October 9, 2013

REMEDIAL INVESTIGATION WORK PLAN

Post Road Corridor – White Plains
BCP Site No. C360129
77 West Post Road
City of White Plains
County of Westchester, New York

Prepared for:

POST MAPLE 77, LLC
2309 Frederick Douglas Boulevard
New York, New York 10027-3612

ROUX ASSOCIATES, INC.

Environmental Consulting & Management

and REMEDIAL ENGINEERING, P.C.

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PLATES

LIST OF ACRONYMS

µg/kg .....Micrograms per Kilogram

µg/L.....Micrograms per Liter

µg/m^3.....Micrograms per Cubic Meter

1,2 DCE.....cis-1,2-dichloroethene

AAR/RAWP .....Alternatives Analysis Report/Remedial Action Work Plan

AOCs.....Areas of Concern

ARARs.....Applicable or Relevant and Appropriate Requirements

ASP .....Analytical Services Protocol (NYSDEC)

AWQSGVs .....Ambient Water Quality Standards and Guidance Values

BCA .....Brownfield Cleanup Agreement

BCP.....Brownfield Cleanup Program

BLS .....Below Land Surface

CAMP .....Community Air Monitoring Plan

CERCLA.....Comprehensive Environmental Response, Compensation and Liability Act

CLP .....Contract Laboratory Protocol

CPP .....Citizen Participation Plan

CQAP.....Construction Quality Assurance Plan

CVOCs.....Chlorinated Volatile Organic Compounds

DER-10 .....NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation

DO.....Dissolved Oxygen

DUSR.....Data Usability Summary Report

EA .....Exposure Assessment

ECL.....Environmental Conservation Law

ECs/ICs .....Engineering and Institutional Controls

ELAP.....Environmental Laboratory Approval Program

ERD.....Enhanced Reductive Dechlorination

ESA.....Environmental Site Assessment

FSP.....Field Sampling Plan

HASP .....Health and Safety Plan

IRM.....Interim Remedial Action

LIST OF ACRONYMS (Continued)

mg/L.....Milligrams per liter
MW .....Monitoring Well
NTUs.....Nephelometric Turbidity Units
NYCRR.....New York Codes, Rules and Regulations
NYSDEC.....New York State Department of Environmental Conservation
NYSDOH.....New York State Department of Health
ORP.....Oxidation – Reduction Potential
PCBs .....Polychlorinated Biphenyls
PCE .....Tetrachloroethene (Perchloroethene)
PID .....Photo Ionization Detector
PPE.....Personal Protective Equipment
PVC.....Polyvinyl Chloride
QA.....Quality Assurance
QAPP .....Quality Assurance Project Plan
QC.....Quality Control
RAO .....Remedial Action Objective
RAWP .....Remedial Action Work Plan
RI.....Remedial Investigation
RIWP.....Remedial Investigation Work Plan
RSCOs.....Recommended Soil Cleanup Objectives
SB.....Soil Boring
SCGs .....Standards, Criteria, and Guidance
SCOs .....Soil Cleanup Objectives
SMP.....Site Management Plan
SoMP.....Soil/Materials Management Plan
SOP .....Site Operation Plan
SRI .....Supplemental Remedial Investigation
SVOCs .....Semivolatile Organic Compounds
TAGM.....NYSDEC Technical and Administrative Guidance Memorandum
TBC.....To be Considered
TCE.....Trichloroethene
TAL.....Target Analyte List

LIST OF ACRONYMS (Continued)

TCL.....Target Compound List

TWA .....Total Weighted Average

USEPA.....United States Environmental Protection Agency

USGS .....United States Geological Survey

VOCs.....Volatile Organic Compounds

1.0 CERTIFICATION

I, Joseph D. Duminuco, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Remedial Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Signature

October 9, 2013

Date

2.0 INTRODUCTION

Roux Associates, Inc. (Roux Associates), on behalf of Post Maple 77, LLC (Volunteer), has prepared this Remedial Investigation (RI) Work Plan for the property identified as Post Road Corridor – White Plains, located at 77 West Post Road, in the City of White Plains, County of Westchester, New York (Site). The Site location is shown on Figure 1. The Site consists of ten separate Parcels (identified as Parcels A through D and Parcels F through K), nine of which are located between West Post Road and Maple Avenue. One additional parcel is located at the intersection of West Post Road and South Lexington Avenue. A detailed description of the Site is provided in Section 3. A Site Layout Plan is provided on Figure 2. The anticipated plan for Site redevelopment consists of the construction of multi-level, mixed use development including parking, retail space and medical office space.

2.1 Brownfield Cleanup Program Application and Environmental Work Plans

Given the intended future use of the Site for commercial medical office, retail and, potentially residential development, the Volunteer plans to remediate the Site for restricted residential use under the New York State Brownfield Cleanup Program (BCP). The RI Work Plan is being submitted for New York State Department of Environmental Conservation (NYSDEC) for review and approval. The RI has been developed in accordance with the draft BCP Guide (May 2004) and the DER-10 Technical Guidance for Site Investigation and Remediation (May 2010) issued by the NYSDEC. The purpose of the RI is to determine the nature and extent of contamination at the Site, characterize environmental media at the Site, qualitatively assess the potential exposure of receptors to Site contaminants, and generate sufficient data necessary to support the development of a Remedial Action Work Plan (RAWP).

The Site was accepted into the BCP in March of 2013. A Brownfield Cleanup Agreement (BCA) was executed on April 11, 2013. Site Number C360129 has been assigned.

2.2 RI Work Plan Document Organization

This RI Work Plan contains a background section (Section 3) describing the Site, its history, and results of previous environmental investigations; a section defining the objectives and scope of the RI (Section 4); and Sections 5 and 6 that describe various project operations plans (e.g., Quality Assurance/Quality Control, Health and Safety). Reporting requirements and the project schedule

are discussed in Section 7. Additionally, tables are provided that summarize previously collected environmental quality data. Finally, maps are also provided to illustrate Site location, surrounding land use, and locations of proposed sampling efforts.

2.3 Project Team Contact Information

Roux Associates' Principal-In-Charge for this Site will be Joseph Duminuco, Principal Hydrogeologist and Vice President. Mr. Duminuco is based in Roux Associates' Islandia, New York headquarters office and can be reached at (631) 232-2600. Richard Maxwell will be the Project Manager and will be responsible for day-to-day management of the project, including preparation of work plans, and scoping and directing field activities.

The contact for the Volunteer is:

Scott Auster
Post Maple 77, LLC
% Grid Properties, Inc.
2309 Frederick Douglas Boulevard
New York, New York 10027-3612

At this time, a drilling subcontractor, analytical laboratory and other subcontracted services have not yet been selected for this project. This information will be provided to NYSDEC following contractor selection.

3.0 BACKGROUND

This section provides pertinent background information, including a description of the Site and its setting, the known history of the Site, and the results of previous environmental investigation work conducted at the Site.

3.1 Site Description and Setting

Property Location	
Property Name:	Post Road Corridor – White Plains
Property Description:	Ten separate tax lots (identified as Parcels A through D and F through K), all currently vacant
Property Address:	77 West Post Road
Property Town, County, State:	White Plains, Westchester County, New York
Property Tax Identification:	Parcel A – 130.34-6-1 Parcel B – 130.34-6-6 Parcel C – 130.34-6-4 Parcel D – 130.34-6-3 Parcel F – 130.34-5-2 Parcel G – 130.34-5-3 Parcel H – 130.34-5-4 Parcel I – 130.34-5-5 Parcel J – 130.34-5-6 Parcel K – 130.27-8-3
Property Topographic Quadrangle:	White Plains, New York
Nearest Intersection:	West Post Road and Rathbun Avenue
Area Description:	Mixed-use to the north consisting of street level retail stores with residences above. Primarily residential to the south and predominately commercial use properties to the east and west
Current Site Zoning:	Business District B-3 (All Parcels except Parcel B) and Business District B-2 (Parcel B)

A Site location map is included as Figure 1.

Property Information	
Property Acreage:	3.69 (combined total)
Property Shape:	Irregular

Property Information	
Property Use:	Vacant
Improvements:	The following Parcels are improved as noted, all others are without improvements. Parcel D: One, 1-story, 4,438 square foot (sq. ft.) former automobile sales office. Parcel G: Two buildings: one, 1-story, 15,176 sq. ft. former automobile showroom and service facility with basement and one, 1-story 500 sq. ft. structure. Parcel H: One, 1-story, 7,200 sq. ft. former automobile repair facility with basement. Parcel J: One, 2-story, 14,400 sq. ft. former automobile showroom and repair facility.

3.1.1 Site Operations

Currently, the Site is vacant. Site operations are reported to have ceased in 2008.

3.1.2 Utilities

The following companies and municipalities currently provide utility services to the Site:

Utility	Provider
Electricity	Con Edison
Natural Gas	Con Edison
Sanitary/Storm Sewerage	City of White Plains Public Works Department
Potable Water	City of White Plains Public Works Department

3.1.3 Topography/Hydrogeology

The United States Geological Survey (USGS) 7.5-minute series topographic quadrangle map of White Plains, New York, and the topographic contours included in Plate 1 indicate that the maximum elevation of the nine contiguous (i.e., excluding Parcel K) Parcels of the Site is approximately 242 feet above mean sea level in the western portion (Parcels A and B) of the Site. The topography of the Site slopes to the northeast until it reaches a low of approximately 214 feet above mean sea level in the northeastern portion of Parcel I; a change in elevation of

approximately 28 feet. This change in elevation is accomplished by a moderate to steep slope at Parcel C and through a series of retaining walls, as the slope of each of the remaining contiguous Parcels is relatively gentle. Additionally, the elevation on the north side of the contiguous parcels (along West Post Road) is generally higher than in the south side of the Site (i.e., slopes to the south). The elevation of Parcel K is approximately 205 feet above mean sea level and the Parcel is relatively flat.

According to water level information collected during previous environmental investigations (discussed in detail in Section 3.3), the water table at the Site ranges from approximately 13 feet below land surface (bls) in the west to approximately seven feet bls at Parcel K. Groundwater flow direction was not evaluated in previous environmental investigations conducted at the Site; however, local groundwater is expected to follow topography and flow toward the northeast.

3.1.4 Wetland Areas and Surface Water Bodies

There are no identified wetlands on or adjacent to the Site. There are no surface water bodies on or adjacent to the Site. The Bronx River is approximately 0.75 miles west of the Site.

3.1.5 Soils

Based on a review of the United States Department of Agriculture, Soil Conservation Service's soil maps, soils in the area of the Site are classified as Urban land (Ug).

Urban land consists of areas where at least 80-85 percent of the surface is covered by asphalt, concrete, or other impervious building materials.

3.1.6 Underlying Formation

According to A Guide to the Geology of Westchester County, New York by Thomas Macguire (1997), Westchester County is in the Manhattan Prong region of the Highlands physiographic province. The higher ground in Westchester is composed of the Fordham Gneiss and the Manhattan Schist, both highly resistant to erosion. Inwood Marble underlies many of the valleys including the Bronx River located approximately three quarters of a mile to the west of the Site. Most of the rocks in the area of the Site have been dated as late Precambrian and early Paleozoic ages.

3.1.7 Neighboring Properties

Review of neighboring properties from the Site and from public thoroughfares, and research of available information regarding the neighboring properties, were performed to identify evidence of environmental concern that could adversely impact the Site. The Site is located in a mixed use commercial and residential area of White Plains, New York.

Direction	Operations
North	Residential/Commercial
South	Residential
East	Commercial
West	Commercial/Residential

The Site is located in a mixed commercial and residential use area of White Plains. All but one of the Parcels (Parcel B) is located in Business District Zone B-3. Parcel B is located in business District B-2. The B-3 District is a general district containing a wide variety of retail, office and service uses as well as multi-family dwellings. The majority of the uses in the District are of a service character.

A mixed-use area is located north of the contiguous Parcels (i.e., excluding Parcel K) across West Post Road with street level retail stores/restaurants and residences located above. A residential use area is located south of the contiguous Parcels across Maple Avenue primarily consisting of multi-family dwellings. Commercial use areas extend to the east and west of the contiguous Parcels. Multi-family residences are located northwest of Parcel K and commercial-use properties extend to the south, east and west of Parcel K including a used car lot located adjacent to the northeast of the Parcel.

3.2 Site History

According to available sources, historic Site operations predominately involved automobile sales and repair , which persisted for approximately 50 years. Each of the individual Parcels were either directly utilized for automobile sales, storage and/ or repair, or are located adjacent to Parcels that

were. Additional historic site operations included former use as a gasoline service station and a drycleaner. Known historic Site use is provided for each Parcel below.

- 99-103 W. Post Road (Parcel A)
  Parcel A is 0.21 acres in area and is currently vacant without improvements. According to available historical sources, the Parcel was initially developed with residential buildings as early as 1905 and developed for commercial purposes from the 1930's onward. Historical use of environmental concern includes former use as a gas station including four underground storage tanks (USTs) for an unknown amount of time.

- 5 Rathbun Avenue (Parcel B)
  Parcel B is 0.09 acres in area and is currently vacant without improvements. According to available historical sources, the Parcel was initially developed with residential buildings as early as 1905. Additional historical use information specific to this Parcel is limited; however, available information suggests that the immediately surrounding properties have been utilized for automobile repairs and sales for at least 30 years.

- 3 Brady Place (Parcel C)
  Parcel C is 0.06 acres in area and is currently vacant without improvements. According to available historical sources, structures have periodically appeared on this parcel since 1905. A building utilized for by an electrical contractor was demolished in the late 1980's. Additional, historical use information specific to this Parcel is limited; however, available information suggests that the surrounding area has been utilized for automobile repairs and sales for at least 30 years.

- 95 West Post Road (Parcel D)
  Parcel D is 0.09 acres in area and is currently vacant. The Parcel is improved by one abandoned building previously utilized as an automobile sales office; an associated parking area is located south of the building. According to available historical sources, the Parcel was initially developed with residential buildings as early as 1905 and developed for commercial purposes from the 1930's onward. The current onsite structure was reportedly constructed in 1935. Historical use information specific to this Parcel is limited; however, available information suggests that the Parcel was occupied by a dry cleaner in the 1970's and possibly as early as the 1940's.

- 79-83 West Post Road (Parcel F)
  Parcel F is 0.38 acres in area and is currently vacant. The Parcel is improved by an asphalt paved parking lot; no other improvements exist. According to available historical sources, the Parcel was initially developed with residential buildings as early as 1905 and developed for commercial purposes from the 1930's onward. Limited historical information is available for the Parcel specifically; however, it is known that the immediately adjacent properties to both the east and west have been utilized as automobile repair/service facilities for as many as 50 years.

- 77 West Post Road (Parcel G)
  Parcel G is 0.88 acres in area, is currently vacant and is improved by two abandoned single story buildings (one with a basement) formerly utilized for automobile repairs and sales

from the 1970's through 2008. Available documentation indicated that the Parcel was utilized for mixed commercial and residential uses up to the 1970's.

- 55 West Post Road (Parcel H)
  Parcel H is 0.91 acres in area and is currently vacant. The Parcel is improved by one single-story building with a basement that was formerly utilized for automobile repairs and sales from the 1950's through 2008.

- 41-45 and 35 West Post Road (Parcels I and J)
  Parcel I (0.28 acres) consists of an asphalt paved parking lot that serves Parcel J (0.32 acres) which is currently vacant and improved with one 14,400 square foot, two-story abandoned building formerly used primarily for automobile repair but also as a showroom/office building. The two Parcels (I and J) were reportedly used as a parking garage from development in 1928 until being converted into their current configuration of an auto repair and sales facility in 1958. The Parcels were utilized for automobile repair and sales for the next 50 years until being abandoned in 2008.

- 190-192 South Lexington Avenue (Parcel K)
  Parcel K is approximately 0.47 acres in area, is currently vacant and is undeveloped. The Parcel is comprised of grass and small trees along a perimeter fence located adjacent to West Post Road and South Lexington Avenue. According to available historical sources, the Parcel was initially developed sometime between 1900 and 1930 with several residential buildings with street level retail units one of which was occupied by a drycleaner for some time. In the 1970's the buildings were demolished and the Parcel was utilized for car storage for the dealership located across West Post Road until 2008 when the Parcel was vacated.

3.3 Results of Previous Environmental Investigations

The following sections provide an overview of the results of previous environmental investigations at the Site. The following Environmental Reports were reviewed by Roux Associates:

- Woodard & Curran (January 24, 2008); Phase II Environmental Assessment Report, 35-95 West Post Road and 80 Brady Place, White Plains, New York; Prepared for Brickman Associates (Phase II).

- Partner Engineering and Science, Inc. (March 29, 2010); Phase I Environmental Site Assessment Report, White Plains Portfolio, 55 and 77 West Post Road, White Plains, New York; Prepared for Nolan and Heller, LLP.

- Partner Engineering and Science, Inc.(March 29, 2010); Phase I Environmental Site Assessment Report, White Plains Portfolio, 2 West Post Road, White Plains, New York; Prepared for Nolan and Heller, LLP.

- Partner Engineering and Science, Inc. (March 30, 2010); Phase I Environmental Site Assessment Report, White Plains Portfolio, 87 and 95 West Post Road, White Plains, New York; Prepared for Nolan and Heller, LLP.

- Jade Environmental Inc. (December 31, 2010); Facility Closure and Site Remediation Report, Former White Plains Mazda, 35 West Post Road, White Plains New York; prepared for BRK Acquisition Holdings, LLC.

- DRE Environmental, Inc. (March 2012); Tank Removal & Closure Report; 55 West Post Road, White Plains, New York.

- DRE Environmental, Inc. (March 2012); Tank Removal & Closure Report; 55 West Post Road, White Plains, New York.

Results of the above Environmental Reports are discussed in the following subsections.

3.3.1 Woodard & Curran Phase II ESA

In 2007, Woodard & Curran conducted a Site-wide Phase II Environmental Site Assessment (ESA) (W&C Phase II ESA). The purpose of the Phase II ESA was to evaluate Recognized Environmental Conditions (RECs) identified during a 2007 Phase I ESA. The RECs identified in the 2007 Phase I ESA included several former USTs, potential fill material and in-ground hydraulic lifts. Results of the Woodard & Curran Phase II are presented below.

3.3.1.1 Soil

Woodard & Curran installed 23 soil borings and collected 25 soil samples for analysis of select volatile organic compounds (VOCs), and Semivolatile organic compounds (SVOCs), metals and polychlorinated biphenyls (PCBs). Soil boring locations are shown on Plate 1. A summary of the soil analytical results compared to the NYSDEC Part 375 Restricted Residential Use Soil Cleanup Standards (Restricted Residential SCOs) is presented on Tables 1 through 4. A discussion of the results is presented below.

Volatile Organic Compounds

Volatile organic compounds were detected in 10 of the 25 samples analyzed; exceedances were noted in two soil samples as summarized below:

- 1,2,4-trimethylbenzene: Concentrations ranged from non-detect to 305 mg/kg (GP-8[8-10]), exceedances of the Restricted Residential SCO of 52 milligrams per kilogram (mg/kg) occurred in samples GP-8(8-10) and GP-9(2-4).

- 1,3,5-trimethylbenzene: Concentrations ranged from non-detect to 84 mg/kg (GP-8[8-10]), exceedances of the Restricted Residential SCO of 52 mg/kg occurred in samples GP-8(8-10) and GP-9(2-4).

- Ethylbenzene: Concentrations ranged from non-detect to 131.0 mg/kg (GP-8[8-10]), exceedances of the Restricted Residential SCO of 41 mg/kg occurred in samples GP-8(8-10) and GP-9(2-4).

- Xylenes (total): Concentrations ranged from non-detect to 368.1 (GP-8[8-10]), exceedances of the Restricted Residential SCO of 100 mg/kg occurred in samples GP-8(8-10) and GP-9(2-4).

Semivolatile Organic Compounds

Semivolatile Organic Compounds were detected in 10 of the 25 soil samples analyzed. Exceedances of the Restricted Residential SCOs were limited to one sample, GP-1B(4-6), as summarized below:

- Benzo(a)pyrene: Concentrations ranged from non-detect to 1.34 mg/kg.

- Benzo(b)fluoranthene: Concentrations ranged from non-detect to 1.36 mg/kg.

- Dibenz(a,h)anthracene: Concentrations ranged from non-detect to 1.43 mg/kg.

Metals

Metals were detected in each of the 25 soil samples analyzed. Exceedances of the Restricted Residential SCOs were noted in four of the samples analyzed, as summarized below:

- Arsenic: Concentrations ranged from non-detect to 21.90 mg/kg (SB-3[3-4]). Only sample SB-3(3-4) exceeded the Restricted Residential SCO of 16 mg/kg.

- Barium: Concentrations ranged from 47.8 mg/kg to 483.0 mg/kg (GP-10[2-4]). Only sample GP-10(2-4) exceeded the Restricted Residential SCO of 400 mg/kg.

- Copper: Concentrations ranged from 10.8 mg/kg to 415 mg/kg (GP-1B[4-6]). Only sample GP-1B(4-6) exceeded the Restricted Residential SCO of 270 mg/kg.

- Lead: Concentrations ranged from non-detect to 1730.0 mg/kg (GP-10[2-4]). Only sample GP-10(2-4) exceeded the Restricted Residential SCO of 400 mg/kg.

- Mercury: Concentrations ranged from non-detect to 70.8 mg/kg (GP-9[2-4]). Only sample GP-9(2-4) exceeded the Restricted Residential SCO of 0.81 mg/kg.

Polychlorinated biphenyls

PCBs were detected in one of the samples analyzed (GP-10 [2-4]) at a concentration less than the Restricted Residential SCO of 1 mg/kg.

Pesticides

Two pesticides (4,4-DDE and 4,4-DDT) were detected in one of the soil samples analyzed (GP-10[2-4]) at concentrations below the Restricted Residential SCOs of 8.9 and 7.9 mg/kg, respectively.

