14.8

Designation	MH-5
Date	11/13/96
Total PCBs	18800

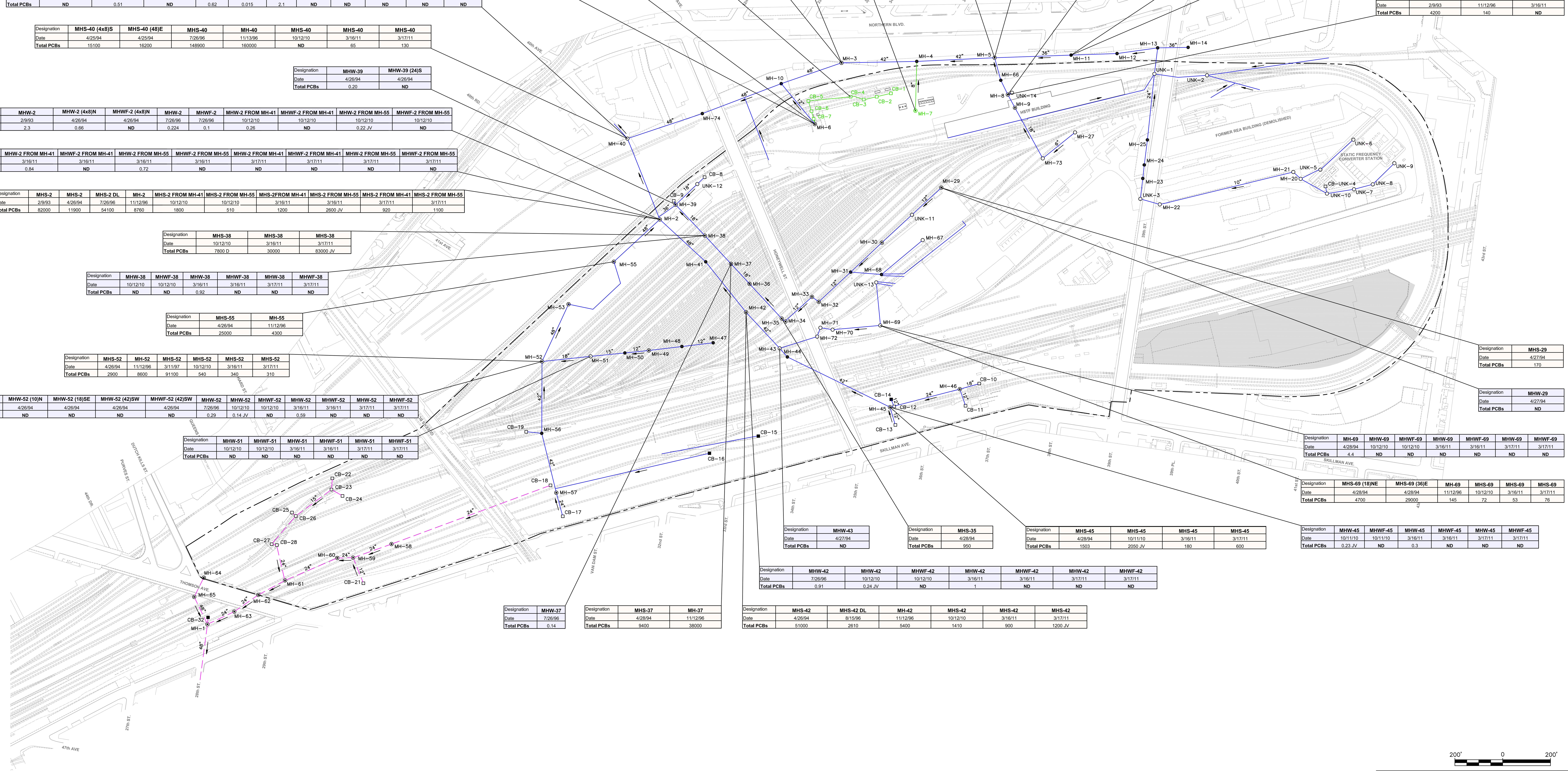
Designation	MHW-5	MHW-5
Date	2/8/93	7/26/96
Total PCBs	ND	0.077

Designation	MHW-8	MHW-8	MHWF-8	MHW-8	MHWF-8	MHW-8	MHWF-8
Date	2/9/93	10/11/10	10/11/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	20.6	ND	ND	ND	ND	ND	ND

Designation	MH-11	MH-11	MHS-11	MHS-11
Date	3/11/97	10/11/10	3/16/11	3/17/11
Total PCBs	1000	520	500	380

Designation	MHW-11	MHWF-11	MHW-11	MHWF-11	MHW-11	MHWF-11
Date	10/11/10	10/11/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	ND	ND	0.98	ND	ND	ND

Designation	MHS-8 DL	MH-8	MHS-8
Date	2/9/93	11/12/96	3/16/11
Total PCBs	4200	140	ND



Designation	MHS-29
Date	4/27/94
Total PCBs	170

Designation	MHW-29
Date	4/27/94
Total PCBs	ND

Designation	MH-69	MHW-69	MHWF-69	MHW-69	MHWF-69	MHW-69	MHWF-69
Date	4/28/94	10/12/10	10/12/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	4.4	ND	ND	ND	ND	ND	ND