3.3.1.2 Groundwater

Woodard & Curran installed three permanent groundwater monitoring wells (MW-1 through MW-3); and collected 12 groundwater grab samples for a total of 15 groundwater samples analyzed during their investigation in 2007. The locations of the monitoring wells and groundwater grab sample locations are shown on Plate 1. These samples were analyzed for select VOCs, SVOCs, and metals. A summary of the results compared to the NYSDEC Ambient Water Quality Standards and Guidance Values (AWQSGVs) are presented in Tables 5 through 7. A discussion of the results is presented below.

Volatile Organic Compounds

Volatile organic compounds were detected in all but one sample (GP-2W) analyzed and exceedances of applicable AWQSGVs were observed in 11 of the samples analyzed. Details as follows:

- 1,2,4-trimiethylbenzene: Concentrations ranged from non-detect to 1,460 micrograms per liter (µg/liter) (GP-9W), and exceeded its AWQSGV of 5 µg/liter in samples GP-1W, GP-9W, SB-7W, SB-8W, and MW-3.

- 1,3,5-trimmethylbenzene: Concentrations ranged from non-detect to a high of 546 µg/liter (GP-9W) and exceeded its AWQSGV of 5 µg/liter in samples GP-1W, GP-9W, SB-7W, SB-8W, and MW-3.

- 4-isopropyltoluene: Concentrations ranged from non-detect to a high of 101 µg/liter (GP-9W) and exceeded its AWQSGV of 5 µg/liter in samples GP-9W, SB-8W and MW-3.

- Benzene: Concentrations ranged from non-detect to 446 µg/liter (SB-7W) and exceeded its AWQSGV of 1 µg/liter in samples GP-4W, GP-9W, SB-7W, SB-8W and SB-9W.

- Cis-1,2-dichloroethene: Concentrations ranged from non-detect to 222 µg/liter (SB-9W) and exceeded its AWQSGV of 5 µg/liter in samples GP-4W, GP-12W, SB-5W and SB-9W.

- Ethylbenzene: Concentrations ranged from non-detect to a high of 1020 µg/liter (GP-9W) and exceeded its AWQSGC of 5 µg/liter in samples GP-9W, SB-7W, SB-8W, and MW-3.

- Isopropylbenzene: Concentrations ranged from non-detect to a high of 102 µg/liter (GP-9W) and exceeded its AWQSGV of 5 µg/liter in samples GP-9W and GP-7W.

- Methyl tert-butyl ether (MTBE): Concentrations ranged from non-detect to 1,120 µg/liter (SB-7W) and exceeded its AWQSGV of 10 µg/liter in samples GP-12W, SB-5W and SB-7W.

- Naphthalene: Concentrations ranged from non-detect to 532 µg/liter (GP-9W) and exceeded its AWQSGV of 10 µg/liter in samples GP-9W and SB-7W.

- N-butylbenzene: Concentrations ranged from non-detect to 80.5 (GP-9W) and exceeded its AWQSGV of 5 µg/liter in sample GP-9W.

- Sec-butylbenzene: Concentrations ranged from non-detect to 53.0 µg/liter (GP-9W) and exceeded its AWQSGV of 5 µg/liter in sample GP-9W.

- N-propylbenzene: Concentrations ranged from non-detect to 231 µg/liter (GP-9W) and exceeded its AWQSGV of 5 µg/liter in samples GP-4W, GP-9W and SB-7W.

- Toluene: Concentrations ranged from non-detect to 114 µg/liter (GP-9W) and exceeded its AWQSGV of 5 µg/liter in samples GP-9W and SB-7W.

- Vinyl Chloride: Concentrations ranged from non-detect to 21.9 µg/liter (GP-4W) and exceeded its AWQSGV of 2 µg/liter in samples GP-4W and SB-5W.

- Xylenes (total): Concentrations ranged from non-detect to 2,680 µg/liter (GP-9W) and exceeded its AWQSGV of 5 µg/liter in samples GP-9W and SB-7W.

Semivolatile Organic Compounds

Semivolatile organic compounds were detected in three of the 15 groundwater samples analyzed. Exceedances of the AWQSGVs were noted in all three samples, details as follows:

- 2-methylnapthalene: Concentrations ranged from non-detect to 79.9 µg/liter (GP-9W). Only sample GP-9W exceeded the AWQSGV of 50 µg/liter.

- Naphthalene: Concentrations ranged from non-detect to 237 µg/liter (GP-9W) and exceeded its AWQSGVs in samples GP-9W, SB-8W and MW-3.

Metals

Metals were detected in each of the groundwater samples analyzed. Exceedances of the AWQSGVs were also noted in each of the samples analyzed, details as follows:

- Mercury: Concentrations ranged from non-detect to 6.4 µg/liter (GP-6W) and exceeded its AWGSGV of 0.7 µg/liter in sample GP-6W.

- Arsenic: Concentrations ranged from non-detect to 231 µg/liter (GP-6W) and exceeded its AWQSGV of 25 µg/liter in samples GP-6W and GP-9W.

- Barium: Concentrations ranged from 140 µg/liter to 6,070 µg/liter (GP-6W) and exceeded its AWQSGV of 1,000 µg/liter in samples GP-6W and GP-9W.

- Beryllium: Concentrations ranged from non-detect to 18.8 µg/liter (GP-6W) and exceeded its AWQSGV of 3 µg/liter in samples GP-6W and GP-9W.

- Cadmium: Concentrations ranged from non-detect to 27.5 µg/liter (GP-6W) and exceeded its AWQSGV of 5 µg/liter in sample GP-6W.

- Chromium: Concentrations ranged from non-detect to 1,640 µg/liter (GP-6W) and exceeded its AWQSGV of 50 µg/liter in samples GP-6W, GP-9W and GP-12W.

- Copper: Concentrations ranged from non-detect to 1,520 µg/liter (GP-6W) and exceeded its AWQSGV of 200 µg/liter in samples GP-6W and GP-9W.

- Iron: Concentrations ranged from 27.3 µg/liter to 2,160,000 µg/liter (GP-6W) and exceeded its AWQSGV of 300 µg/liter in samples GP-1W, GP-2W, GP-4W, GP-6W, GP-9W, GP-12W, SB-5W, MW-1, MW-2 and MW-3.

- Iron and Manganese Combined: Concentrations ranged from 460 µg/liter to 2,175,800 µg/liter (GP-6W) and exceeded its AWQSGV of 500 µg/liter in all samples except SB-11W.

- Magnesium: Concentrations ranged from 9,120 µg/liter (GP-4W) to 384,000 µg/liter (GP-6W) and exceeded its AWQSGV of 7 µg/liter in each sample analyzed.

- Manganese: Concentrations ranged from 383 µg/liter (GP-4W) to 15,000 µg/liter (GP-6W) and exceeded its AWQSGV of 300 µg/liter in each sample analyzed.

- Sodium: Concentrations ranged from 27,700 µg/liter to 831,000 µg/liter (MW-3) and exceeded its AWQSGV of 20000 µg/liter in each sample analyzed.

- Nickel: Concentrations ranged from non-detect to 942 µg/liter (GP-6W) and exceeded its AWQSGV of 100 µg/liter in samples GP-6W and GP-9W.

- Lead: Concentrations ranged from non-detect to 5,750 µg/liter (GP-6W) and exceeded its AWQSGV of 25 µg/liter in samples GP-4W, GP-6W, GP-9W, and GP-12W.

- Antimony: Concentrations ranged from non-detect to 125 µg/liter (GP-6W) and exceeded its AWQSGV of 3 µg/liter in samples GP-2W, GP-6W and MW-1.

- Thallium: Concentrations ranged from non-detect to 112 µg/liter (GP-6W) and exceeded its AWQSGV of 1 µg/liter in samples GP-6W, SB-5W, SB-9W and MW-3.

- Vanadium: Concentrations ranged from non-detect to 1,620 µg/liter (GP-6W) and exceeded its AWQSGV of 14 µg/liter in samples GP-2W, GP-4W, GP-6W, GP-9W, GP-12W, SB-5W, MW-1, and MW-2.

- Zinc: Concentrations ranged from non-detect to 5,080 µg/liter (GP-6W) and exceeded its AWQSGV of 2,000 µg/liter in sample GP-6W.

3.3.2 Phase I ESA – 55 and 77 West Post Road

Partner Engineering and Science, Inc. (Partner) prepared a Phase I ESA in March of 2010 for 55 and 77 West Post Road which includes Parcels G (77 West Post Road) and H (55 West Post Road). The following RECs were identified:

- Historical records indicated the site had been utilized for auto sales and repair purposes since the 1970s including the use of above and below ground storage tanks, hydraulic lift systems, and an oil/water separator. Additionally, the Phase I ESA references the soil and groundwater samples collected during the W&C Phase II ESA and notes that contaminants associated with auto repair has been found in groundwater above applicable standards.

- Two spill numbers are associated with the site (both listed as active in the Phase I ESA, have subsequently been closed), details as follows:

  - Spill number 0901783 was generated following the removal of a 1,000-gallon fuel oil UST in 2009 in which soil contamination was observed (spill number 0901783 was closed on April 17, 2012).

  - Spill number 0901804 was generated following the removal of an unregistered UST which was found and removed in 2009. An unreported amount of diesel fuel was reported as spilled associated with this UST removal (spill number 0901804 was closed on March 31, 2011).

  Partner noted that limited information regarding the above spill numbers and UST removals was available to them during the preparation of the Phase I; however, DRE Environmental, Inc. prepared a Tank Removal and Closure report in 2012 which provides details of the UST removals noted above and is summarized in Section 3.3.6 below.

- Partner noted that since one unregistered UST was discovered at 55 West Post Road it is possible that additional orphaned USTs are present at the Parcel. With respect to 77 West Post Road, Partner was informed that a fuel oil UST was removed from the parcel in 1983; however, Partner references the W&C Phase II ESA which notes there are two USTs located at this Parcel and highlights the discrepancy as a REC.

- An oil/water separator located at 77 West Post Road was identified as a REC by Partner.

- An unknown steel plate located in the rear parking area at 77 West Post Road was also identified as a REC by Partner.

Additionally, Partner noted a number of environmental concerns including:

- Several canisters of hazardous materials and gases along with drums of recovered (purged) water and stockpiled soils located at the rear of 55 West Post Road. Note the location of

the hazardous material was not provided in the Phase I ESA, nor could their location be ascertained from reviewing photographs included in the Phase I ESA.

- Staining observed in the basement of 55 West Post Road which Partner attributed to a de minimis issue.

- Ten hydraulic lifts located at 55 West Post Road. Because these are not in-ground hydraulic lifts they were not identified as RECs.

3.3.3 Phase I ESA – 2 West Post Road

Partner prepared a Phase I ESA in March of 2010 for 2 West Post Road (AKA 190-192 South Lexington Avenue) (Parcel K). The following RECs were identified:

- A former drycleaner was identified through historical sources as having occupied the site in 1976.

- Slightly elevated levels of various contaminants in soil and groundwater above applicable regulatory limits were identified at the site during the W&C Phase II ESA.

Additionally, Partner identified the following environmental concerns:

- Seven former structures used for residential and commercial purposes were formerly located at the site until the 1970s. Some of these buildings were reportedly heated with fuel oil; however tank removal records were not provided for review leaving the possibility of orphaned USTs.

3.3.4 Phase I ESA – 87 and 95 West Post Road

Partner prepared a Phase I ESA in March of 2010 for 87 and 95 West Post Road which includes Parcels A (99-103 West Post Road), B (5 Rathbun Avenue), C (3 Brady Place), D (95 West Post Road) and F (79-83 West Post Road). The following RECs were identified:

- Historical use includes a gas station (Parcel A), a drycleaner (Parcel D) and auto repair (Parcel D).

- Partner reviewed the W&C Phase II ESA and cited elevated levels of contaminants above applicable regulatory limits in both the soil and groundwater as a REC. Additionally, Partner cited open Spill Number 0709611 (opened as a result of the findings of the Woodard & Curran Phase II) which remains open.

3.3.5 Facility Closure and Site Remediation Report – 35 West Post Road

Jade Environmental Inc. (Jade) performed facility closure and remediation activities at the Parcel J in 2010. The scope of work included completing a geophysical survey to look for orphaned USTs, clean and dispose of two USTs and three aboveground storage tanks (ASTs), removing 11

in-ground hydraulic lifts and cleaning and removing a floor drain and an oil water separator (OWS). Note that two in-ground hydraulic lifts were reportedly removed in 2005 (for a total of 13 in-ground hydraulic lifts). Results of the facility closure and assessment activities are as follows:

Geophysical Survey

A Phase I ESA conducted at the Parcel previously indicated that buried gasoline tanks may be present under the sidewalks north and south of the property or beneath the shoulder of Maple Avenue. The geophysical survey did not locate the suspected orphaned gasoline tanks. The survey did locate a previously known 1,000-gallon waste oil UST in the parking lot and one 1,000-gallon fuel oil UST beneath the showroom.

UST Removal

Both the waste oil and fuel oil USTs were unearthed, cut open, cleaned, removed and disposed offsite. Both USTs were found to contain 18-24 inches of an oil and water mixture. Upon removal, holes were observed in the bottoms of both USTs. Impacted soil, based on visual, olfactory and photo-ionization detector (PID) readings were discovered in the fuel oil UST excavation. Impacted soil was not observed in the waste oil UST excavation.

Four end point composite samples were collected from the sidewalls of the waste oil UST excavation along with a groundwater sample as groundwater had accumulated in the bottom of the excavation. Additionally, two monitoring wells were installed and sampled north and south of the UST, and an existing well located on the north end of the parking lot was also sampled. The report notes that no VOCs or SVOCs typical of heavy oil were identified in any of the soil samples collected and that no VOCs were detected in the groundwater samples collected from the three wells. Jade therefore concludes that there is no evidence of petroleum impacts in the waste oil UST excavation. Note that summary tables were not provided in the report and the groundwater sample collected from within the excavation is not discussed.

Due to the petroleum impacts observed in the soil in the fuel oil UST excavation Spill Number 10-07371 was generated. Approximately 250 tons of impacted soil from the UST excavation was removed and transported offsite for disposal. Post remedial sampling consisted of five sidewall composite samples and a groundwater sample of the water that had accumulated in the bottom of the excavation. Analytical results indicated that VOCs typical of fuel oil were not detected in soil

above regulatory limits. Exceedances of VOCs and SVOCs in groundwater were detected; however, it was Jade's opinion that the exceedances are within an order of magnitude of the regulatory limits and will likely degrade over time.

Hydraulic Lift Removal

Each of the existing eleven in-ground hydraulic lifts was removed. Additionally, the soil in the locations of two former lifts were excavated to close Spill Number 05-08992 which was generated in 2005 when the two hydraulic lifts were removed from the property.

The report notes that during removal of the lifts it was evident that several if not all the lifts had leaked to some extent. Specifically, a thin layer of free phase hydraulic fluid was observed floating on the groundwater in lift excavations HL-1 and HL-9. Sheens were observed elsewhere.

Soil that appeared saturated with hydraulic fluid was excavated and removed. To remove free phase hydraulic fluid from the groundwater, an eight-hour enhanced fluid recovery (EFR) event was conducted. The EFR event was conducted at each of the 13 excavations; however, excavations HL-1, HL-2, HL-9, HL-10 and HL-13 required repeated events to capture the free phase hydraulic fluid. Post remedial sampling consisted of one composite soil sample from each excavation. Following sampling, each excavation was backfilled. Monitoring wells were installed at excavations HL-1, HL-2, HL-9, HL-10 and HL-13 to allow for future monitoring at these locations.

Analytical results from the post remediation samples indicated that PCBs were not detected, trace levels of SVOCs were detected in HL-7 and no petroleum related VOCs were detected. Chlorinated VOCs were detected in end point samples collected at HL-2, HL-4 and HL-9. Of these detections, only the sample collected at location HL-9 contained cis-1,2,-dicloroethene at concentrations above regulatory limits. Analytical results from the groundwater samples collected from the five interior wells indicated exceedances of regulatory limits at location HL-9 for various chlorinated VOCs (cVOCs) including PCE, trichloroethene (TCE), cis-1,2dichloroehtene and vinyl chloride. The report notes that a Phase I ESA previously conducted at the parcel documented the use of PCE at the parcel.

Based on the analytical results, the area around HL-9 was excavated. The dimensions of the excavation were approximately 20-feet by 20-feet centered on HL-9 and extended to approximately three feet into the saturated zone. A floor drain sump (possibly an OWS) was discovered and removed during the excavation. In total 108 tons of soil was removed. Additionally, an EFR event was conducted on the accumulated groundwater in the excavation. In total 1,180-gallons of contaminated groundwater was removed from the excavation.

Following the second excavation, four post remediation end point soil samples were collected. Laboratory analytical results revealed no exceedances of cVOCs in the samples analyzed.

The groundwater in the excavation was inoculated with a hydrogen releasing compound (HRC) to address cVOC concerns in groundwater. Two weeks following the inoculation, analytical results indicated exceedances of PCE, TCE and cis-1,2-dichloroethane. Samples were also collected six weeks following the inoculation; PCE, TCE and cis-1,2-dichloroethane were still present at concentrations above regulatory limits; however, trending downward. Based on this downward trend the excavation was again inoculated with HRC and then backfilled. The last sampling event occurred six months following the initial inoculation, analytical results indicated that PCE was the only cVOC detected above regulatory limits. Based on these results Jade concluded that further mitigation was not necessary. Spill Numbers 05-08992 and 10-07370 were closed on October 5th and October 6th of 2011 respectively.

3.3.6 Tank Removal and Closure Report – 55 West Post Road

In February of 2012, DRE Environmental, Inc. (DRE) removed three adjoining waste oil USTs (550-gallon, 1,000-gallon and a 4,000-gallon) from Parcel H. During removal, impacted soils were observed (based on olfactory and visual observations) and removed. Spill numbers 09-01783 and 09-01804 were generated subsequent to the discovery of impacted soils. In total 150 tons of petroleum impacted soil was removed from the excavation. Post remedial samples consisted of one composite soil sample for the four sidewalls and one bottom sample from each UST. Analytical results indicated that no VOCs or SVOCs were detected above regulatory limits. Spill numbers 09-01783 and 09-01804 were closed on April 7, 2012 and March 31, 2011 respectively.

3.3.7 Tank Removal and Closure Report – 77 West Post Road

In February of 2012 DRE removed a 500-gallon fuel oil UST from Parcel G. During removal of the UST petroleum impacted soils (based on visual and olfactory observations) were observed and spill number 11-12748 was generated. Approximately 210 tons of petroleum impacted soil was removed from the excavation. Post remedial soil samples included a total of 11 samples from the sidewalls and bottom of the excavation due to its size. DRE notes that analytical results found no petroleum related compounds above regulatory standards and therefore requested closure of spill number 11-12748. The spill number remains open.

3.4 Data Usability

Previous groundwater and soil analytical data developed by Woodard & Curran, Jade Environmental and DRE Environmental were evaluated by Roux Associates for data usability purposes. The laboratory data package deliverables were not available or were not produced in accordance with NYSDEC Analytical Services Protocol (ASP) Category B deliverables. Therefore, the data generated by Woodard & Curran, Jade Environmental and DRE Environmental should be considered qualitative and used only as "screening level" quality data to guide/support future RI sampling efforts.

3.5 Site Redevelopment Plans

As noted previously, the anticipated plan for Site redevelopment consists of the construction of a multi-level, mixed use development including parking, retail space and medical office space. There is also a potential for plans to be amended to include a residential component as well. The future use includes retail space to the north along West Post Road and a parking garage to the south along Maple Avenue. Due to the changes in topography across the Site, redevelopment plans include excavating a significant portion of the Site. The limits (depth) of excavation are summarized below.

Parcels A and B – The future use for both Parcels A (retail building built at grade) and B (landscaped area, entrance ramp) will not require extensive excavation and be limited to that required for foundations and footing.. The final grade is expected to be at or near current grade elevation.

Parcels C and D – At grade level these areas will be utilized as a truck loading area with retail space above. This area will be excavated to an elevation of approximately 225 feet above mean sea level (msl), which will require removing anywhere from 2 to 11 feet of soil and will likely extend to or near the water table.

Parcel F – The front (along West Post Road) 60-feet of Parcel F will be excavated to an elevation of approximately 221 feet above msl which will require removing approximately 6 to 11 feet of soil. The remaining portion of the Site will be excavated to an elevation of 213 feet above msl which will require removing anywhere from 9 to 15 feet of soil. It is anticipated that the excavation will intersect the water table in this area.

Parcel G – Like Parcel F, most of the front portion of Parcel G will be excavated to an elevation of 221 feet above msl which will require removing anywhere from zero to six feet of soil. The remaining southern portion of Parcel G will be excavated to an elevation of 213 feet above msl and will require removing anywhere from 3 to 7 feet of soil. It is expected that the excavation will extend to or near the water table particularly in the western section of the Parcel.

Parcels H, I J – Both Parcels will be excavated to an elevation of approximately 213 feet above msl which will require removing anywhere from 0 to 6 feet of soil.

Parcel K – Redevelopment plans for Parcel K include office, retail and parking space. The entire parcel will be excavated to an elevation of 190 feet above msl which will require removing approximately 10 feet of soil. It is expected that the excavations will extend to or near the water table.