Designation	MHS-69 (18)NE	MHS-69 (36)E	MH-69	MHS-69	MHS-69	MHS-69
Date	4/28/94	4/28/94	11/12/96	10/12/10	3/16/11	3/17/11
Total PCBs	4700	29000	145	72	53	76

Designation	MHW-45	MHWF-45	MHW-45	MHWF-45	MHW-45	MHWF-45
Date	10/11/10	10/11/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	0.23 JV	ND	0.3	ND	ND	ND

Designation	MHW-43
Date	4/27/94
Total PCBs	ND

Designation	MHS-35
Date	4/28/94
Total PCBs	950

Designation	MHS-45	MHS-45	MHS-45	MHS-45
Date	4/28/94	10/11/10	3/16/11	3/17/11
Total PCBs	1503	2050 JV	180	600

Designation	MHW-42	MHW-42	MHWF-42	MHW-42	MHWF-42	MHW-42	MHWF-42
Date	7/26/96	10/12/10	10/12/10	3/16/11	3/16/11	3/17/11	3/17/11
Total PCBs	0.91	0.24 JV	ND	1	ND	ND	ND

Designation	MHW-37
Date	7/26/96
Total PCBs	0.14

Designation	MHS-37	MH-37
Date	4/28/94	11/12/96
Total PCBs	9400	38000

Designation	MHS-42	MHS-42 DL	MH-42	MHS-42	MHS-42	MHS-42
Date	4/26/94	8/15/96	11/12/96	10/12/10	3/16/11	3/17/11
Total PCBs	51000	2610	5400	1410	900	1200 JV

200' 0 200'

LEGEND

- PRIMARY SEWER SYSTEM (COMBINED SEWER SYSTEM)
- SECONDARY SEWER SYSTEM (STORM SEWER SYSTEM)
- REMOVED OR INOPERABLE SECTIONS OF SEWER SYSTEM
- APPROXIMATE PROPERTY BOUNDARY
- PRIVATE PROPERTY NOT OWNED BY AMTRAK
- UNK-10 MANHOLE LOCATED IN THE FIELD BUT NOT SHOWN IN AVAILABLE SEWER MAPS
- MH-2 LOCATION AND DESIGNATION OF SEWER MANHOLE WITH GRATE COVER
- MH-5 LOCATION AND DESIGNATION OF SEWER MANHOLE WITH SOLID COVER
- MH-66 LOCATION AND DESIGNATION OF SEWER MANHOLE NOT LOCATED OR COMPLETELY BURIED
- CB-18 LOCATION AND DESIGNATION OF CATCH BASIN
- CB-14 LOCATION AND DESIGNATION OF CATCH BASIN NOT LOCATED OR COMPETELY BURIED
- 48" DIAMETER OF SEWER PIPE (INCHES) DIRECTION OF SEWER FLOW

SEWER SEDIMENT

Designation	MHS-1
Date	4/28/94
Total PCBs	3500

← TOTAL CONCENTRATION MICROGRAMS PER KILOGRAM (μg/kg)

SEWER WATER

Designation	MHW-7
Date	2/8/93
Total PCBs	14.8

← TOTAL CONCENTRATION MICROGRAMS PER LITER (μg/L)

NOTES

1. IF SUFFICIENT QUANTITIES OF SEWER WATER AND/OR SEWER SEDIMENT WERE NOT PRESENT IN THE INFLUENT PIPES AT MULTIPLE INFLUENT SAMPLING LOCATIONS, BUT SEWER WATER AND/OR SEWER SEDIMENT WAS PRESENT IN THE MANHOLE, THEN THE SAMPLE WAS COLLECTED FROM THE MANHOLE BOTTOM AND THE SAMPLE DESIGNATION DOESN'T INDICATE A SAMPLING LOCATION.
2. DESIGNATIONS WITH THE LETTER "F" INDICATE A FILTERED SAMPLE.
3. DESIGNATIONS WITH THE LETTER "W" INDICATE A SEWER WATER SAMPLE.
4. DESIGNATIONS WITH THE LETTER "S" INDICATE A SEWER SEDIMENT SAMPLE.
5. DESIGNATIONS WITH THE PREFIX "DL" INDICATE A DILUTED SEWER SEDIMENT SAMPLE.
6. THE LETTER "J" INDICATES AN ESTIMATED VALUE
7. THE LETTER "V" INDICATES QUALIFIER ADDED AND/OR VALVE ALTERED DURING VALIDATION
8. THE LETTER "D" INDICATES A COMPOUND IDENTIFIED IN AN ANALYSIS AT A SECONDARY DILUTION
9. ND – PCB'S NOT DETECTED

Title:

SUMMARY OF TOTAL PCBs IN SEWER WATER AND SEDIMENT SAMPLES

OPERABLE UNIT 5 REMEDIAL INVESTIGATION REPORT
SUNNYSIDE YARD, QUEENS, NEW YORK

Prepared For:

AMTRAK

ROUX ASSOCIATES, INC.
Environmental Consulting and Management

Compiled by: L.O.	Date: 12AUG11	PLATE
Prepared by: J.A.D.	Scale: AS SHOWN	2
Project Mgr: H.G.	Project: 0055.0050Y005	
File: 0055.0050Y122.04.DWG		

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