4.0 RI WORK PLAN OBJECTIVES, SCOPE, AND RATIONALE

4.1 Objectives and Relationship to RAWP

Previous investigations have documented the presence of the following areas of concern (AOCs):

Parcel A

- Petroleum related VOCs in soil and groundwater

Parcel B

- Petroleum related VOCs in soil and groundwater

Parcel C

- Petroleum related VOCs in soil (no groundwater data)

Parcel D

- Petroleum related VOCs in soil and groundwater
- Potential for chlorinated VOC impacts due to former use as a drycleaner

Parcel F

- Petroleum related VOCs in soil and groundwater
- Chlorinated related VOCs in groundwater

Parcel G

- Chlorinated VOCs in soil
- polychlorinated biphenyls were previously detected in soil
- Petroleum related VOCs in groundwater
- Potential orphaned USTs

Parcel H

- Petroleum related VOCs in groundwater
- Chlorinated VOCs groundwater
- Potential orphaned USTs
- Unknown steel plate located in the rear of the parking lot

Parcel I and J

- Petroleum related VOCs and SVOCs in soil and groundwater
- Chlorinated VOCs in groundwater

Parcel K

- Petroleum related VOCs in groundwater
- Chlorinated VOCs in groundwater
- Potential orphaned USTs

Based on the existing database for the Site and known data gaps, the following objectives have been identified for the RIWP:

- Evaluate soil quality associated with all AOCs that will remain onsite following redevelopment;
- Complete the installation of a comprehensive onsite groundwater monitoring well network to determine groundwater flow direction and provide coverage for all potential AOCs; and
- Delineate the three dimensional extent of previously documented VOC impacts to groundwater.

Environmental data collected during the RI will be used to qualitatively assess the potential exposure of receptors to Site contaminants, and develop the information necessary to support the development of a RAWP.

4.2 RI Scope

The scope of the RI will entail the collection of sufficient Site characterization data so that, together with the historic data generated by others including groundwater and soil sampling, the entire Site will be sufficiently characterized to support the development of the Site-wide RAWP. To accomplish this, the RI will focus on the following:

- The collection of soil and groundwater data sufficient to define the nature and extent of contamination for impacted areas;
- The collection of land survey data for developing a groundwater contour map; and
- The performance of a qualitative exposure assessment to identify exposure pathways, and evaluate contaminant fate and transport.

Soil vapor sampling is not proposed at this time. The need for, and potential location of soil vapor sampling will be evaluated based on the results of the RI VOC data and the redevelopment plans. The redevelopment plans include demolition of the existing buildings and excavating most of the Site which in many areas may extend to, and sometimes into the water table. For this reason,

redevelopment plans include a pressurized slab to be used under future Site structures anticipated to be installed at or in the water table which will provide waterproofing and mitigate any potential vapor intrusion issues. In addition, the redevelopment plans include parking or unoccupied space beneath the majority of the development.

The scope of each component of the RI is discussed in the following subsections. The proposed scope of work will be conducted as follows:

- Install 45 soil borings (RB-1 to RB-45) in order to horizontally and vertically delineate previous soil sample results and fill existing data gaps.
- Install 20 shallow monitoring wells (RW-1 through RW-20), collect water level measurements and collect groundwater samples to assess groundwater quality.
- Install two deep monitoring well clusters (RW-3D and RW-5D), collect water level measurements and collect groundwater samples to assess deep groundwater quality.

Current development plans include excavation, removal and offsite disposal of up to 15 feet of soil (in some areas). The depth of this "excavation envelope" varies by parcel. Because the soil is to be removed and properly disposed of at an offsite facility, soil from within the excavation envelope will not be collected for laboratory analysis as part of this RIWP. Anticipated final excavation elevations are shown on Plate 3 and are described in Section 3.5. The soil within the excavation envelope will be sampled in accordance with the requirements of the designated disposal facility, to be chosen at a later date. If development plans are modified and additional soil will remain in place, additional soil samples will be collected. Following completion of the investigative activities described herein, Roux Associates will review the RI data along with the available historic data and evaluate whether delineation is warranted. Delineation borings, if required, will be performed in accordance with the procedures outlined in the Field Sampling Plan (FSP).

Detailed field sampling procedures are provided in the FSP, Appendix A. The proposed locations are shown on Plate 3 and sampling details are summarized in Table 8.

4.2.1 Site Reconnaissance

Roux Associates has performed a preliminary Site reconnaissance and has not located any additional AOCs. An inspection of the existing Site buildings will be conducted to determine final locations of soil boring and monitoring wells based on actual field conditions.

4.2.2 Soil Characterization at Potential Impact Areas

Sixty five soil borings (45 soil borings and 20 monitoring well pilot-boreholes) will be installed at the locations shown on Plate 3. Actual locations may vary slightly based on field conditions (i.e., access constraints, and/or utilities). If a boring is proposed to be moved more than 10 feet from the location shown on Plate 3, the NYSDEC project manager will be consulted prior to installing the boring at the new location. Soil samples will be collected using a Geoprobe® drill rig (or similar) and will be collected continuously using either a four foot or five foot macro core sampler, depending on the model used from the land surface to the observed water table at a minimum.

In all soil borings, a soil sample will be collected from the interval located immediately below the excavation envelope (i.e., the soil that will remain behind will be sampled). In areas where the extent of the construction envelope is above the water table, then an additional soil sample will be collected at the water table interface. In addition, if odor/visual evidence of contamination or elevated photoionization detector (PID) readings are observed at or below the limit of the excavation envelope (as depicted on Plate 3), additional samples will be collected from the interval that exhibits the highest contamination (as determined through visual, olfactory and/or PID readings) and from the next clean interval below the interval below with the highest contamination. The proposed sampling locations can be found on Plate 3 and sampling criteria are summarized in Table 8. During installation of the soil borings, the lithology will be recorded and soil will be visually inspected for evidence of contamination and field screened for VOCs using a PID, continuously.

All soil samples will be analyzed for the full Target Compound List (TCL) plus the 30 (10 volatile organic compounds and 20 semi-volatile organic compounds) highest concentration tentatively identified compounds (TICs) and the full target analyte list (TAL) (metals) via United States Environmental Protection Agency (USEPA) Method 8260, Method 8270, Method 8010, and Method 6010. Additionally, a portion (25%) of all soil samples collected will be analyzed for PCBs and pesticides in order to confirm that they are not a compound of concern at the Site. All soil samples will be analyzed at laboratory with a current New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) Contract Laboratory Protocol (CLP) certification for each of the parameters noted above. Samples will be analyzed on

a standard turnaround time and will be reported as Category B data deliverables. The laboratory analytical data will be submitted to an independent data validator and a Data Usability Summary Report (DUSR) will be prepared.

4.2.3 Groundwater Investigation

To characterize onsite groundwater flow and quality conditions, the existing network of monitoring wells will be gauged and sampled, to the extent possible. Twenty new monitoring wells will also be installed (RW-1 through RW-20) to evaluate groundwater quality and to vertically delineate previously identified cVOCs. To assess cVOC impacts, two shallow/ deep monitoring well clusters will be installed (RW-3 and RW-5). The deep wells will be denoted with a 'D' designation. Additional shallow monitoring wells may be installed at locations based on field observations (elevated PID readings, visual or olfactory evidence of contamination at or near the water table) during soil boring activities. The proposed monitoring well locations are shown on Plate 3 and summarized in Table 8.

Each well will be developed to ensure proper hydraulic connection with the aquifer and to reduce/eliminate turbidity of the water. The wells will be developed using a submersible pump, which will be surged periodically until well yield is consistent and has turbidity below 50 nephelometric turbidity units (NTUs), if possible. Detailed procedures regarding well development are also found in the FSP (Appendix A). All monitoring wells will be surveyed by a licensed New York State surveyor to obtain horizontal and vertical survey coordinates, and water level elevations will be calculated for each well, and a groundwater contour map will be developed. See the FSP in Appendix A for monitoring well design details.

To characterize groundwater flow and quality conditions, following well installation and development, the entire network of monitoring wells will be gauged and sampled. As part of the gauging round, water-level measurements will be recorded for all monitoring wells to further define groundwater flow patterns beneath the Site.

Following the groundwater gauging event, a comprehensive groundwater sampling event will be completed. To ensure groundwater samples collected are representative of the conditions in the surrounding aquifer, monitoring wells will be purged prior to sample collection using low flow

sampling procedures as outlined in USEPA document titled "Low Stress (Low Flow) Purging and Sampling Procedures for the Collection of Groundwater Samples From Monitoring Wells" (USEPA, 2010). Additional information regarding groundwater sampling procedures can be found in the FSP (Appendix A).

Groundwater samples will be collected and analyzed for:

- Organic contaminants – the full target compound list plus the 30 (10 volatile organic compounds and 20 semi-volatile organic compounds) highest concentration tentatively identified compounds (TICs);
- Groundwater samples will also be analyzed for PCBs and pesticides to confirm they are not a compound of concern at the Site;
- Inorganic compounds – the full target analyte list (TAL); and
- Field parameters will also be collected during well sampling.

All groundwater samples will be analyzed at laboratory with a current NYSDOH ELAP CLP certification for each of the parameters noted above. Samples will be analyzed on a standard turnaround time and will be reported as Category B data deliverables and a DUSR will be prepared. More information on sample analysis is provided in the QAPP (Appendix B).

4.2.4 Drains and Catch Basins

Catch basins and drains located onsite are presumed to be connected to the municipal sewer system. Connections to the municipal sewer system will be visually confirmed during the investigation. A sediment sample will be collected from any drywells identified onsite. Drywell sediment samples will be analyzed for the full TCL plus the 30 highest concentration TICs, TAL metals, TCL PCBs and TCL pesticides.

4.2.5 Qualitative Exposure Assessment

A qualitative exposure assessment (EA) will be performed following the collection of all initial and supplemental RI data. The EA will be performed in accordance with Section 3.3(c)4 of DER-10 and the New York State Department of Health (NYSDOH) guidance for performing a qualitative EA (NYSDEC DER-10; Technical Guidance for Site Investigation and Remediation; Appendix 3 B). The results of the qualitative EA will be provided in the RI report.

4.2.6 Fish and Wildlife Resource Impact Analysis

A Fish and Wildlife Resource Impact Analysis is not necessary due to the Site's location in a heavily urbanized area.

5.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROTOCOLS

The goal of the QA/QC aspect of the RI is to ensure that suitable and verifiable data results from sampling and analysis performed. To accomplish this, a Quality Assurance Project Plan (QAPP) has been prepared and is provided as Appendix B.

6.0 HEALTH AND SAFETY

A site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) have been prepared for the Site and are provided in Appendix C. Decontamination plans and details can be found in Attachment A-1 of the FSP (Appendix A) and Section 11.0 of the HASP (Appendix C).

The Volunteer and associated parties preparing the remedial documents submitted to the State, and parties performing this work are completely responsible for the safe performance of all invasive work, and for the integrity and safety of structures that may be affected by the intrusive activities (such as buildings, foundations and bridge footings). HAZWOPER training to on site workers and personnel will be provided as required for remedial investigation activities as appropriate. Copies of the 40 Hours OSHA course certificates will be submitted to the NYSDEC and NYSDOH.

7.0 REPORTING AND SCHEDULE

The following will be provided to the NYSDEC during the course of the RI work.

Progress Reports

Progress report submittals to be provided to NYSDEC will include the following.

1) Daily Reports will be provided to the Project Manager for NYSDEC and NYSDOH during all periods of major investigative activity on remedial projects. These reports will include daily activities. These reports will include a summary of substantive findings and other pertinent information including all complaints received from the public.

2) Monthly reports are also required to be submitted until the Certificate of Completion is issued.

3) Identification of any previously unknown contaminated media identified during RI activities will be promptly communicated to NYSDEC's project manager.

4) A Site map will be provided to identify locations discussed in progress reports provided to NYSDEC.

RI Report

Following the completion of the RI, a RI report will be prepared and will include a description of the procedures followed and the results, including data summary tables and maps showing the extent of contamination. Based on the RI report findings a RAWP will be prepared to address contamination at the Site.

The RI Report will include all data developed during the RI, and will meet the technical requirements of NYSDEC's DER-10; Technical Guidance for Site Investigation and Remediation. All RI analyses (i.e., TCL + 30,TAL) will be performed in accordance with the NYSDEC ASP, using USEPA SW-846 methods. The laboratory selected to analyze the field samples collected during the RI shall maintain a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certification for each of the analyses listed in Section 4.0.

All laboratory data are to be reported in NYSDEC ASP Category B deliverables and will be delivered to NYSDEC in electronic data deliverable (EDD) format as described on NYSDEC's website (http://www.dec.ny.gov/chemical/62440.html). A Data Usability Report will be prepared meeting the requirements in Section 2.2(a)1.ii and Appendix 2B of DER-10 for all data packages generated for the RI.

Hazardous wastes and other contaminated media generated during the remedial investigation phase will be stored, transported, and disposed in full compliance with applicable local, state and federal regulations.

A table of data on the construction details for monitoring wells that have been built on-site will be submitted. This will include screen elevations, date of construction, geologic interval screened, and current status (i.e. available for sampling, destroyed, intact, needs development, etc.).

The Remedial Investigation Report will include a conceptual site model that explains the occurrence of contaminant sources and their fate and transport at the site in the context of the local site stratigraphy and hydrogeology. The conceptual model will utilize both plan and cross-sectional views of the site.

Copies of the transport manifests of hazardous and nonhazardous investigative waste will be provided to the NYSDEC Project Manager.

Following completion of the Remedial Investigation Report a Remedial Action Work Plan will be prepared. The RAWP will provide a detailed description of the remedial action and the remedial technology to be conducted for each area of concern. Note that, depending on the findings of the Remedial Investigation, the Remedial Investigation Report and the Remedial Action Work Plan may be submitted to NYSDEC simultaneously.

Schedule

RIWP Submittal to NYSDEC	May 2013
NYSDEC Approval of RIWP	October 2013
Remedial Investigation Field Work	November to December 2013
Submit RI Report	February 2014
NYSDEC and NYSDOH RI Report Approval	April 2014
Remedial Action Work Plan Submittal to NYSDEC	June 2014
NYSDEC and NYSDOH Approval	July 2014
Implement Remedial Action Work Plan	August 2014
Submit Site Management Plan and Final Engineering Report	To Be Determined

TABLES

Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-1A I 11/1/2007 2 - 3	GP-1B I 11/1/2007 4 - 6	GP-2 I 11/1/2007 4 - 6	GP-3 I 11/1/2007 4 - 5.5	GP-4 H 11/1/2007 3.5 - 5.5
1,1,1-Trichloroethane	0.68	0.68	100		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	--	--	--		ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	--	--	--		ND	ND	ND	ND	ND
1,1-Dichloroethane	0.27	0.27	26		ND	ND	ND	ND	ND
1,1-Dichloroethene	0.33	0.33	100		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	3.6	52		**40.2**	3.22	ND	ND	ND
1,2-Dichlorobenzene	1.1	1.1	--		ND	ND	ND	ND	ND
1,2-Dichloroethane	0.02	0.02	3.1		ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8.4	8.4	52		**12.8**	0.222	ND	ND	ND
1,3-Dichlorobenzene	2.4	2.4	49		ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	1.8	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Butanone (MEK)	0.12	0.12	100		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
4-Isopropyltoluene	--	--	--		7.35	0.783	ND	ND	ND
4-methyl-2-pentanone (MIBK)	--	--	--		ND	ND	ND	ND	ND
Acetone	0.05	0.05	100		ND	ND	ND	ND	ND
Benzene	0.06	0.06	4.8		ND	ND	ND	ND	ND
1,1-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroethyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroisopropyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-ethylhexyl]phthalate	--	--	--		ND	ND	ND	ND	ND
Carbon Disulfide	--	--	--		ND	ND	ND	ND	ND
Carbon Tetrachloride	0.76	0.76	2.4		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
Chlorobenzene	1.1	1.1	100		ND	ND	ND	ND	ND
Chloroethane	--	--	--		ND	ND	ND	ND	ND
Chloroform	0.37	0.37	49		ND	ND	ND	ND	ND
Dibromochloromethane	--	--	--		ND	ND	ND	ND	ND
Ethylbenzene	1	1	41		ND	ND	ND	ND	ND

Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-1A I 11/1/2007 2 - 3	GP-1B I 11/1/2007 4 - 6	GP-2 I 11/1/2007 4 - 6	GP-3 I 11/1/2007 4 - 5.5	GP-4 H 11/1/2007 3.5 - 5.5
Isopropylbenzene	--	--	--		2.29	0.225	ND	ND	ND
Methylene chloride	0.05	0.05	100		ND	ND	ND	ND	ND
Napthalene	--	--	100		24.4	0.952	ND	ND	ND
n-Butylbenzene	12	12	100		7.76	0.674	ND	ND	ND
n-Propylbenzene	3.9	3.9	100		**4.46**	0.364	ND	ND	ND
sec-Butylbenzene	11	11	100		3.04	0.366	ND	ND	ND
Tert-butanol / butyl alcohol	--	--	--		ND	ND	ND	ND	ND
Tetrachloroethene	1.3	1.3	19		ND	ND	ND	ND	ND
Toluene	0.7	0.7	100		ND	ND	ND	ND	ND
trans-1,2-Dichloroethane	0.19	0.19	100		ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.47	0.47	21		ND	ND	ND	ND	ND
Vinyl chloride	0.02	0.02	0.9		ND	ND	ND	ND	ND
Xylenes (Total)	0.26	1.6	100		**4.66**	ND	ND	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the
NYSDEC Part 375 Unrestricted Use Standards
Shaded data indicates that parameter was detected above the
NYSDEC Part 375 Protection of Groundwater Standards
Boxed data indicates that parameter was detected above the
NYSDEC Part 375 Restricted Residential Standards

Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-5 H 11/2/2007 6 - 8	GP-6 H 11/2/2007 6 - 8	GP-7 H 11/2/2007 2 - 4	GP-8 NA 11/5/2007 8 - 10	GP-9 D 11/5/2007 2 - 4
1,1,1-Trichloroethane	0.68	0.68	100		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	--	--	--		ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	--	--	--		ND	ND	ND	ND	ND
1,1-Dichloroethane	0.27	0.27	26		ND	ND	ND	ND	ND
1,1-Dichloroethene	0.33	0.33	100		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	3.6	52		ND	ND	ND	**305**	**146**
1,2-Dichlorobenzene	1.1	1.1	--		ND	ND	ND	ND	ND
1,2-Dichloroethane	0.02	0.02	3.1		ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8.4	8.4	52		ND	ND	ND	**84**	**59.4**
1,3-Dichlorobenzene	2.4	2.4	49		ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	1.8	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Butanone (MEK)	0.12	0.12	100		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
4-Isopropyltoluene	--	--	--		ND	ND	ND	7.89	14.1
4-methyl-2-pentanone (MIBK)	--	--	--		ND	ND	ND	ND	ND
Acetone	0.05	0.05	100		ND	ND	ND	ND	ND
Benzene	0.06	0.06	4.8		ND	ND	ND	ND	ND
1,1-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroethyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroisopropyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-ethylhexyl]phthalate	--	--	--		ND	ND	ND	ND	ND
Carbon Disulfide	--	--	--		ND	ND	ND	ND	ND
Carbon Tetrachloride	0.76	0.76	2.4		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
Chlorobenzene	1.1	1.1	100		ND	ND	ND	ND	ND
Chloroethane	--	--	--		ND	ND	ND	ND	ND
Chloroform	0.37	0.37	49		ND	ND	ND	ND	ND
Dibromochloromethane	--	--	--		ND	ND	ND	ND	ND
Ethylbenzene	1	1	41		ND	ND	ND	**131**	**54.4**

Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-5 H 11/2/2007 6 - 8	GP-6 H 11/2/2007 6 - 8	GP-7 H 11/2/2007 2 - 4	GP-8 NA 11/5/2007 8 - 10	GP-9 D 11/5/2007 2 - 4
Isopropylbenzene	--	--	--		ND	ND	ND	20.4	16.8
Methylene chloride	0.05	0.05	100		ND	ND	ND	ND	ND
Napthalene	--	--	100		ND	ND	ND	45.6	47
n-Butylbenzene	12	12	100		ND	ND	ND	**22.4**	11.4
n-Propylbenzene	3.9	3.9	100		ND	ND	ND	**60**	**23.1**
sec-Butylbenzene	11	11	100		ND	ND	ND	9.12	6.73
Tert-butanol / butyl alcohol	--	--	--		ND	ND	ND	ND	ND
Tetrachloroethene	1.3	1.3	19		ND	ND	ND	ND	ND
Toluene	0.7	0.7	100		ND	ND	ND	ND	ND
trans-1,2-Dichloroethane	0.19	0.19	100		ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.47	0.47	21		ND	ND	ND	ND	ND
Vinyl chloride	0.02	0.02	0.9		ND	ND	ND	ND	ND
Xylenes (Total)	0.26	1.6	100		ND	ND	ND	**368.1**	**147**

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the
NYSDEC Part 375 Unrestricted Use Standards
Shaded data indicates that parameter was detected above the
NYSDEC Part 375 Protection of Groundwater Standards
Boxed data indicates that parameter was detected above the
NYSDEC Part 375 Restricted Residential Standards

Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-10 G 11/5/2007 2 - 4	GP-11 K 11/5/2007 4 - 6	GP-12 K 11/5/2007 6 - 8	SB-1 I 11/7/2007 6 - 8	SB-2A H 11/7/2007 4 - 6
1,1,1-Trichloroethane	0.68	0.68	100		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	--	--	--		ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	--	--	--		ND	ND	ND	ND	ND
1,1-Dichloroethane	0.27	0.27	26		ND	ND	ND	ND	ND
1,1-Dichloroethene	0.33	0.33	100		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	3.6	52		ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.1	1.1	--		ND	ND	ND	ND	ND
1,2-Dichloroethane	0.02	0.02	3.1		ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8.4	8.4	52		ND	ND	ND	ND	ND
1,3-Dichlorobenzene	2.4	2.4	49		ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	1.8	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Butanone (MEK)	0.12	0.12	100		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
4-Isopropyltoluene	--	--	--		ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	--	--	--		ND	ND	ND	ND	ND
Acetone	0.05	0.05	100		ND	ND	ND	ND	ND
Benzene	0.06	0.06	4.8		ND	ND	ND	ND	ND
1,1-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroethyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroisopropyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-ethylhexyl]phthalate	--	--	--		ND	ND	ND	ND	ND
Carbon Disulfide	--	--	--		ND	ND	ND	ND	ND
Carbon Tetrachloride	0.76	0.76	2.4		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
Chlorobenzene	1.1	1.1	100		ND	ND	ND	ND	ND
Chloroethane	--	--	--		ND	ND	ND	ND	ND
Chloroform	0.37	0.37	49		ND	ND	ND	ND	ND
Dibromochloromethane	--	--	--		ND	ND	ND	ND	ND
Ethylbenzene	1	1	41		ND	ND	ND	ND	ND

Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-10 G 11/5/2007 2 - 4	GP-11 K 11/5/2007 4 - 6	GP-12 K 11/5/2007 6 - 8	SB-1 I 11/7/2007 6 - 8	SB-2A H 11/7/2007 4 - 6
Isopropylbenzene	--	--	--		ND	ND	ND	ND	ND
Methylene chloride	0.05	0.05	100		ND	ND	ND	ND	ND
Napthalene	--	--	100		ND	ND	ND	ND	ND
n-Butylbenzene	12	12	100		ND	ND	ND	ND	ND
n-Propylbenzene	3.9	3.9	100		ND	ND	ND	ND	ND
sec-Butylbenzene	11	11	100		ND	ND	ND	ND	ND
Tert-butanol / butyl alcohol	--	--	--		ND	ND	ND	ND	ND
Tetrachloroethene	1.3	1.3	19		0.207	ND	ND	ND	ND
Toluene	0.7	0.7	100		ND	ND	ND	ND	ND
trans-1,2-Dichloroethane	0.19	0.19	100		ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.47	0.47	21		ND	ND	ND	ND	ND
Vinyl chloride	0.02	0.02	0.9		ND	ND	ND	ND	ND
Xylenes (Total)	0.26	1.6	100		ND	ND	ND	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
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Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-2B H 11/7/2007 8 - 10	SB-3 G 11/7/2007 3 - 4	SB-4 A 11/8/2007 10 - 14	SB-5 F 11/9/2007 8 - 10	SB-6 NA 11/9/2007 17 - 19
1,1,1-Trichloroethane	0.68	0.68	100		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	--	--	--		ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	--	--	--		ND	ND	ND	ND	ND
1,1-Dichloroethane	0.27	0.27	26		ND	ND	ND	ND	ND
1,1-Dichloroethene	0.33	0.33	100		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	3.6	52		ND	ND	**41.4**	ND	0.151
1,2-Dichlorobenzene	1.1	1.1	--		ND	ND	ND	ND	ND
1,2-Dichloroethane	0.02	0.02	3.1		ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8.4	8.4	52		ND	ND	**13.5**	ND	0.077
1,3-Dichlorobenzene	2.4	2.4	49		ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	1.8	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Butanone (MEK)	0.12	0.12	100		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
4-Isopropyltoluene	--	--	--		ND	ND	3.49	ND	ND
4-methyl-2-pentanone (MIBK)	--	--	--		ND	ND	ND	ND	ND
Acetone	0.05	0.05	100		ND	ND	ND	ND	ND
Benzene	0.06	0.06	4.8		ND	ND	ND	ND	ND
1,1-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroethyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroisopropyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-ethylhexyl]phthalate	--	--	--		ND	ND	ND	ND	ND
Carbon Disulfide	--	--	--		ND	ND	ND	ND	ND
Carbon Tetrachloride	0.76	0.76	2.4		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
Chlorobenzene	1.1	1.1	100		ND	ND	ND	ND	ND
Chloroethane	--	--	--		ND	ND	ND	ND	ND
Chloroform	0.37	0.37	49		ND	ND	ND	ND	ND
Dibromochloromethane	--	--	--		ND	ND	ND	ND	ND
Ethylbenzene	1	1	41		ND	ND	**4.25**	ND	ND

Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-2B H 11/7/2007 8 - 10	SB-3 G 11/7/2007 3 - 4	SB-4 A 11/8/2007 10 - 14	SB-5 F 11/9/2007 8 - 10	SB-6 NA 11/9/2007 17 - 19
Isopropylbenzene	--	--	--		ND	ND	2.86	ND	ND
Methylene chloride	0.05	0.05	100		ND	ND	ND	ND	ND
Napthalene	--	--	100		ND	ND	8.29	ND	ND
n-Butylbenzene	12	12	100		ND	ND	3.59	ND	ND
n-Propylbenzene	3.9	3.9	100		ND	ND	**5.22**	ND	ND
sec-Butylbenzene	11	11	100		ND	ND	1.72	ND	ND
Tert-butanol / butyl alcohol	--	--	--		ND	ND	ND	ND	ND
Tetrachloroethene	1.3	1.3	19		ND	ND	ND	ND	ND
Toluene	0.7	0.7	100		ND	ND	ND	ND	ND
trans-1,2-Dichloroethane	0.19	0.19	100		ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.47	0.47	21		ND	ND	ND	ND	ND
Vinyl chloride	0.02	0.02	0.9		ND	ND	ND	ND	ND
Xylenes (Total)	0.26	1.6	100		ND	ND	**6.45**	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
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Bold data indicates that parameter was detected above the
NYSDEC Part 375 Unrestricted Use Standards
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Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-7 A 12/5/2007 12 - 16	SB-8 B 12/5/2007 12 - 14	SB-9 G 12/7/2007 9 - 11	SB-10 F 12/7/2007 9 - 11	SB-11 E 12/7/2007 4 - 6
1,1,1-Trichloroethane	0.68	0.68	100		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	--	--	--		ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	--	--	--		ND	ND	ND	ND	ND
1,1-Dichloroethane	0.27	0.27	26		ND	ND	ND	ND	ND
1,1-Dichloroethene	0.33	0.33	100		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	3.6	52		ND	**147**	ND	**4.24**	ND
1,2-Dichlorobenzene	1.1	1.1	--		ND	ND	ND	ND	ND
1,2-Dichloroethane	0.02	0.02	3.1		ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8.4	8.4	52		ND	**40.8**	ND	1.97	ND
1,3-Dichlorobenzene	2.4	2.4	49		ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	1.8	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Butanone (MEK)	0.12	0.12	100		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
4-Isopropyltoluene	--	--	--		ND	1.6	ND	0.594	ND
4-methyl-2-pentanone (MIBK)	--	--	--		ND	ND	ND	ND	ND
Acetone	0.05	0.05	100		**0.116**	ND	ND	ND	ND
Benzene	0.06	0.06	4.8		ND	ND	ND	**0.143**	ND
1,1-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroethyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-chloroisopropyl]ether	--	--	--		ND	ND	ND	ND	ND
Bis[2-ethylhexyl]phthalate	--	--	--		ND	ND	ND	ND	ND
Carbon Disulfide	--	--	--		ND	ND	ND	ND	ND
Carbon Tetrachloride	0.76	0.76	2.4		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
Chlorobenzene	1.1	1.1	100		ND	ND	ND	ND	ND
Chloroethane	--	--	--		ND	ND	ND	ND	ND
Chloroform	0.37	0.37	49		ND	ND	ND	ND	ND
Dibromochloromethane	--	--	--		ND	ND	ND	ND	ND
Ethylbenzene	1	1	41		ND	**21.6**	ND	**2.23**	ND

Table 1. Summary of Volatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-7 A 12/5/2007 12 - 16	SB-8 B 12/5/2007 12 - 14	SB-9 G 12/7/2007 9 - 11	SB-10 F 12/7/2007 9 - 11	SB-11 E 12/7/2007 4 - 6
Isopropylbenzene	--	--	--		ND	4.38	ND	0.743	ND
Methylene chloride	0.05	0.05	100		ND	ND	ND	ND	ND
Napthalene	--	--	100		ND	15.1	ND	1.22	ND
n-Butylbenzene	12	12	100		ND	9.51	ND	0.765	ND
n-Propylbenzene	3.9	3.9	100		ND	**21.6**	ND	1.31	ND
sec-Butylbenzene	11	11	100		ND	2.2	ND	0.366	ND
Tert-butanol / butyl alcohol	--	--	--		0.869	ND	ND	ND	ND
Tetrachloroethene	1.3	1.3	19		ND	ND	ND	ND	ND
Toluene	0.7	0.7	100		ND	ND	ND	0.099	ND
trans-1,2-Dichloroethane	0.19	0.19	100		ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.47	0.47	21		ND	ND	ND	ND	ND
Vinyl chloride	0.02	0.02	0.9		ND	ND	ND	ND	ND
Xylenes (Total)	0.26	1.6	100		ND	**37.44**	ND	**2.697**	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the
NYSDEC Part 375 Unrestricted Use Standards
Shaded data indicates that parameter was detected above the
NYSDEC Part 375 Protection of Groundwater Standards
Boxed data indicates that parameter was detected above the
NYSDEC Part 375 Restricted Residential Standards

Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-1A I 11/1/2007 2 - 3	GP-1B I 11/1/2007 4 - 6	GP-2 I 11/1/2007 4 - 6	GP-3 I 11/1/2007 4 - 5.5	GP-4 H 11/1/2007 3.5 - 5.5
1-Methylnaphthalene	--	--	--		2.95	ND	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dinitrophenol	--	--	--		ND	ND	ND	ND	ND
2,6-Dinitrotoluene	--	--	--		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Methylnaphthalene	--	--	--		7.88	0.583	ND	ND	ND
2-Methylphenol	0.33	0.33	100		ND	ND	ND	ND	ND
2-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
2-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	--	--	--		ND	ND	ND	ND	ND
3-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol	--	--	--		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
4-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
Acenaphthene	20	98	--		ND	ND	ND	ND	ND
Acenaphthylene	100	107	--		ND	ND	ND	ND	ND
Anthracene	100	1000	100		ND	ND	ND	ND	ND
Benz (a) anthracene	1	1	1		ND	ND	ND	ND	ND
Benzo (a) pyrene	1	22	1		ND	**1.34**	ND	ND	ND
Benzo(b)fluoranthene	1	1.7	1		ND	**1.36**	ND	0.439	ND
Benzo(g,h,i)perylene	100	1000	100		ND	0.878	ND	ND	ND
Benzo(k)fluoranthene	0.8	1.7	3.9		ND	**1.01**	ND	ND	ND
1,1'-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroethyl) ether	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl) ether	--	--	--		ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	--	--	--		ND	ND	ND	ND	ND
Butylbenzyl phthalate	--	--	--		ND	ND	ND	ND	ND
Chrysene	1	1	3.9		ND	**1.47**	ND	ND	ND
Dibenz(a,h)anthracene	0.33	1000	0.33		ND	**1.43**	ND	ND	ND

Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-1A I 11/1/2007 2 - 3	GP-1B I 11/1/2007 4 - 6	GP-2 I 11/1/2007 4 - 6	GP-3 I 11/1/2007 4 - 5.5	GP-4 H 11/1/2007 3.5 - 5.5
Dibenzofuran	7	210	59		ND	ND	ND	ND	ND
Diethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Dimethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-butyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-octyl phthalate	--	--	--		ND	ND	ND	ND	ND
Fluoranthene	100	1000	100		ND	1.66	ND	ND	ND
Fluorene	30	386	100		ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	3.2	1.2		ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.5		ND	ND	ND	ND	ND
Isophorone	--	--	--		ND	ND	ND	ND	ND
Naphthalene	12	12	100		5.97	ND	ND	ND	ND
Nitrobenzene	--	--	--		ND	ND	ND	ND	ND
Pentachlorophenol	0.8	0.8	6.7		ND	ND	ND	ND	ND
Phenanthrene	100	1000	100		ND	ND	ND	ND	ND
Phenol	0.33	0.33	100		ND	ND	ND	ND	ND
Pyrene	100	1000	100		ND	1.81	ND	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
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ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the
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Shaded data indicates that parameter was detected above the
NYSDEC Part 375 Protection of Groundwater Standards
Boxed data indicates that parameter was detected above the
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Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-5 H 11/2/2007 6 - 8	GP-6 H 11/2/2007 6 - 8	GP-7 H 11/2/2007 2 - 4	GP-8 NA 11/5/2007 8 - 10	GP-9 D 11/5/2007 2 - 4
1-Methylnaphthalene	--	--	--		ND	ND	ND	6.71	1.22
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dinitrophenol	--	--	--		ND	ND	ND	ND	ND
2,6-Dinitrotoluene	--	--	--		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Methylnaphthalene	--	--	--		ND	ND	ND	12.8	2.94
2-Methylphenol	0.33	0.33	100		ND	ND	ND	ND	ND
2-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
2-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	--	--	--		ND	ND	ND	ND	ND
3-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol	--	--	--		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
4-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
Acenaphthene	20	98	--		ND	ND	ND	ND	ND
Acenaphthylene	100	107	--		ND	ND	ND	ND	ND
Anthracene	100	1000	100		ND	ND	ND	ND	ND
Benz (a) anthracene	1	1	1		ND	ND	ND	ND	ND
Benzo (a) pyrene	1	22	1		ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1	1.7	1		ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100	1000	100		ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.8	1.7	3.9		ND	ND	ND	ND	ND
1,1'-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroethyl) ether	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl) ether	--	--	--		ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	--	--	--		ND	ND	ND	ND	ND
Butylbenzyl phthalate	--	--	--		ND	ND	ND	ND	ND
Chrysene	1	1	3.9		ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.33	1000	0.33		ND	ND	ND	ND	ND

Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-5 H 11/2/2007 6 - 8	GP-6 H 11/2/2007 6 - 8	GP-7 H 11/2/2007 2 - 4	GP-8 NA 11/5/2007 8 - 10	GP-9 D 11/5/2007 2 - 4
Dibenzofuran	7	210	59		ND	ND	ND	ND	ND
Diethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Dimethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-butyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-octyl phthalate	--	--	--		ND	ND	ND	ND	ND
Fluoranthene	100	1000	100		ND	ND	ND	ND	ND
Fluorene	30	386	100		ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	3.2	1.2		ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.5		ND	ND	ND	ND	ND
Isophorone	--	--	--		ND	ND	ND	ND	ND
Naphthalene	12	12	100		ND	ND	ND	9.82	6.39
Nitrobenzene	--	--	--		ND	ND	ND	ND	ND
Pentachlorophenol	0.8	0.8	6.7		ND	ND	ND	ND	ND
Phenanthrene	100	1000	100		ND	ND	ND	ND	ND
Phenol	0.33	0.33	100		ND	ND	ND	ND	ND
Pyrene	100	1000	100		ND	ND	ND	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the
NYSDEC Part 375 Unrestricted Use Standards
Shaded data indicates that parameter was detected above the
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Boxed data indicates that parameter was detected above the
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Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-10 / GP-10 / 11/5/2007 / 2 - 4	GP-11 / K / 11/5/2007 / 4 - 6	GP-12 / K / 11/5/2007 / 6 - 8	SB-1 / I / 11/7/2007 / 6 - 8	SB-2A / H / 11/7/2007 / 4 - 6
1-Methylnaphthalene	--	--	--		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dinitrophenol	--	--	--		ND	ND	ND	ND	ND
2,6-Dinitrotoluene	--	--	--		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Methylnaphthalene	--	--	--		ND	ND	ND	ND	ND
2-Methylphenol	0.33	0.33	100		ND	ND	ND	ND	ND
2-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
2-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	--	--	--		ND	ND	ND	ND	ND
3-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol	--	--	--		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
4-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
Acenaphthene	20	98	--		ND	ND	ND	ND	ND
Acenaphthylene	100	107	--		ND	ND	ND	ND	ND
Anthracene	100	1000	100		ND	ND	0.22	ND	ND
Benz (a) anthracene	1	1	1		ND	ND	0.434	ND	ND
Benzo (a) pyrene	1	22	1		ND	ND	0.366	ND	ND
Benzo(b)fluoranthene	1	1.7	1		ND	ND	0.313	ND	ND
Benzo(g,h,i)perylene	100	1000	100		ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.8	1.7	3.9		ND	ND	0.395	ND	ND
1,1'-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroethyl) ether	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl) ether	--	--	--		ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	--	--	--		ND	ND	ND	ND	ND
Butylbenzyl phthalate	--	--	--		ND	ND	ND	ND	ND
Chrysene	1	1	3.9		ND	ND	0.423	ND	ND
Dibenz(a,h)anthracene	0.33	1000	0.33		ND	ND	ND	ND	ND

Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:**	GP-10	GP-11	GP-12	SB-1	SB-2A
				Parcel ID:	GP-10	K	K	I	H
				Sample Date:	11/5/2007	11/5/2007	11/5/2007	11/7/2007	11/7/2007
				Sample Depth (ft bls):	2 - 4	4 - 6	6 - 8	6 - 8	4 - 6
Dibenzofuran	7	210	59		ND	ND	ND	ND	ND
Diethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Dimethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-butyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-octyl phthalate	--	--	--		ND	ND	ND	ND	ND
Fluoranthene	100	1000	100		ND	ND	0.953	ND	ND
Fluorene	30	386	100		ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	3.2	1.2		ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.5		ND	ND	**0.196**	ND	ND
Isophorone	--	--	--		ND	ND	ND	ND	ND
Naphthalene	12	12	100		ND	ND	ND	ND	ND
Nitrobenzene	--	--	--		ND	ND	ND	ND	ND
Pentachlorophenol	0.8	0.8	6.7		ND	ND	ND	ND	ND
Phenanthrene	100	1000	100		ND	ND	0.858	ND	ND
Phenol	0.33	0.33	100		ND	ND	ND	ND	ND
Pyrene	100	1000	100		ND	1.01	0.899	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the
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Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-2B H 11/7/2007 8 - 10	SB-3 G 11/7/2007 3 - 4	SB-4 A 11/8/2007 10 - 14	SB-5 F 11/9/2007 8 - 10	SB-6 NA 11/9/2007 17 - 19
1-Methylnaphthalene	--	--	--		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dinitrophenol	--	--	--		ND	ND	ND	ND	ND
2,6-Dinitrotoluene	--	--	--		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Methylnaphthalene	--	--	--		ND	ND	1.1	ND	ND
2-Methylphenol	0.33	0.33	100		ND	ND	ND	ND	ND
2-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
2-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	--	--	--		ND	ND	ND	ND	ND
3-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol	--	--	--		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
4-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
Acenaphthene	20	98	--		ND	ND	ND	ND	ND
Acenaphthylene	100	107	--		ND	ND	ND	ND	ND
Anthracene	100	1000	100		ND	ND	ND	ND	ND
Benz (a) anthracene	1	1	1		ND	ND	ND	ND	ND
Benzo (a) pyrene	1	22	1		ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1	1.7	1		ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100	1000	100		ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.8	1.7	3.9		ND	ND	ND	ND	ND
1,1'-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroethyl) ether	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl) ether	--	--	--		ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	--	--	--		ND	ND	ND	ND	ND
Butylbenzyl phthalate	--	--	--		ND	ND	ND	ND	ND
Chrysene	1	1	3.9		ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.33	1000	0.33		ND	ND	ND	ND	ND

Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-2B H 11/7/2007 8 - 10	SB-3 G 11/7/2007 3 - 4	SB-4 A 11/8/2007 10 - 14	SB-5 F 11/9/2007 8 - 10	SB-6 NA 11/9/2007 17 - 19
Dibenzofuran	7	210	59		ND	ND	ND	ND	ND
Diethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Dimethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-butyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-octyl phthalate	--	--	--		ND	ND	ND	ND	ND
Fluoranthene	100	1000	100		ND	ND	ND	ND	ND
Fluorene	30	386	100		ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	3.2	1.2		ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.5		ND	ND	ND	ND	ND
Isophorone	--	--	--		ND	ND	ND	ND	ND
Naphthalene	12	12	100		ND	ND	1.1	ND	ND
Nitrobenzene	--	--	--		ND	ND	ND	ND	ND
Pentachlorophenol	0.8	0.8	6.7		ND	ND	ND	ND	ND
Phenanthrene	100	1000	100		ND	ND	ND	ND	ND
Phenol	0.33	0.33	100		ND	ND	ND	ND	ND
Pyrene	100	1000	100		ND	ND	ND	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the
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Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-7 A 12/5/2007 12 - 16	SB-8 B 12/5/2007 12 - 14	SB-9 G 12/7/2007 9 - 11	SB-10 F 12/7/2007 9 - 11	SB-11 E 12/7/2007 4 - 6
1-Methylnaphthalene	--	--	--		ND	2	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	--		ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dichlorophenol	--	--	--		ND	ND	ND	ND	ND
2,4-Dinitrophenol	--	--	--		ND	ND	ND	ND	ND
2,6-Dinitrotoluene	--	--	--		ND	ND	ND	ND	ND
2-Chlorophenol	--	--	--		ND	ND	ND	ND	ND
2-Methylnaphthalene	--	--	--		ND	3.86	ND	0.375	ND
2-Methylphenol	0.33	0.33	100		ND	ND	ND	ND	ND
2-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
2-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	--	--	--		ND	ND	ND	ND	ND
3-Nitroaniline	--	--	--		ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol	--	--	--		ND	ND	ND	ND	ND
4-Chloroaniline	--	--	--		ND	ND	ND	ND	ND
4-Nitrophenol	--	--	--		ND	ND	ND	ND	ND
Acenaphthene	20	98	--		ND	ND	ND	ND	ND
Acenaphthylene	100	107	--		ND	ND	ND	ND	ND
Anthracene	100	1000	100		ND	ND	ND	ND	ND
Benz (a) anthracene	1	1	1		ND	ND	ND	ND	ND
Benzo (a) pyrene	1	22	1		ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1	1.7	1		ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100	1000	100		ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.8	1.7	3.9		ND	ND	ND	ND	ND
1,1'-Biphenyl	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroethyl) ether	--	--	--		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl) ether	--	--	--		ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	--	--	--		ND	ND	ND	ND	ND
Butylbenzyl phthalate	--	--	--		ND	ND	ND	ND	ND
Chrysene	1	1	3.9		ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.33	1000	0.33		ND	ND	ND	ND	ND

Table 2. Summary of Semivolatile Organic Compounds in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-7 A 12/5/2007 12 - 16	SB-8 B 12/5/2007 12 - 14	SB-9 G 12/7/2007 9 - 11	SB-10 F 12/7/2007 9 - 11	SB-11 E 12/7/2007 4 - 6
Dibenzofuran	7	210	59		ND	ND	ND	ND	ND
Diethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Dimethyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-butyl phthalate	--	--	--		ND	ND	ND	ND	ND
Di-n-octyl phthalate	--	--	--		ND	ND	ND	ND	ND
Fluoranthene	100	1000	100		ND	ND	ND	ND	ND
Fluorene	30	386	100		ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	3.2	1.2		ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.5		ND	ND	ND	ND	ND
Isophorone	--	--	--		ND	ND	ND	ND	ND
Naphthalene	12	12	100		ND	2.92	ND	0.317	ND
Nitrobenzene	--	--	--		ND	ND	ND	ND	ND
Pentachlorophenol	0.8	0.8	6.7		ND	ND	ND	ND	ND
Phenanthrene	100	1000	100		ND	ND	ND	ND	ND
Phenol	0.33	0.33	100		ND	ND	ND	ND	ND
Pyrene	100	1000	100		ND	ND	ND	ND	ND

Notes:
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NYSDEC Part 375 Unrestricted Use Standards
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NYSDEC Part 375 Protection of Groundwater Standards
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NYSDEC Part 375 Restricted Residential Standards

Table 3. Summary of Metals in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-1A I 11/1/2007 2 - 3	GP-1B I 11/1/2007 4 - 6	GP-2 I 11/7/2007 4 - 6	GP-3 I 11/1/2007 4 - 5.5	GP-4 H 11/1/2007 3.5 - 5.5
Aluminum	--	--	--		10600	9920	12700	11700	9980
Antimony	--	--	--		ND	ND	ND	ND	ND
Arsenic	13	16	16		4.2	10.7	3.76	6.47	5.83
Barium	350	820	400		105	293	96	79.7	130
Beryllium	7.2	47	72		ND	ND	ND	ND	ND
Cadmium	2.5	7.5	4.3		ND	1.02	ND	ND	ND
Calcium	--	--	--		4820	11200	3280	8200	9930
Chromium	30	--	180		19.5	**32.1**	25.2	21.7	19.2
Chromium, Hexavalent	1	19	110		ND	ND	ND	ND	ND
Cobalt	--	--	--		6.88	10.1	7.45	6.59	6.88
Copper	50	1720	270		24.2	**415**	24.5	17.4	38.4
Cyanide	27	40	--		ND	ND	ND	ND	ND
Iron	--	--	--		17300	54200	18800	26000	18300
Lead	63	450	400		**220**	**233**	48	**82.1**	**210**
Magnesium	--	--	--		5420	6400	4910	4160	5150
Manganese	1600	2000	2000		253	340	204	263	315
Mercury	0.18	0.73	0.81		0.0419	0.178	0.0885	0.178	**0.308**
Nickel	30	130	310		13.9	20.7	16.2	12.4	13.2
Potassium	--	--	--		2100	3270	1010	1610	1450
Selenium	3.9	4	--		ND	ND	ND	ND	ND
Silver	2	8.3	180		ND	1.87	ND	ND	ND
Sodium	--	--	--		160	287	348	425	305
Thallium	--	--	--		ND	ND	ND	ND	ND
Vanadium	--	--	--		29.8	33.5	33.4	36	29.8
Zinc	109	2480	10000		**143**	**479**	**220**	76.3	**185**

Notes:
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Table 3. Summary of Metals in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-5 H 11/2/2007 6 - 8	GP-6 H 11/2/2007 6 - 8	GP-7 H 11/2/2007 2 - 4	GP-8 NA 11/5/2007 8 - 10	GP-9 D 11/5/2007 2 - 4
Aluminum	--	--	--		12600	11900	11600	12800	8450
Antimony	--	--	--		ND	ND	ND	ND	ND
Arsenic	13	16	16		4.35	4.77	4.04	ND	3.89
Barium	350	820	400		92.3	84.8	102	162	102
Beryllium	7.2	47	72		ND	ND	ND	ND	ND
Cadmium	2.5	7.5	4.3		ND	ND	ND	ND	ND
Calcium	--	--	--		2300	3530	13200	1810	4010
Chromium	30	--	180		20.2	17	14.9	23	14.9
Chromium, Hexavalent	1	19	110		ND	ND	ND	ND	ND
Cobalt	--	--	--		7.03	7.93	5.24	11.6	5.35
Copper	50	1720	270		24.9	33.1	13.8	12.4	31.3
Cyanide	27	40	--		ND	ND	ND	ND	ND
Iron	--	--	--		18600	19000	14800	22400	14600
Lead	63	450	400		**109**	**114**	**134**	8.6	**182**
Magnesium	--	--	--		4760	4460	3860	5150	4100
Manganese	1600	2000	2000		256	242	161	143	267
Mercury	0.18	0.73	0.81		**0.227**	**0.6**	**0.35**	ND	**70.8**
Nickel	30	130	310		13.9	12.5	10.2	24.7	10.4
Potassium	--	--	--		1920	2190	929	8020	1550
Selenium	3.9	4	--		ND	ND	ND	ND	ND
Silver	2	8.3	180		ND	1.65	ND	**3.21**	ND
Sodium	--	--	--		172	270	250	114	96.8
Thallium	--	--	--		ND	ND	ND	3.22	ND
Vanadium	--	--	--		34	34.4	23.7	40.5	25.4
Zinc	109	2480	10000		103	72	92.7	52.4	**114**

Notes:
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Table 3. Summary of Metals in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-10 G 11/5/2007 2 - 4	GP-11 K 11/5/2007 4 - 6	GP-12 K 11/5/2007 6 - 8	SB-1 I 11/7/2007 6 - 8	SB-2A H 11/7/2007 4 - 6
Aluminum	--	--	--		6630	14800	12700	7070	11300
Antimony	--	--	--		ND	ND	ND	ND	ND
Arsenic	13	16	16		5.63	ND	ND	3.2	5.58
Barium	350	820	400		**483**	296	161	47.8	80.8
Beryllium	7.2	47	72		ND	ND	ND	ND	1.56
Cadmium	2.5	7.5	4.3		1.54	0.694	ND	ND	1.4
Calcium	--	--	--		30700	7120	3450	2250	2600
Chromium	30	--	180		16	28.7	**30.9**	16.3	24
Chromium, Hexavalent	1	19	110		ND	ND	ND	ND	ND
Cobalt	--	--	--		5.6	12.9	12.5	5.22	9.55
Copper	50	1720	270		**123**	29.6	30.1	11.8	24.5
Cyanide	27	40	--		ND	ND	ND	ND	ND
Iron	--	--	--		12800	27100	25200	14600	19100
Lead	63	450	400		**1730**	**230**	**73.4**	6.01	12.6
Magnesium	--	--	--		4050	6690	6810	3070	4960
Manganese	1600	2000	2000		241	304	171	172	333
Mercury	0.18	0.73	0.81		0.118	**0.133**	0.0308	ND	ND
Nickel	30	130	310		15.4	26.1	27.5	10.9	18
Potassium	--	--	--		1550	5740	5810	1290	2330
Selenium	3.9	4	--		ND	ND	ND	ND	2.09
Silver	2	8.3	180		ND	**2.61**	**2.53**	ND	**3.15**
Sodium	--	--	--		352	136	91.8	411	228
Thallium	--	--	--		ND	ND	ND	ND	ND
Vanadium	--	--	--		25.5	47.7	43.7	24.4	34.4
Zinc	109	2480	10000		**603**	**214**	89.5	29.6	52.4

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Table 3. Summary of Metals in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-2B H 11/7/2007 8 - 10	SB-3 G 11/7/2007 3 - 4	SB-4 A 11/6/2007 10 - 14	SB-5 F 11/9/2007 8 - 10	SB-6 NA 11/9/2007 17 - 19
Aluminum	--	--	--		12000	14200	12100	9830	6100
Antimony	--	--	--		ND	ND	ND	ND	ND
Arsenic	13	16	16		5.06	**21.9**	2.75	3.66	2.84
Barium	350	820	400		83.2	175	113	70.8	58.5
Beryllium	7.2	47	72		ND	0.87	ND	ND	ND
Cadmium	2.5	7.5	4.3		ND	1.13	ND	ND	ND
Calcium	--	--	--		2730	9350	2830	5630	17600
Chromium	30	--	180		24.9	23.8	23.5	20.4	14.5
Chromium, Hexavalent	1	19	110		ND	ND	ND	ND	ND
Cobalt	--	--	--		8.52	11.5	9.42	6.87	4.09
Copper	50	1720	270		23.6	**102**	26.9	23.4	21.3
Cyanide	27	40	--		ND	ND	ND	ND	ND
Iron	--	--	--		21400	45300	20700	17600	14200
Lead	63	450	400		19.6	**347**	4.02	51.7	2.73
Magnesium	--	--	--		4960	4390	4200	5410	9860
Manganese	1600	2000	2000		648	702	250	247	242
Mercury	0.18	0.73	0.81		ND	**0.314**	ND	0.166	ND
Nickel	30	130	310		15.9	23.6	19	12.9	9.73
Potassium	--	--	--		2340	2180	5510	1780	1990
Selenium	3.9	4	--		ND	3.26	ND	ND	ND
Silver	2	8.3	180		**2.15**	**2.52**	**4.05**	1.59	ND
Sodium	--	--	--		248	324	183	132	213
Thallium	--	--	--		ND	ND	ND	ND	ND
Vanadium	--	--	--		37.1	50.7	34.4	28.8	19.5
Zinc	109	2480	10000		47.3	**584**	47.9	54.3	26.9

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Table 3. Summary of Metals in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-7 A 12/5/2007 12 - 16	SB-8 B 12/5/2007 12 - 14	SB-9 G 12/7/2007 9 - 11	SB-10 F 12/7/2007 9 - 11	SB-11 E 12/7/2007 4 - 6
Aluminum	--	--	--		5310	6860	13200	7420	9650
Antimony	--	--	--		ND	ND	ND	ND	ND
Arsenic	13	16	16		ND	ND	ND	1.58	ND
Barium	350	820	400		60.4	61.2	154	65.4	124
Beryllium	7.2	47	72		ND	ND	ND	ND	ND
Cadmium	2.5	7.5	4.3		ND	ND	0.551	ND	ND
Calcium	--	--	--		28600	4360	1960	10100	4120
Chromium	30	--	180		15.2	16.2	26	18.4	18.5
Chromium, Hexavalent	1	19	110		ND	ND	ND	ND	ND
Cobalt	--	--	--		5.02	5.9	21.9	7.24	9.16
Copper	50	1720	270		10.8	19.1	27.2	20.2	18.9
Cyanide	27	40	--		ND	ND	ND	ND	ND
Iron	--	--	--		13000	16000	25600	16200	18000
Lead	63	450	400		ND	8.49	25	32.4	27.1
Magnesium	--	--	--		9520	5090	6050	6280	3540
Manganese	1600	2000	2000		159	313	1370	1060	563
Mercury	0.18	0.73	0.81		ND	ND	ND	0.038	0.065
Nickel	30	130	310		14	11.8	22.3	9.73	10.3
Potassium	--	--	--		2370	2120	5180	1880	2030
Selenium	3.9	4	--		ND	ND	ND	ND	ND
Silver	2	8.3	180		ND	ND	ND	ND	ND
Sodium	--	--	--		198	215	358	150	96.1
Thallium	--	--	--		ND	ND	ND	ND	ND
Vanadium	--	--	--		22	19.3	40.5	26.1	29.5
Zinc	109	2480	10000		22.2	30.8	64.8	43.6	29.7

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Table 4. Summary of Pesticides and Polychlorinated Biphenyls in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-1A I 11/1/2007 2 - 3	GP-1B I 11/1/2007 4 - 6	GP-2 I 11/1/2007 4 - 6	GP-3 I 11/1/2007 4 - 5.5	GP-4 H 11/1/2007 3.5 - 5.5	GP-5 H 11/2/2007 6 - 8
2,4,5-T	--	--	--		ND	ND	ND	ND	ND	ND
2,4-D	--	--	--		ND	ND	ND	ND	ND	ND
4,4'-DDD	0.0033	14	13		ND	ND	ND	ND	ND	ND
4,4'-DDE	0.0033	17	8.9		ND	ND	ND	ND	ND	ND
4,4'-DDT	0.0033	136	7.9		ND	ND	ND	ND	ND	ND
Aldrin	0.005	0.19	0.097		ND	ND	ND	ND	ND	ND
alpha-BHC	0.02	0.02	0.48		ND	ND	ND	ND	ND	ND
beta-BHC	0.036	0.09	0.36		ND	ND	ND	ND	ND	ND
Chlordane	--	--	--		ND	ND	ND	ND	ND	ND
delta-BHC	0.04	0.25	100		ND	ND	ND	ND	ND	ND
Dibenzo-P-dioxins (PCDD) 2,3,7,8 TCDD	--	--	--		ND	ND	ND	ND	ND	ND
Dieldrin	0.005	0.1	0.2		ND	ND	ND	ND	ND	ND
Endosulfan I	2.4	102	24		ND	ND	ND	ND	ND	ND
Endosulfan II	2.4	102	24		ND	ND	ND	ND	ND	ND
Endosulfan sulfate	2.4	1000	24		ND	ND	ND	ND	ND	ND
Endrin	0.014	0.06	11		ND	ND	ND	ND	ND	ND
Endrin Ketone			--		ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)	0.1	0.1	1.3		ND	ND	ND	ND	ND	ND
gamma-Chlordane	--	--	--		ND	ND	ND	ND	ND	ND
Heptachlor	0.042	0.38	2.1		ND	ND	ND	ND	ND	ND
Heptachlor epoxide	--	--	--		ND	ND	ND	ND	ND	ND
Methoxychlor	--	--	--		ND	ND	ND	ND	ND	ND
Milolane	--	--	--		ND	ND	ND	ND	ND	ND
Parathion	--	--	--		ND	ND	ND	ND	ND	ND
Polychlorinated biphenyls	0.1	3.2	1		ND	ND	ND	ND	ND	ND
Polychlorinated dibenzo-furans (PCDF)	--	--	--		ND	ND	ND	ND	ND	ND
Silvex	3.8	3.8	--		ND	ND	ND	ND	ND	ND

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Table 4. Summary of Pesticides and Polychlorinated Biphenyls in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-6 H 11/2/2007 6 - 8	GP-7 H 11/2/2007 2 - 4	GP-8 NA 11/5/2007 8 - 10	GP-9 D 11/5/2007 2 - 4	GP-10 G 11/5/2007 2 - 4	GP-11 K 11/5/2007 4 - 6
2,4,5-T	--	--	--		ND	ND	ND	ND	ND	ND
2,4-D	--	--	--		ND	ND	ND	ND	ND	ND
4,4'-DDD	0.0033	14	13		ND	ND	ND	ND	ND	ND
4,4'-DDE	0.0033	17	8.9		ND	ND	ND	ND	**0.0183**	ND
4,4'-DDT	0.0033	136	7.9		ND	ND	ND	ND	**0.0215**	ND
Aldrin	0.005	0.19	0.097		ND	ND	ND	ND	ND	ND
alpha-BHC	0.02	0.02	0.48		ND	ND	ND	ND	ND	ND
beta-BHC	0.036	0.09	0.36		ND	ND	ND	ND	ND	ND
Chlordane	--	--	--		ND	ND	ND	ND	ND	ND
delta-BHC	0.04	0.25	100		ND	ND	ND	ND	ND	ND
Dibenzo-P-dioxins (PCDD) 2,3,7,8 TCDD	--	--	--		ND	ND	ND	ND	ND	ND
Dieldrin	0.005	0.1	0.2		ND	ND	ND	ND	ND	ND
Endosulfan I	2.4	102	24		ND	ND	ND	ND	ND	ND
Endosulfan II	2.4	102	24		ND	ND	ND	ND	ND	ND
Endosulfan sulfate	2.4	1000	24		ND	ND	ND	ND	ND	ND
Endrin	0.014	0.06	11		ND	ND	ND	ND	ND	ND
Endrin Ketone			--		ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)	0.1	0.1	1.3		ND	ND	ND	ND	ND	ND
gamma-Chlordane	--	--	--		ND	ND	ND	ND	ND	ND
Heptachlor	0.042	0.38	2.1		ND	ND	ND	ND	ND	ND
Heptachlor epoxide	--	--	--		ND	ND	ND	ND	ND	ND
Methoxychlor	--	--	--		ND	ND	ND	ND	ND	ND
Milolane	--	--	--		ND	ND	ND	ND	ND	ND
Parathion	--	--	--		ND	ND	ND	ND	ND	ND
Polychlorinated biphenyls	0.1	3.2	1		ND	ND	ND	ND	0.0619	ND
Polychlorinated dibenzo-furans (PCDF)	--	--	--		ND	ND	ND	ND	ND	ND
Silvex	3.8	3.8	--		ND	ND	ND	ND	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use Standards
Shaded data indicates that parameter was detected above the NYSDEC Part 375 Protection of Groundwater Standards
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Restricted Residential Standards

Table 4. Summary of Pesticides and Polychlorinated Biphenyls in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	GP-12 K 11/5/2007 6 - 8	SB-1 I 11/7/2007 6 - 8	SB-2A H 11/7/2007 4 - 6	SB-2B H 11/7/2007 8 - 10	SB-3 G 11/7/2007 3 - 4	SB-4 A 11/8/2007 10 - 14
2,4,5-T	--	--	--		ND	ND	ND	ND	ND	ND
2,4-D	--	--	--		ND	ND	ND	ND	ND	ND
4,4'-DDD	0.0033	14	13		ND	ND	ND	ND	ND	ND
4,4'-DDE	0.0033	17	8.9		ND	ND	ND	ND	ND	ND
4,4'-DDT	0.0033	136	7.9		ND	ND	ND	ND	ND	ND
Aldrin	0.005	0.19	0.097		ND	ND	ND	ND	ND	ND
alpha-BHC	0.02	0.02	0.48		ND	ND	ND	ND	ND	ND
beta-BHC	0.036	0.09	0.36		ND	ND	ND	ND	ND	ND
Chlordane	--	--	--		ND	ND	ND	ND	ND	ND
delta-BHC	0.04	0.25	100		ND	ND	ND	ND	ND	ND
Dibenzo-P-dioxins (PCDD) 2,3,7,8 TCDD	--	--	--		ND	ND	ND	ND	ND	ND
Dieldrin	0.005	0.1	0.2		ND	ND	ND	ND	ND	ND
Endosulfan I	2.4	102	24		ND	ND	ND	ND	ND	ND
Endosulfan II	2.4	102	24		ND	ND	ND	ND	ND	ND
Endosulfan sulfate	2.4	1000	24		ND	ND	ND	ND	ND	ND
Endrin	0.014	0.06	11		ND	ND	ND	ND	ND	ND
Endrin Ketone			--		ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)	0.1	0.1	1.3		ND	ND	ND	ND	ND	ND
gamma-Chlordane	--	--	--		ND	ND	ND	ND	ND	ND
Heptachlor	0.042	0.38	2.1		ND	ND	ND	ND	ND	ND
Heptachlor epoxide	--	--	--		ND	ND	ND	ND	ND	ND
Methoxychlor	--	--	--		ND	ND	ND	ND	ND	ND
Milolane	--	--	--		ND	ND	ND	ND	ND	ND
Parathion	--	--	--		ND	ND	ND	ND	ND	ND
Polychlorinated biphenyls	0.1	3.2	1		ND	ND	ND	ND	ND	ND
Polychlorinated dibenzo-furans (PCDF)	--	--	--		ND	ND	ND	ND	ND	ND
Silvex	3.8	3.8	--		ND	ND	ND	ND	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use Standards
Shaded data indicates that parameter was detected above the NYSDEC Part 375 Protection of Groundwater Standards
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Restricted Residential Standards

Table 4. Summary of Pesticides and Polychlorinated Biphenyls in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** / **Parcel ID:** / **Sample Date:** / **Sample Depth (ft bls):**	SB-5 F 11/9/2007 8 - 10	SB-6 NA 11/9/2007 17 - 19	SB-7 A 12/5/2007 12 - 16	SB-8 B 12/5/2007 12 - 14	SB-9 G 12/7/2007 9 - 11	SB-10 F 12/7/2007 9 - 11
2,4,5-T	--	--	--		ND	ND	ND	ND	ND	ND
2,4-D	--	--	--		ND	ND	ND	ND	ND	ND
4,4'-DDD	0.0033	14	13		ND	ND	ND	ND	ND	ND
4,4'-DDE	0.0033	17	8.9		ND	ND	ND	ND	ND	ND
4,4'-DDT	0.0033	136	7.9		ND	ND	ND	ND	ND	ND
Aldrin	0.005	0.19	0.097		ND	ND	ND	ND	ND	ND
alpha-BHC	0.02	0.02	0.48		ND	ND	ND	ND	ND	ND
beta-BHC	0.036	0.09	0.36		ND	ND	ND	ND	ND	ND
Chlordane	--	--	--		ND	ND	ND	ND	ND	ND
delta-BHC	0.04	0.25	100		ND	ND	ND	ND	ND	ND
Dibenzo-P-dioxins (PCDD) 2,3,7,8 TCDD	--	--	--		ND	ND	ND	ND	ND	ND
Dieldrin	0.005	0.1	0.2		ND	ND	ND	ND	ND	ND
Endosulfan I	2.4	102	24		ND	ND	ND	ND	ND	ND
Endosulfan II	2.4	102	24		ND	ND	ND	ND	ND	ND
Endosulfan sulfate	2.4	1000	24		ND	ND	ND	ND	ND	ND
Endrin	0.014	0.06	11		ND	ND	ND	ND	ND	ND
Endrin Ketone			--		ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)	0.1	0.1	1.3		ND	ND	ND	ND	ND	ND
gamma-Chlordane	--	--	--		ND	ND	ND	ND	ND	ND
Heptachlor	0.042	0.38	2.1		ND	ND	ND	ND	ND	ND
Heptachlor epoxide	--	--	--		ND	ND	ND	ND	ND	ND
Methoxychlor	--	--	--		ND	ND	ND	ND	ND	ND
Milolane	--	--	--		ND	ND	ND	ND	ND	ND
Parathion	--	--	--		ND	ND	ND	ND	ND	ND
Polychlorinated biphenyls	0.1	3.2	1		ND	ND	ND	ND	ND	ND
Polychlorinated dibenzo-furans (PCDF)	--	--	--		ND	ND	ND	ND	ND	ND
Silvex	3.8	3.8	--		ND	ND	ND	ND	ND	ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use Standards
Shaded data indicates that parameter was detected above the NYSDEC Part 375 Protection of Groundwater Standards
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Restricted Residential Standards

Table 4. Summary of Pesticides and Polychlorinated Biphenyls in Soil, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Protection of Groundwater	NYSDEC Part 375 Restricted Residential	**Sample Designation:** **Parcel ID:** **Sample Date:** **Sample Depth (ft bls):**	SB-11 E 12/7/2007 4 - 6
2,4,5-T	--	--	--		ND
2,4-D	--	--	--		ND
4,4'-DDD	0.0033	14	13		ND
4,4'-DDE	0.0033	17	8.9		ND
4,4'-DDT	0.0033	136	7.9		ND
Aldrin	0.005	0.19	0.097		ND
alpha-BHC	0.02	0.02	0.48		ND
beta-BHC	0.036	0.09	0.36		ND
Chlordane	--	--	--		ND
delta-BHC	0.04	0.25	100		ND
Dibenzo-P-dioxins (PCDD) 2,3,7,8 TCDD	--	--	--		ND
Dieldrin	0.005	0.1	0.2		ND
Endosulfan I	2.4	102	24		ND
Endosulfan II	2.4	102	24		ND
Endosulfan sulfate	2.4	1000	24		ND
Endrin	0.014	0.06	11		ND
Endrin Ketone			--		ND
gamma-BHC (Lindane)	0.1	0.1	1.3		ND
gamma-Chlordane	--	--	--		ND
Heptachlor	0.042	0.38	2.1		ND
Heptachlor epoxide	--	--	--		ND
Methoxychlor	--	--	--		ND
Milolane	--	--	--		ND
Parathion	--	--	--		ND
Polychlorinated biphenyls	0.1	3.2	1		ND
Polychlorinated dibenzo-furans (PCDF)	--	--	--		ND
Silvex	3.8	3.8	--		ND

Notes:
mg/kg - Milligrams per kilogram
NYSDEC - New York State Department of Environmental Conservation
-- No NYSDEC Part 375 Restricted Residential Standards available
ft bls - Feet below land surface
ND - Compound was analyzed for but not detected
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use Standards
Shaded data indicates that parameter was detected above the NYSDEC Part 375 Protection of Groundwater Standards
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Restricted Residential Standards

Table 5. Summary of Volatile Organic Compounds in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:**	GP-1W	GP-2W	GP-4W	GP-6W	GP-9W	GP-12W	SB-5W	SB-7W
		Parcel ID:	I	I	H	H	D	K	F	A
		Sample Date:	11/5/2007	11/5/2007	11/5/2007	11/5/2007	11/14/2007	11/14/2007	11/14/2007	12/11/2007
1,1,1-Trichloroethane	5		ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5		ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04		ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5		ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5		**35.9**	ND	ND	ND	**1460**	ND	ND	**5.4**
1,2-Dichlorobenzene	3		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6		ND	ND	ND	ND	ND	ND	ND	ND
1,3,5- Trimethylbenzene	5		**6.7**	ND	ND	ND	**546**	ND	ND	**21.3**
1,3-Dichlorobenzene	3		ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3		ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	50		ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	--		ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--		ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--		ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	5		ND	ND	ND	ND	**101**	ND	ND	2.4
4-Methyl-2-Pentanone (MIBK)	--		ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50		ND	ND	ND	14.7	NA	ND	11	ND
Benzene	1		ND	ND	**4.6**	ND	**128**	ND	ND	**446**
Carbon disulfide	60		ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	5		ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5		ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	5		ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7		ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5		ND	ND	**22.4**	ND	ND	**11.3**	**15.8**	ND
Dibromochloromethane	50		ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl ether	--		ND	ND	2.5	ND	ND	ND	ND	3
Ethylbenzene	5		1	ND	ND	ND	**1020**	ND	ND	**47.9**
Isopropylbenzene	5		3.3	ND	ND	ND	**102**	ND	ND	**11.3**
Methyl tert-butyl ether (MTBE)	10		ND	ND	ND	5	ND	**22.8**	**11.5**	**1120**
Methylene chloride	5		ND	ND	ND	ND	ND	ND	ND	ND
Napthalene	10		6.8	ND	ND	ND	**532**	ND	ND	**34.9**
n-Butylbenzene	5		ND	ND	ND	ND	**80.5**	ND	ND	ND

Table 5. Summary of Volatile Organic Compounds in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** / **Parcel ID:** / **Sample Date:**	GP-1W I 11/5/2007	GP-2W I 11/5/2007	GP-4W H 11/5/2007	GP-6W H 11/5/2007	GP-9W D 11/14/2007	GP-12W K 11/14/2007	SB-5W F 11/14/2007	SB-7W A 12/11/2007
sec-Butylbenzene	5		ND	ND	ND	ND	**53**	ND	ND	2
n-Propylbenzene	5		4.2	ND	**129**	ND	**231**	ND	ND	**6.9**
Tert-amyl methyl ether	--		ND	ND	2.6	ND	ND	ND	ND	ND
Tert-butanol / butyl alcohol	--		ND	ND	2100	ND	ND	ND	ND	22,200
Tetrachloroethene	5		ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5		ND	ND	ND	ND	**114**	ND	ND	**24.6**
Trans-1 2-Dichloroethene	5		ND	ND	1.1	ND	ND	ND	ND	ND
Trichloroethene (TCE)	5		ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2		ND	ND	**21.9**	1	ND	ND	**2.5**	ND
Xylenes (Total)	5		**8.8**	ND	ND	ND	**2680**	ND	ND	**99.9**

NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water-Quality Standards and Guidance Values
J - Estimated Value
ND - Compound was analyzed for but not detected
- - No NYSDEC AWQSGV available
Bold data indicates that parameter was detected above the NYSDEC AWQSGVs
NA - Compound was not analyzed by laboratory
µg/L -Micrograms per liter

Table 5. Summary of Volatile Organic Compounds in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** / **Parcel ID:** / **Sample Date:**	SB-8W B 12/11/2007	SB-9W G 12/11/2007	SB-10W F 12/11/2007	SB-11W E 12/11/2007	MW-1 I 11/19/2007	MW-2 H 11/19/2007	MW-3 A 11/20/2007
1,1,1-Trichloroethane	5		ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5		ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5		ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5		ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04		ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5		ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5		**60.7**	ND	**1.2**	ND	ND	ND	**877**
1,2-Dichlorobenzene	3		ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6		ND	ND	ND	ND	ND	ND	ND
1,3,5- Trimethylbenzene	5		**333**	ND	ND	ND	ND	ND	**265**
1,3-Dichlorobenzene	3		ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3		ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	50		ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	--		ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--		ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--		ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	5		**6.5**	ND	ND	ND	ND	ND	**53.2**
4-Methyl-2-Pentanone (MIBK)	--		ND	ND	ND	ND	ND	ND	ND
Acetone	50		ND	ND	ND	ND	ND	ND	ND
Benzene	1		**28.6**	**1.4**	ND	ND	ND	ND	ND
Carbon disulfide	60		ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	5		ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5		ND	ND	ND	ND	ND	ND	ND
Chloroethane	5		ND	ND	ND	ND	ND	ND	ND
Chloroform	7		ND	ND	ND	ND	2.4	2.4	ND
cis-1,2-Dichloroethene	5		ND	**222**	ND	1.4	4.5	NA	ND
Dibromochloromethane	50		ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl ether	--		ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5		**340**	ND	1.8	ND	ND	ND	**706**
Isopropylbenzene	5		**48.8**	ND	ND	ND	ND	ND	**81.6**
Methyl tert-butyl ether (MTBE)	10		**62.5**	**116**	**29.1**	ND	ND	ND	**46**
Methylene chloride	5		ND	ND	ND	ND	ND	ND	ND
Napthalene	10		**147**	ND	ND	ND	ND	ND	**315**
n-Butylbenzene	5		ND	ND	ND	ND	ND	ND	ND

Table 5. Summary of Volatile Organic Compounds in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** / **Parcel ID:** / **Sample Date:**	SB-8W B 12/11/2007	SB-9W G 12/11/2007	SB-10W F 12/11/2007	SB-11W E 12/11/2007	MW-1 I 11/19/2007	MW-2 H 11/19/2007	MW-3 A 11/20/2007
sec-Butylbenzene	5		**17.6**	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5		**170**	ND	ND	ND	ND	ND	**72.8**
Tert-amyl methyl ether	--		ND	ND	ND	ND	ND	ND	ND
Tert-butanol / butyl alcohol	--		ND	25.8	ND	NA	68.4	ND	451
Tetrachloroethene	5		ND	2.1	ND	4.9	ND	ND	NA
Toluene	5		4.5	ND	ND	ND	ND	ND	ND
Trans-1 2-Dichloroethene	5		ND	1	ND	ND	ND	ND	ND
Trichloroethene (TCE)	5		ND	**6.1**	ND	1.1	ND	ND	ND
Vinyl chloride	2		ND	**15.2**	ND	ND	**2.4**	ND	ND
Xylenes (Total)	5		**749**	ND	2.3	ND	ND	ND	**1091**

NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water-Quality Standards and Guidance Values
J - Estimated Value
ND - Compound was analyzed for but not detected
- - No NYSDEC AWQSGV available
Bold data indicates that parameter was detected above the NYSDEC AWQSGVs
NA - Compound was not analyzed by laboratory
µg/L -Micrograms per liter

Table 6. Summary of Semivolatile Organic Compounds in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:**	GP-1W	GP-2W	GP-4W	GP-6W	GP-9W	GP-12W	SB-5W	SB-7W
		Parcel ID:	I	I	H	H	G	K	F	A
		Sample Date:	11/5/2007	11/5/2007	11/5/2007	11/5/2007	11/14/2007	11/14/2007	11/14/2007	12/11/2007
1,1'-Biphenyl	--		ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	--		ND	ND	ND	ND	36.2	ND	ND	ND
1,2,4-Trichlorobenzene	5		ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--		ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--		ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	5		ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	10		ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	5		ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	--		ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	50		ND	ND	ND	ND	**79.9**	ND	ND	ND
2-Methylphenol	--		ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	5		ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	--		ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	5		ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	5		ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	--		ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	5		ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	--		ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20		ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	20		ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	50		ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	0.002		ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	0		ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	0.002		ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	--		ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	0.002		ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl) ether	--		ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl) ether	--		ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylexyl) phthalate	--		ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	5		ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzyl phthalate	50		ND	ND	ND	ND	ND	ND	ND	ND

Table 6. Summary of Semivolatile Organic Compounds in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:**	GP-1W	GP-2W	GP-4W	GP-6W	GP-9W	GP-12W	SB-5W	SB-7W
		Parcel ID:	I	I	H	H	G	K	F	A
		Sample Date:	11/5/2007	11/5/2007	11/5/2007	11/5/2007	11/14/2007	11/14/2007	11/14/2007	12/11/2007
Chrysene	0.002		ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo[a,h]anthracene	--		ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	--		ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	50		ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	50		ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	50		ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	--		ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50		ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	50		ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.04		ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	0.002		ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	50		ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10		ND	ND	ND	ND	**237**	ND	ND	ND
Nitrobenzene	0.4		ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1		ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	50		ND	ND	ND	ND	ND	ND	ND	ND
Phenol	1		ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	50		ND	ND	ND	ND	ND	ND	ND	ND

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AWQSGVs - Ambient Water-Quality Standards and Guidance Values

J - Estimated Value

ND - Compound was analyzed for but not detected

- - No NYSDEC AWQSGV available

Bold data indicates that parameter was detected above the NYSDEC AWQSGVs

µg/L -Micrograms per liter

Table 6. Summary of Semivolatile Organic Compounds in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:**	SB-8W	SB-9W	SB-10W	SB-11W	MW-1	MW-2	MW-3
		Parcel ID:	B	G	F	E	I	H	A
		Sample Date:	12/11/2007	12/11/2007	12/11/2007	12/11/2007	11/19/2007	11/19/2007	11/20/2007
1,1'-Biphenyl	--		ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	--		26.6	ND	ND	ND	ND	ND	15.3
1,2,4-Trichlorobenzene	5		ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	--		ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	--		ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	5		ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	10		ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	5		ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	--		ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	50		25.3	ND	ND	ND	ND	ND	28.6
2-Methylphenol	--		ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	5		ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	--		ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	5		ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	5		ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	--		ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	5		ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	--		ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20		ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	20		ND	ND	ND	ND	ND	ND	ND
Anthracene	50		ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	0.002		ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	0		ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	0.002		ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	--		ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	0.002		ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl) ether	--		ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl) ether	--		ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylexyl) phthalate	--		ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	5		ND	ND	ND	ND	ND	ND	ND
Butylbenzyl phthalate	50		ND	ND	ND	ND	ND	ND	ND

Table 6. Summary of Semivolatile Organic Compounds in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:**	SB-8W	SB-9W	SB-10W	SB-11W	MW-1	MW-2	MW-3
		Parcel ID:	B	G	F	E	I	H	A
		Sample Date:	12/11/2007	12/11/2007	12/11/2007	12/11/2007	11/19/2007	11/19/2007	11/20/2007
Chrysene	0.002		ND	ND	ND	ND	ND	ND	ND
Dibenzo[a,h]anthracene	--		ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	--		ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	50		ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	50		ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	50		ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	--		ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50		ND	ND	ND	ND	ND	ND	ND
Fluorene	50		ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.04		ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	0.002		ND	ND	ND	ND	ND	ND	ND
Isophorone	50		ND	ND	ND	ND	ND	ND	ND
Naphthalene	10		**44.4**	ND	ND	ND	ND	ND	**103**
Nitrobenzene	0.4		ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1		ND	ND	ND	ND	ND	ND	ND
Phenanthrene	50		ND	ND	ND	ND	ND	ND	ND
Phenol	1		ND	ND	ND	ND	ND	ND	ND
Pyrene	50		ND	ND	ND	ND	ND	ND	ND

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Bold data indicates that parameter was detected above the NYSDEC AWQSGVs

µg/L -Micrograms per liter

Table 7. Summary of Metals in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:**	GP-1W	GP-2W	GP-4W	GP-6W	GP-9W	GP-12W	SB-5W	SB-7W
		Parcel ID:	I	I	H	H	G	K	F	A
		Sample Date:	11/5/2007	11/5/2007	11/5/2007	11/5/2007	11/14/2007	11/14/2007	11/14/2007	12/11/2007
Mercury	0.7		ND	ND	0.32	**6.4**	0.21	ND	ND	ND
Silver	50		ND	ND	ND	ND	17.7	5.4	ND	ND
Aluminum	--		1960	12200	14600	634000	134000	28100	15900	46.3
Arsenic	25		ND	4	7.2	**231**	**32**	ND	ND	ND
Barium	1000		204	275	140	**6070**	**1800**	434	241	228
Beryllium	3		ND	ND	ND	**18.8**	**4.4**	ND	ND	ND
Calcium	--		145000	204000	14900	623000	226000	241000	212000	198000
Cadmium	5		ND	ND	ND	**27.5**	2.9	ND	ND	ND
Cobalt	--		6.7	11	10.5	366	74.7	24.3	38.6	6.6
Chromium	50		12	28	37.8	**1640**	**148**	**54.6**	25.5	ND
Copper	200		15	18.6	30.1	**1520**	**410**	85.7	44.8	ND
Iron	300		**17500**	**21500**	**48600**	**2160000**	**163000**	**42700**	**26800**	41.1
Iron and Manganese Combined	500		**19600**	**23730**	**48980**	**2175800**	**172100**	**45200**	**36180**	**2770**
Potassium	--		13600	13600	3610	155000	30300	16100	15400	15000
Magnesium	7		**42500**	**69700**	**9120**	**384000**	**92200**	**62800**	**39500**	**71000**
Manganese	300		**2080**	**2230**	**383**	**15000**	**9100**	**2500**	**9380**	**2730**
Sodium	20000		**185000**	**257000**	**96800**	**241000**	**328000**	**27700**	**145000**	**275000**
Nickel	100		6.8	19	21.8	**942**	**141**	46.8	51	7.4
Lead	25		20	21	**137**	**5750**	**351**	**120**	24	ND
Antimony	3		ND	**52**	ND	**126**	ND	ND	ND	ND
Selenium	10		ND	ND	ND	ND	ND	ND	ND	ND
Thallium	1		ND	ND	ND	**112**	ND	ND	**10.8**	ND
Vanadium	14		7.7	**32.9**	**41.8**	**1620**	**328**	**72.4**	**41**	ND
Zinc	2000		73	81	122	**5080**	548	208	107	5.5
Chromium, Hexavalent	50		ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	200		ND	13	ND	ND	ND	ND	14	ND

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Table 7. Summary of Metals in Groundwater, Remedial Investigation Work Plan
Post Road Corridor – White Plains, 77 West Post Road, White Plains New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** / **Parcel ID:** / **Sample Date:**	SB-8W B 12/11/2007	SB-9W G 12/11/2007	SB-10W F 12/11/2007	SB-11W E 12/11/2007	MW-1 I 11/19/2007	MW-2 H 11/19/2007	MW-3 A 11/20/2007
Mercury	0.7		ND	ND	ND	ND	ND	ND	ND
Silver	50		12.8	16.8	ND	12.1	6.2	ND	ND
Aluminum	--		53.5	26.2	18.8	51.5	27900	16800	143
Arsenic	25		4	ND	ND	ND	13	6.8	6.6
Barium	1000		412	228	251	150	267	282	852
Beryllium	3		ND	ND	ND	ND	ND	ND	ND
Calcium	--		220000	154000	132000	92600	140000	120000	266000
Cadmium	5		ND	ND	ND	ND	ND	ND	ND
Cobalt	--		5.3	ND	ND	ND	17	11.2	ND
Chromium	50		ND	ND	ND	ND	48.4	29	ND
Copper	200		ND	ND	ND	ND	40.8	39.6	ND
Iron	300		48	42.3	27.3	51.7	**39000**	**22400**	**37200**
Iron and Manganese Combined	500		**3950**	**3240**	**2880**	460	**40070**	**23830**	**42540**
Potassium	--		19700	10700	11500	6350	21800	15200	12000
Magnesium	7		**90200**	**29100**	**40800**	**15300**	**38300**	**34700**	**60900**
Manganese	300		**3900**	**3200**	**2850**	**407**	**1070**	**1430**	**6340**
Sodium	20000		**385000**	**333000**	**177000**	**242000**	**242000**	**136000**	**831000**
Nickel	100		7	ND	ND	ND	36.8	28	0
Lead	25		11.9	ND	ND	ND	ND	ND	12.7
Antimony	3		ND	ND	ND	ND	**6.2**	ND	ND
Selenium	10		ND	ND	ND	ND	ND	ND	ND
Thallium	1		ND	**12.8**	ND	ND	ND	ND	**9**
Vanadium	14		ND	ND	ND	ND	**73.8**	**44.4**	ND
Zinc	2000		ND	9.6	ND	5	117	58.8	ND
Chromium, Hexavalent	50		ND	ND	ND	ND	ND	ND	ND
Cyanide	200		ND	ND	ND	ND	ND	ND	ND

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Table 8. Proposed Sampling Locations, Remedial Investigation Work Plan
Post Road Corridor - White Plains, 77 West Post Road, White Plains, New York

Parcel	Location	Approximate Excavation Depth (feet bls)	Soil Sample Depth Intervals*	Soil Sample Parameters	Groundwater Sample Parameters	Sampling Method**	Rationale
A	RB-1	None	2-foot interval above the water table	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-2		2-foot interval above the water table	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-3		2-foot interval above the water table	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To delineate the nature and extent of contamination identified during previous investigations
	RB-4		2-foot interval above the water table	TCL + 30/TAL PCBs & Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To delineate the nature and extent of contamination identified during previous investigations
	RB-5		2-foot interval above the water table	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-6		2-foot interval above the water table	TCL + 30/TAL PCBs & Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RW-1		2-foot interval above the water table	TCL + 30/TAL	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
B	RB-7	None	2-foot interval above the water table	TCL + 30/TAL PCBs & Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To delineate the nature and extent of contamination identified during previous investigations
	RB-8		2-foot interval above the water table	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To delineate the nature and extent of contamination identified during previous investigations
	RW-2		2-foot interval above the water table	TCL + 30/TAL	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To delineate the nature and extent of contamination identified during previous investigations
C	RB-9	11	11-13 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To delineate the nature and extent of contamination identified during previous investigations
	RW-4	1	1-3 feet bls	TCL + 30/TAL PCBs & Pesticides	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
D	RB-10	1	1-3 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-11	2	2-4 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To delineate the nature and extent of contamination identified during previous investigations
	RW-3	1	1-3 feet bls	TCL + 30/TAL PCBs & Pesticides	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
F	RB-12	7	7-9 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-13	4	4-6 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-14	11	11-12 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RW-5	9	9-11 feet bls	TCL + 30/TAL	TCL + 30/TAL	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To delineate the nature and extent of contamination identified during previous investigations
	RW-6	15	15-17 feet bls	TCL + 30/TAL PCBs & Pesticides	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To delineate the nature and extent of contamination identified during previous investigations
	RW-7	10	10-12 feet bls	TCL + 30/TAL	TCL + 30/TAL PCBs & Pesticides	TCL + 30/TAL PCBs & Pesticides	To fill data gaps observed in previous investigations
G	RB-15	7	7-9 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-16	6	6-8 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-17	6	6-8 feet bls	TCL + 30/TAL PCBs & Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations. Investigate are surround open NYSDEC spill number 1112748
	RB-18	5	5-7 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-19	5	5-7 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations. Investigate are surround open NYSDEC spill number 1112748
	RB-20	3	3-5 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-21	4	4-6 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-22	4	4-6 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-23	3	3-5 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-24	2	2-4 feet bls	TCL + 30/TAL PCBs and Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RB-25	4	4-6 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RW-8	5	5-7 feet bls	TCL + 30/TAL	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations. Investigate are surround open NYSDEC spill number 1112748
	RW-9	4	4-6 feet bls	TCL + 30/TAL PCBs and Pesticides	TCL + 30/TAL PCBs and Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RW-10	6	6-8 feet bls	TCL + 30/TAL	TCL + 30/TAL PCBs and Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RW-11	4	4-6 feet bls	TCL + 30/TAL	TCL + 30/TAL PCBs and Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations

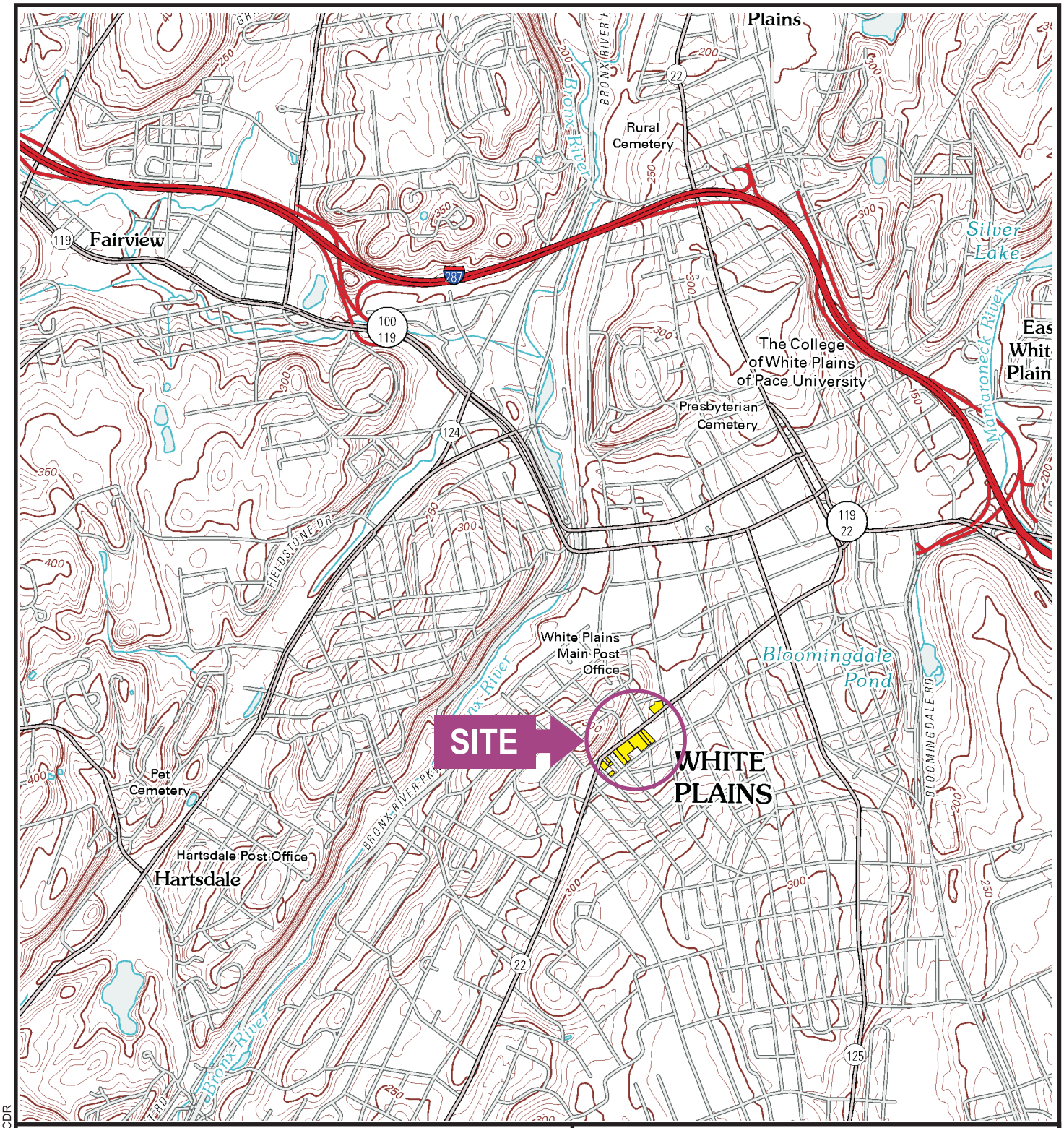
Table 8. Proposed Sampling Locations, Remedial Investigation Work Plan
Post Road Corridor - White Plains, 77 West Post Road, White Plains, New York

Parcel	Location	Approximate Excavation Depth (feet bls)	Soil Sample Depth Intervals*	Soil Sample Parameters	Groundwater Sample Parameters	Sampling Method**	Rationale
H	RB-26	5	5-7 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-27	5	5-7 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-28	5	5-7 feet bls	TCL + 30/TAL PCBs & Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RB-29	5	5-7 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-30	5	5-7 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-31	5	5-7 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-32	5	5-7 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-33	4	4-6 feet bls	TCL + 30/TAL PCBs & Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RB-34	4	4-6 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-35	3	3-5 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RW-12	5	5-7 feet bls	TCL + 30/TAL	TCL + 30/TAL PCBs and Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RW-13	5	5-7 feet bls	TCL + 30/TAL	TCL + 30/TAL PCBs and Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To delineate the nature and extent of contamination identified during previous investigations
	RW-14	3	3-5 feet bls	TCL + 30/TAL PCBs & Pesticides	TCL + 30/TAL PCBs and Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
I	RB-36	2	2-4 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-37	None	2-foot interval above the water table	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-38		2-foot interval above the water table	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RW-15		2-foot interval above the water table	TCL + 30/TAL PCBs & Pesticides	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
J	RB-39	None	2-foot interval above the water table	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-40		2-foot interval above the water table	TCL + 30/TAL PCBs and Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RB-41		0-2 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-42		0-2 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RW-16		2-foot interval above the water table	TCL + 30/TAL	TCL + 30/TAL PCBs and Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RW-17		0-2 feet bls	TCL + 30/TAL PCBs and Pesticides	TCL + 30/TAL PCBs and Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
K	RB-43	10	10-12 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-44	10	10-12 feet bls	TCL + 30/TAL	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471	To fill data gaps observed in previous investigations
	RB-45	10	10-12 feet bls	TCL + 30/TAL PCBs & Pesticides	NA	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RW-18	10	10-12 feet bls	TCL + 30/TAL	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To fill data gaps observed in previous investigations
	RW-19	10	10-12 feet bls	TCL + 30/TAL PCBs & Pesticides	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To delineate the nature and extent of contamination identified during previous investigations
	RW-20	10	10-12 feet bls	TCL + 30/TAL	TCL + 30/TAL PCBs & Pesticides	SW-846 8260B; SW-846 8270C; SW-846 6010/7471; SW-846 8081A; SW-846 8082;	To delineate the nature and extent of contamination identified during previous investigations

* In addition to the sample intervals listed, the 2-foot interval above the water table will be collected only if the water table is observed below the listed intervals. Additionally, should field observations indicate impacted soil at the above listed intervals, soil borings will be advanced until impacts are no longer observed. the next clean interval will be collected for laboratory analysis.
** Laboratory will report to their minimum possible standards for each method (QAPP Table 2)
bls - below land surface
TCL + 30/TAL - includes TCL VOCs + 10 TICs, TCL BNA (SVOCs) + 20 TICs + TAL Metals
TCL - USEPA Contract Laboratory Program Target Compound List
TAL - USEPA Contract Laboratory Program Target Analyze List
VOCs - Volatile Organic Compounds
SVOCs - Semivolatile Organic Compounds
PCBs - Polychlorinated Biphenyls
TICs - Tentatively Identified Compounds
TBD - To Be Determined
QA/QC samples will be collected as described in the QAPP (Appendix B)

FIGURES

1. Site Location Map
2. Site Layout



QUADRANGLE LOCATION

SOURCE:
USGS; 2010, White Plains, NY
7.5 Minute Topographic Quadrangle

N

0 2000'

Title:

SITE LOCATION MAP

RIWP
POST ROAD CORRIDOR - WHITE PLAINS
77 WEST POST ROAD, WHITE PLAINS, NY

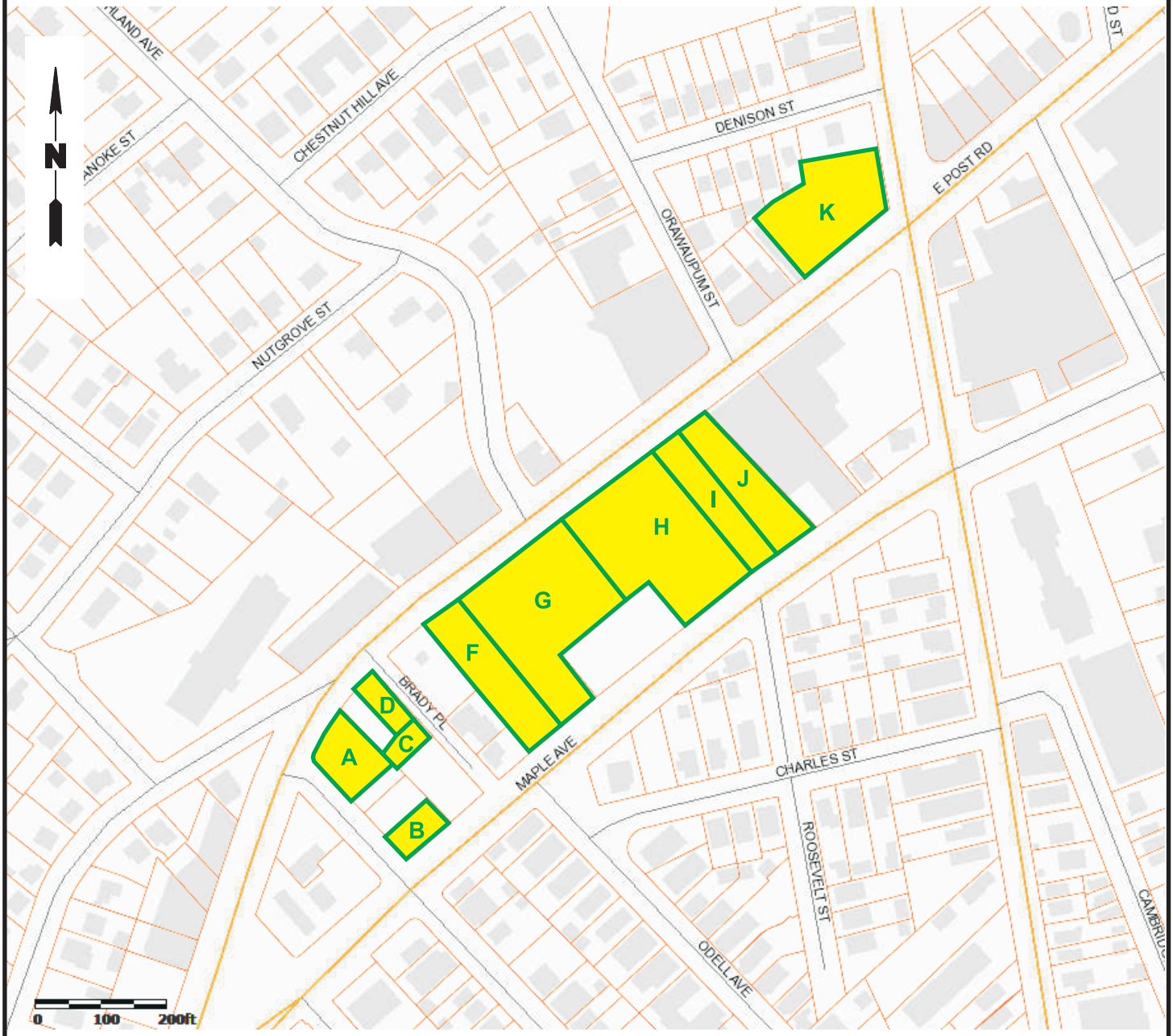
Prepared for:

POST MAPLE 77, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: R.M.	Date: 16MAY13	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	1
Project Mgr.: R.M.	Project No.: 2195.0001Y000	
File: 2195.0001Y106.02.CDR		

V:\CAD\PROJECTS\2195Y0001Y\105\2195.0001Y105.01.CDR



Legend

Site Location and Tax Parcel
(See tax parcel reference list below.)

SOURCE: Westchester County Geographic Information Systems Website.

REF.	ADDRESS	TAX I.D.
A	99-103 W. Post Rd	130.34-6-1
B	5 Rathbun Avenue	130.34-6-6
C	3 Brady Place	130.34-6-4
D	95 W. Post Rd	130.34-6-3
F	79-83 W. Post Rd	130.34-5-2
G	77 W. Post Rd	130.34-5-3
H	55 W. Post Rd	130.34-5-4
I	41-45 W. Post Rd	130.34-5-5
J	35 W. Post Rd	130.34-5-6
K	190-192 S. Lexington Ave	130.27-8-3

Title:

SITE LAYOUT

RIWP
POST ROAD CORRIDOR - WHITE PLAINS
77 WEST POST ROAD, WHITE PLAINS, NY

Prepared for:

POST MAPLE 77, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: R.M.	Date: 16MAY13	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	2
Project Mgr.: R.M.	Project No.: 2195.0001Y000	
File: 2195.0001Y106.02.CDR		

\2195Y0001Y106\2195.0001Y106.02.CDR

APPENDICES

A. Field Sampling Plan

B. Quality Assurance Project Plan

C. Site Health and Safety Plan

APPENDIX A

Field Sampling Plan

October 9, 2013

FIELD SAMPLING PLAN

Post Road Corridor – White Plains
77 West Post Road
City of White Plains
County of Westchester, New York

Prepared for:

POST MAPLE 77, LLC
2309 Frederick Douglas Boulevard
New York, New York 10027-3612

ROUX ASSOCIATES, INC.

Environmental Consulting & Management

and REMEDIAL ENGINEERING, P.C.

209 Shafter Street, Islandia, New York 11749 ♦ 631-232-2600

TABLE OF CONTENTS

TABLES

ATTACHMENTS

1.0 INTRODUCTION

Roux Associates has developed this Field Sampling Plan (FSP) to describe in detail the field sampling methods to be used during performance of the Remedial Investigation (RI) at 77 West Post Road, White Plains, New York (Site).

The FSP was prepared in accordance with directives provided in the DER-10 Technical Guidance for Site Investigation and Remediation (May 2010) issued by the New York State Department of Environmental Conservation (NYSDEC), as well as 6 NYCRR Part 375and provides guidelines and procedures to be followed by field personnel during performance of the RI. Information contained in this FSP relates to sampling objectives, sampling locations, sampling frequencies, sample designations, sampling equipment, sample handling, sample analysis, and decontamination.

2.0 SAMPLING OBJECTIVES

This FSP was developed based upon a detailed review of available information obtained during previous investigations and is designed to obtain the additional data necessary to achieve the objectives of the RI. This FSP describes in detail the sampling and data gathering methods to be used during implementation of the RI.

The objective of the proposed sampling is to determine the nature and extent of the known contamination on Site, to evaluate any additional areas of contamination (AOCs) and potential associated contamination and to obtain a current representation of the environmental conditions at the Site.

The sampling procedures associated with characterization of soil, groundwater, and soil vapors are discussed in detail in Section 4 of this FSP. A discussion of the data quality objectives (DQOs) is provided in the Quality Assurance Project Plan (QAPP) located in Appendix B of the RI Work Plan.

3.0 SAMPLE MEDIA, LOCATIONS, ANALYTICAL SUITES, AND FREQUENCY

The media to be sampled during the RI include soil and groundwater. Soil vapor sampling is not proposed at this time, but may be undertaken if indicated by the RI. Discussions regarding soil vapor sampling are included for reference in the event soil vapor sampling is conducted. Sampling locations, analytical suites, and frequency vary by medium. A discussion of the sampling schedule for each medium is provided below, while the assumed number of field samples to be collected for each medium, including quality control (QC) samples, is shown in Table A-1. Specifics regarding the collection of samples at each location and for each task are provided in Section 4 of this FSP.

3.1 Soil Sampling

Soil samples underlying the Site will be collected at 65 locations (monitoring wells and soil borings) as shown in Plate 3 of the RI Work Plan. Continuous soil samples will be collected using the direct-push method via a Geoprobe® (or similar) with either a four or five-foot macrocore sampler, depending on the model used. During soil boring activities, lithology will be recorded and soil will be visually inspected and field screened every two feet for volatile organic compounds (VOCs) using a photoionization detector (PID).

Soil borings may be added to the scope of work to investigate any additional areas of concern identified during field activities.

A minimum of one soil sample from each location will be submitted for laboratory analysis. All samples will be analyzed for the full Target Compound List (TCL) plus the 30 (10 VOC and 20 SVOC organic compounds) highest concentration tentatively identified compounds (TICs), and Target Analyte List (TAL) metals. Additionally, a portion (25%) of all soil samples collected will also be analyzed for TCL pesticides and TCL polychlorinated biphenyl's (PCBs).

All soil samples will be analyzed at a laboratory with a current New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) Contract Laboratory Protocol (CLP) certification for each of the parameters noted above. Samples will be analyzed on a standard turnaround time and will be reported as Category B data deliverables.

3.2 Groundwater Sampling

Groundwater samples will be collected from all three existing monitoring wells located at the Site and the 20 additional monitoring wells that will be installed during the investigation. After gauging for potential separate-phase petroleum product using an oil/water interface probe, each shallow well will be sampled for the full TCL plus the 30 (10 VOC and 20 SVOC organic compounds) highest concentration TICs, and TAL metals. Additionally, all groundwater samples collected will also be analyzed for TCL pesticides and TCL PCBs. Deep wells (RW-3D and RW-5D) will also be sampled for the parameters listed above. Purging and sampling will be performed consistent with United State Environmental Protection Agency (USEPA) low-flow sampling requirements. Field parameters will be collected using a water quality meter with flow-through cell until parameters stabilized before samples are collected.

All Groundwater samples will be analyzed at a laboratory with a current NYSDOH ELAP CLP certification for each of the parameters noted above. Samples will be analyzed on a standard turnaround time and will be reported as Category B data deliverables.

3.3 Soil Vapor Sampling

Soil vapor sampling is not proposed at this time. The need for and potential location of soil vapor sampling will be evaluated based on the results of the RI VOC data. If performed, soil vapor samples collected in Summa canisters will be used to quantitatively verify the extent of soil vapor impacts indicated by RI sample results.

If deemed necessary at a future date, sample locations for soil vapor samples will be selected based on areas of known or suspected historical activities, where previous sampling has indicated contamination, future development plans and based on the results of the RI as described in the RI work plan. All samples will be analyzed for VOCs using USEPA method TO-15.

4.0 FIELD SAMPLING PROCEDURES

This section provides a detailed discussion of the field procedures to be used during sampling of the various media being evaluated as part of the RI (i.e., soil, groundwater, and soil vapor). The locations are shown on Plate 3 of the RI work plan and additional information including intervals to be sampled and sample rationale is provided in Table 8 of the RI work plan.

4.1 Soil Sampling and Monitoring Well Installation

Details for the collection of soil samples and the installation of monitoring wells are provided below. Boreholes will be pre-cleared using non-intrusive methods prior to advancement of soil borings and monitoring well pilot-boreholes.

4.1.1 Soil Sampling

Borings will be advanced using a Geoprobe™ truck or track-mounted direct-push drill rig (or similar). Samples of the soil profile will be collected in continuous four or five-foot increments using a 2-inch-diameter macrocore sampler to the observed water table. Each four or five-foot increment will be collected in dedicated acetate sleeves or similar. The sleeve will be laid on a piece of polyethylene sheeting and opened. Soil samples in the sleeve will be separated into two-foot sections and screened for VOCs with a PID. Following the PID screening, a portion of soil from each two-foot section will be placed into pre-cleaned sample jars and placed on ice in a cooler at 4°C. All remaining soils will be visually characterized according to the Unified Soils Classification System (USCS) and placed into zip-lock plastic storage bags and homogenized. The bags will be allowed to stand for approximately 15 minutes and the bag headspace will then be monitored for organic vapors with a PID.

Soil samples will be collected according to Table 8 of the RI Work Plan. Soil from within the excavation envelope (soil that will be removed and transported offsite to allow for Site redevelopment) will not be collected for laboratory analysis at this time. In all borings, the 2-foot interval immediately below the excavation envelope will be collected for laboratory analysis in order to develop an understanding of post development conditions. Additionally, in the event that the samples collected to assess post development conditions are located above the water table, the boring will be advanced to the observed water table and the 2-foot interval above the water table will also be collected for laboratory analysis.

Furthermore, if odor/visual evidence of contamination or elevated PID readings are noted at or below the excavation envelope, additional samples will be collected from the interval that exhibits the highest contamination, and from the next clean interval below the interval with the highest elevated PID reading. These samples will be placed in the laboratory-supplied containers and shipped to the laboratory under chain of custody procedures in accordance with Roux Associates' standard operating procedures. Upon completion, each boring will be allowed to collapse. Surface completion will consist of placing a bentonite seal at the surface so that boreholes may be returned to for further delineation, if necessary.

If development plans are modified and additional soil will remain in place, additional soil samples will need to be collected.

In the event that delineation borings are required, the following procedures will apply.

If delineation is required, up to four additional delineation borings will be advanced around the location (based on access constraints and proximity to other sample locations). The additional borings will be evenly spaced around the location(s), within a five-foot radius, and sampled in the same manner as described above. Soil samples from delineation borings will be sent to the laboratory for analysis of the compound(s) detected in exceedance in the initial sample location.

Additional details regarding soil-sampling protocols are described in Roux Associates' Standard Operating Procedure for the Collection of Soil Samples for Laboratory Analysis, which is provided in Attachment 1.

4.1.2 Monitoring Well Installation

Following soil sampling activities, shallow monitoring wells will be installed at soil boring locations RW-1 through RW-20, the screened zones of the shallow monitoring wells will bridge the water table. Deep monitoring wells will be installed at RW-3D and RW-5D. The deep monitoring wells will be screened from 10 to 20 feet below the water table. Additional monitoring wells may be installed based on field observations (elevated PID readings, visual or olfactory evidence of contamination at or near the water table) during soil boring activities. Monitoring wells will be installed using the hollow stem auger drilling method and constructed of

2-inch-inside-diameter, Schedule 40 polyvinyl chloride (PVC) casing and, 0.020-inch slot, machined screen. (Depending on lithology, alternative well designs may be used, which will be discussed prior to construction with the NYSDEC.) Well screens will be 10 feet long, and will be installed with three feet above and seven feet below the water table. Two shallow/ deep monitoring well clusters will be constructed. Shallow monitoring wells RW-3 and RW-5 will form well clusters with deep monitoring wells RW-3D and RW-5D respectively. A sand pack will be placed around the well screen, extending two feet above the top of the screened zone. Once the driller confirms the depth of the sand pack, a minimum two-foot-thick bentonite pellet seal will be placed above the sand pack. Once the pellets have been allowed to hydrate, a cement-bentonite grout will be pumped into the remaining annular space from the bottom up using a tremie pipe lowered to just above the bentonite seal. The wells will be completed using locking well plugs, and flush mounted, bolt down, watertight, manhole covers cemented into place. All monitoring wells (including existing wells) will be surveyed by a licensed New York State surveyor to obtain horizontal and vertical survey coordinates, and water level elevations will be calculated for each well, and a groundwater contour map will be developed.

4.2 Groundwater Sampling

Each monitoring well, including existing wells (which will be inspected for integrity), will be developed to remove any fine-grained material in the vicinity of the well screen and to promote hydraulic connection with the aquifer. The wells will be developed using a submersible pump, which will be surged periodically until well yield is consistent and has a turbidity below 50 Nephelometric turbidity units (NTUs).

Groundwater samples will be collected no sooner than one week following development of the wells. Prior to sampling, depth to water will be measured at each well using an electronic oil/water level meter with an accuracy of +/-0.01 feet. All wells will then be purged and sampled using a peristaltic pump, or an alternative method, depending on the observed depth to groundwater and logistical issues. Purging and sampling will be performed consistent with USEPA low-flow sampling requirements. Water generated during the purging of the monitoring wells will be temporarily stored onsite in appropriately labeled 55-gallon drums pending analytical results of the groundwater sampling and proper offsite disposal. Field parameters will be collected

using a water quality meter with flow-through cell until parameters stabilized before samples are collected. Samples will be analyzed for the full TCL plus the 30 (10 VOC and 20 SVOC organic compounds) highest concentration TICs, and TAL metals. Additionally, all groundwater samples collected will also be analyzed for TCL pesticides and TCL PCBs. Deep wells (RW-3D and RW-5D) will also be sampled for parameters listed above. Additional details for the collection of groundwater samples are included in the Roux Associates SOPs (Attachment A-1).

All groundwater samples will be placed in the laboratory-supplied containers and shipped to the laboratory under chain of custody procedures in accordance with Roux Associates' SOPs.

4.3 Drywell Sediment Sampling

In the event that a drywell is identified onsite during the RI, a sediment sample will be collected in the manner described below.

Drywell sediment samples will be obtained using a clean, properly decontaminated stainless steel hand auger. Care will be taken to place only solids into the laboratory supplied sample bottle. Samples will be analyzed for the full TCL plus the 30 highest concentration TICs, TAL metals, TCL PCBs, and TCL pesticides.

All drywells sediment samples will be placed in laboratory-supplied containers and shipped to the laboratory under chain of custody procedures in accordance with Roux Associates' SOPs.

4.4 Soil Vapor Sampling

If deemed appropriate, sample locations for soil vapor samples will be selected based on areas of known or suspected historical activities, development plans and the results of the RI. Soil vapor samples will be collected directly below the excavation envelope (provided the excavation envelope does not extend below the vadose zone at the sample location).

The soil vapor sample points will be installed using a Geoprobe™ drill rig (or similar). The sample point will be installed at least one foot above the water table. Approximately 2 inches of sand will be installed in the bottom of the borehole and a length of Teflon-lined sample tubing fitted with a six inch long stainless steel sample screen will be inserted into the borehole.

The annular space will be backfilled with coarse sand to one foot above the sample tubing. Above the sand a bentonite seal will be installed in the annular space to within one foot of ground surface to secure the sample tubing in place and to seal the borehole to prevent infiltration of ambient air to the soil gas sample point. The borehole will then be backfilled with non-impacted native material or clean sand to grade. The end of the tubing protruding above the land surface will be sealed until the soil sampling begins. Following soil vapor sample collection at each of the proposed locations, the sample tubing will be removed, the boring will be backfilled with clean sand and surface restored.

Soil vapor samples and will be submitted to for laboratory analysis under chain of custody procedures for analysis using USEPA Method TO-15 for VOCs. The detection limits for all Matrix 1 compounds will be less than 0.25 $\mu g/m^3$, as required in the New York State Department of Health Guidance.

5.0 SAMPLE HANDLING AND ANALYSIS

To ensure quality data acquisition and collection of representative samples, there are selective procedures to minimize sample degradation or contamination. These include procedures for preservation of the samples as well as sample packaging and shipping procedures.

5.1 Field Sample Handling

A detailed discussion of the number and types of samples to be collected during each task, as well as the analyses to be performed can be found in Section 3.0 of this FSP. The types of containers, volumes needed, and preservation techniques for the aforementioned testing parameters are presented in Table A-2.

5.2 Sample Custody Documentation

The purpose of documenting sample custody is to confirm that the integrity and handling of the samples is not subject to question. Sample custody will be maintained from the point of sampling through the analysis. Specific procedures regarding sample tracking from the field to the laboratory are described in Roux Associates' SOP for Sample Handling (Attachment A-1).

Each individual collecting samples is personally responsible for the care and custody of the samples. All sample labels should be pre-printed or filled out using waterproof ink. The technical staff will review all field activities with the Field Team Leader to determine whether proper custody procedures were followed during the fieldwork and to decide if additional samples are required.

All samples being shipped off-site for analysis must be accompanied by a properly completed chain of custody form (Attachment A-2). The sample numbers will be listed on the chain of custody form. When transferring the possession of samples, individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents transfer of custody of samples from the sampler to another person, to/from a secure storage area, and to the laboratory.

Samples will be packaged for laboratory pick up and/or shipment with a separate signed custody record enclosed in each sample box or cooler. Shipping containers will be locked and/or secured with strapping tape in at least two locations for shipment to the laboratory.

5.3 Sample Shipment

Laboratory courier services may be used for sample transport on this project. However, in the event that samples are shipped to the laboratory the following procedures will apply. Sample packaging and shipping procedures are based upon USEPA specifications, as well as U.S. Department of Transportation (DOT) regulations. The procedures vary according to potential sample analytes, concentration, and matrix, and are designed to provide optimum protection for the samples and the public. Sample packaging and shipment must be performed using the general outline described below. Additional information regarding sample handling is provided in Roux Associates' SOP for Sample Handling (Attachment A-1).

All samples will be shipped within 12 hours of collection (when possible) and will be preserved appropriately from the time of sample collection. A description of the sample packing and shipping procedures is presented below:

1. Prepare cooler(s) for shipment.
   - tape drain(s) of cooler shut;
   - affix "this side up" arrow labels and "fragile" labels on each cooler; and
   - place mailing label with laboratory address on top of cooler(s).
2. Arrange sample containers in groups by sample number or analyte.
3. Ensure that all bottle labels are completed correctly. Place clear tape over bottle labels to prevent moisture accumulation from causing the label to peel off.
4. Arrange containers in front of assigned coolers.
5. Place packaging material at the bottom of the cooler to act as a cushion for the sample containers.
6. Arrange containers in the cooler so that they are not in contact with the cooler or other samples.
7. Fill remaining spaces with packaging material.

8. Ensure all containers are firmly packed with packaging material.

9. If ice is required to preserve the samples, ice cubes should be repackaged in double Zip-Lock™ bags, and placed on top of the packaging material.

10. Sign chain of custody form (or obtain signature) and indicate the time and date it was relinquished to Federal Express or other carrier, as appropriate.

11. Separate chain of custody forms. Seal proper copies within a large Zip-Lock™ bag and tape to cooler. Retain copies of all forms.

12. Close lid and latch.

13. Secure each cooler using custody seals.

14. Tape cooler shut on both ends.

15. Relinquish to Federal Express or other courier service as appropriate. Retain airbill receipt for project records. (Note: All samples will be shipped for "NEXT A.M." delivery).

16. Telephone laboratory contact and provide him/her with the following shipment information:

    - sampler's name;
    - project name;
    - number of samples sent according to matrix and concentration; and
    - airbill number.

6.0 SITE CONTROL PROCEDURES

Site control procedures, including decontamination and waste handling and disposal, are discussed below.

6.1 Decontamination

In an attempt to avoid the spread of contamination, all drilling and sampling equipment must be decontaminated at a reasonable frequency in a properly designed and located decontamination area. Detailed procedures for the decontamination of field and sampling equipment are included in Roux Associates' SOPs for the Decontamination of Field Equipment, which is provided in Attachment A-1. The location of the decontamination area will be determined prior to the start of field operations. The decontamination area will be constructed to ensure that all wash water generated during decontamination can be collected and containerized for proper disposal.

6.2 Waste Handling and Disposal

All waste materials (drill cuttings, decontamination water, etc.) generated during the RI will be consolidated, and stored in appropriate labeled bulk containers (drums, etc.), and temporarily staged at an investigation-derived-waste storage area onsite and will be managed in accordance with Section 3.3(e) of DER-10. Roux Associates will then coordinate waste characterization and disposal by appropriate means.

Table A-1. Remedial Investigation Field and Quality Control Sampling Summary

Sample Medium	Target Analytes	Field Samples	Replicates[1]	Trip Blanks[2]	Field Blanks[3]	Matrix Spikes[1]	Spike Duplicates[1]	Total No. of Samples
Soil	TCL VOCs +10	87	5	12	16	5	5	130
	TCL SVOCs +20	87	5	0	16	5	5	118
	TCL Pesticides	22	2	0	16	5	5	50
	TCL PCBs	22	2	0	16	5	5	50
	TAL Metals	87	5	0	16	5	5	118
Groundwater	TCL VOCs +10	24	2	4	5	2	2	39
	TCL SVOCs +20	24	2	0	5	2	2	35
	TCL Pesticides	24	2	0	5	2	2	35
	TCL PCBs	24	2	0	5	2	2	35
	TAL Metals	24	2	0	5	2	2	35
Soil Vapor	TO-15 VOCs	TBD	TBD	0	0	0	0	TBD

Totals are estimated based on scope of work as written, actual sample quantities may vary based on field conditions. QA/QC sample quantities will be adjusted accordingly.

[1] Based on 1 per 20 samples or 1 per Sample Delivery Group (3 days max)

[2] Based on 1 cooler per day

[3] Based on 1 per day

TCL - USEPA Contract Laboratory Program Target Compound List

VOCs - Volatile Organic Compounds

SVOCs - Semivolatile Organic Compounds

PCBs - Polychlorinated Biphenyls

TAL - USEPA Contract Laboratory Program Target Analyte List

TBD - To Be Determined

Table A-2. Preservation, Holding Times and Sample Containers

Analysis	Matrix	Bottle Type	Preservation(a)	Holding Time(b)
TAL Metals (total) SW-846 6010/7471	Soil Water	8 oz wide mouth glass, teflon lined cap 250 mL plastic, teflon lined cap	Cool to 4°C Nitric acid	180 days, Hg 28 days
TO-15	Air	6 liter Summa Canister	None	14 days from sample collection
Target Compound List (TCL)				
TCL Volatile Organic Compounds (VOCs) SW-846 8260B	Soil Water	2 oz wide mouth glass, teflon lined cap 40mL voa vial, teflon lined cap	Cool to 4°C Hydrochloric Acid	14 days from sample collection
TCL Semivolatile Organic Compounds (SVOCs) SW-846 8270C	Soil Water	8 oz wide mouth glass, teflon lined cap 1 liter amber glass, teflon lined cap	Cool to 4°C	14 days to extract, 40 days to analysis 7 days to extract, 40 days to analysis
TCL Pesticides SW-846 8081A	Soil Water	8 oz wide mouth glass, teflon lined cap 1 liter amber glass, teflon lined cap	Cool to 4°C	14 days to extract, 40 days to analysis 7 days to extract, 40 days to analysis
TCL Polychlorinated biphenyls (PCBs) SW-846 8082	Soil Water	8 oz wide mouth glass, teflon lined cap 1 liter amber glass, teflon lined cap	Cool to 4°C	14 days to extract, 40 days to analysis 7 days to extract, 40 days to analysis

(a) All soil and groundwater samples to be preserved in ice during collection and transport

(b) Days from date of sample collection.

TAL - Target Analyte List

TCL - USEPA Contract Laboratory Program Target Compound List

Roux Associates' Standard Operating Procedure for Tasks Described in this Field Sampling Plan

Date: May 5, 2000

1.0 PURPOSE

The purpose for this standard operating procedure (SOP) is to establish the guidelines for decontamination of all field equipment potentially exposed to contamination during drilling, and soil and water sampling. The objective of decontamination is to ensure that all drilling, and soil-sampling and water-sampling equipment is decontaminated (free of potential contaminants): 1) prior to being brought onsite to avoid the introduction of potential contaminants to the site; 2) between drilling and sampling events/activities onsite to eliminate the potential for cross-contamination between boreholes and/or wells; and 3) prior to the removal of equipment from the site to prevent the transportation of potentially contaminated equipment offsite.

In considering decontamination procedures, state and federal regulatory agency requirements must be considered because of potential variability between state and federal requirements and because of variability in the requirements of individual states. Decontamination procedures must be in compliance with state and/or federal protocols in order that regulatory agency(ies) scrutiny of the procedures and data collected do not result in non acceptance (invalidation) of the work undertaken and data collected.

2.0 PROCEDURE FOR DRILLING EQUIPMENT

The following is a minimum decontamination procedure for drilling equipment. Drilling equipment decontamination procedures, especially any variation from the method itemized below, will be documented on an appropriate field form or in the field notebook.

2.1 The rig and all associated equipment should be properly decontaminated by the contractor before arriving at the test site.

2.2 The augers, drilling casings, rods, samplers, tools, rig, and any piece of equipment that can come in contact (directly or indirectly) with the soil, will be steam cleaned onsite prior to set up for drilling to ensure proper decontamination.

2.3 The same steam cleaning procedures will be followed between boreholes (at a fixed on-site location[s], if appropriate) and before leaving the site at the end of the study.

2.4 All on-site steam cleaning (decontamination) activities will be monitored and documented by a member(s) of the staff of Roux Associates, Inc.

2.5 If drilling activities are conducted in the presence of thick, sticky oils (e.g., PCBs) which coat drilling equipment, then special decontamination procedures may have to be utilized before steam cleaning (e.g., hexane scrub and wash).

2.6 Containment of decontamination fluids may be necessary (e.g., rinseate from steam cleaning) or will be required (e.g., hexane), and disposal must be in accordance with state and/or federal procedures.

3.0 PROCEDURE FOR SOIL-SAMPLING EQUIPMENT

The following is a minimum decontamination procedure for soil-sampling equipment (e.g., split spoons, stainless-steel spatulas). Soil-sampling equipment decontamination procedures, especially any variation from the method itemized below, will be documented on an appropriate field form or in the field notebook.

3.1 Wear disposable gloves while cleaning equipment to avoid cross-contamination and change gloves as needed.

3.2 Steam clean the sampler or rinse with potable water. If soil-sampling activities are conducted in the presence of thick, sticky oils (e.g., PCBs) which coat sampling equipment, then special decontamination procedures may have to be utilized before steam cleaning and washing in detergent solution (e.g., hexane scrub and wash).

3.3 Prepare a non-phosphate, laboratory-grade detergent solution and distilled or potable water in a clean bucket.

3.4 Disassemble the sampler, as necessary and immerse all parts and other sampling equipment in the solution.

3.5 Scrub all equipment in the bucket with a brush to remove any adhering particles.

3.6 Rinse all equipment with copious amounts of potable water followed by distilled or deionized water.

3.7 Place clean equipment on a clean plastic sheet (e.g., polyethylene)

3.8 Reassemble the cleaned sampler, as necessary.

3.9 Transfer the sampler to the driller (or helper) making sure that this individual is also wearing clean gloves, or wrap the equipment with a suitable material (e.g., plastic bag, aluminum foil.

As part of the decontamination procedure for soil-sampling equipment, state and/or federal protocols must be considered. These may require procedures above those specified as minimum for Roux Associates, Inc., such as the use of nitric acid, acetone, etc. Furthermore, the containment and proper disposal of decontamination fluids must be considered with respect to regulatory agency(ies) requirements.

4.0 PROCEDURE FOR WATER-SAMPLING EQUIPMENT

The following is a decontamination procedure for water-sampling equipment (e.g., bailers, pumps). Water-sampling equipment decontamination procedures, especially any variation from the method itemized below, will be documented on an appropriate field form or in the field notebook.

4.1 Decontamination procedures for bailers follow:

a. Wear disposable gloves while cleaning bailer to avoid cross-contamination and change gloves as needed.

b. Prepare a non-phosphate, laboratory-grade detergent solution and potable water in a bucket.

c. Disassemble bailer (if applicable) and discard cord in an appropriate manner, and scrub each part of the bailer with a brush and solution.

d. Rinse with potable water and reassemble bailer.

e. Rinse with copious amounts of distilled or deionized water.

f. Air dry.

g. Wrap equipment with a suitable material (e.g., clean plastic bag, aluminum foil).

h. Rinse bailer at least three times with distilled or deionized water before use.

4.2 Decontamination procedures for pumps follow:

a. Wear disposable gloves while cleaning pump to avoid cross-contamination and change gloves as needed.

b. Prepare a non-phosphate, laboratory-grade detergent solution and potable water in a clean bucket, clean garbage can, or clean 55-gallon drum.

c. Flush the pump and discharge hose (if not disposable) with the detergent solution, and discard disposable tubing and/or cord in an appropriate manner.

d. Flush the pump and discharge hose (if not disposable) with potable water.

e. Place the pump on clear plastic sheeting.

f. Wipe any pump-related equipment (e.g., electrical lines, cables, discharge hose) that entered the well with a clean cloth and detergent solution, and rinse or wipe with a clean cloth and potable water.

g. Air dry.

h. Wrap equipment with a suitable material (e.g., clean plastic bag).

As part of the decontamination procedure for water-sampling equipment, state and/or federal protocols must be considered. These may require procedures above those specified as minimum for Roux Associates, Inc., such as the use of nitric acid, acetone, etc. Furthermore, the containment and proper disposal of decontamination fluids must be considered with respect to regulatory agency(ies) requirements.

Date: May 5, 2000

1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to establish guidelines for the collection of soil samples for laboratory analysis. This SOP is applicable to soil samples collected from split-spoon samplers during drilling, hand auger samples, grab samples from stockpiled soils, surface samples, test pit samples, etc.

2.0 CONSIDERATIONS

Soil samples may be collected in either a random or biased manner. Random samples can be based on a grid system or statistical methodology. Biased samples can be collected in areas of visible impact or suspected source areas. Soil samples can be collected at the surface, shallow subsurface, or at depth. When samples are collected at depth the water content should be noted, since generally "soil sampling" is restricted to the unsaturated zone. Equipment selection will be determined by the depth of the sample to be collected. A thorough description of the sampling locations and proposed methods of sample collection should be included in the work plan.

Commonly, surface sampling refers to the collection of samples at a 0 to 6 inch depth interval. Certain regulatory agencies may define the depth interval of a surface sample differently, and this must be defined in the work plan. Collection of surface soil samples is most efficiently accomplished with the use of a stainless steel trowel or scoop. For samples at greater depths a decontaminated bucket auger or power auger may be needed to advance the hole to the point of sample collection. Another clean bucket auger should then be used to collect the sample. To collect samples at depths of greater than approximately six feet the use of a drill rig and split spoon samples will usually be necessary. In some situations, sample locations are accessed with the use of a backhoe.

3.0 MATERIALS/EQUIPMENT

a. A work plan which outlines soil sampling requirements.

b. Field notebook, field form(s), maps, chain-of-custody forms, and custody seals.

c. Decontamination supplies (including: non-phosphate, laboratory grade detergent, buckets, brushes, potable water, distilled water, regulatory-required reagents, aluminum foil, plastic sheeting, etc.).

d. Sampling device (split-spoon sampler, stainless steel hand auger, stainless steel trowel, etc.).

e. Stainless steel spoons or spatulas.

f. Disposable sampling gloves.

g. Laboratory-supplied sample containers with labels.

h. Cooler with blue or wet ice.

i. Plastic sheeting.

j. Black pen and indelible marker.

k. Zip-lock bags and packing material.

l. Tape measure.

m. Paper towels or clean rags.

n. Masking and packing tape.

o. Overnight (express) mail forms.

4.0 DECONTAMINATION

All reusable sampling equipment will be thoroughly cleaned according to the decontamination SOP. Where possible, thoroughly pre-cleaned and wrapped sampling equipment should be used and dedicated to individual sampling locations. Disposable items such as sampling gloves, aluminum foil, and plastic sheeting will be changed after each use and discarded in an appropriate manner.

5.0 PROCEDURE

5.1 Prior to collecting soil samples, ensure that all sampling equipment has been thoroughly cleaned according to the decontamination SOP. If samples are to be collected at depth, then the boring must be advanced with thoroughly cleaned equipment to the desired sampling horizon and a different thoroughly cleaned sampler must be used to collect the sample.

5.2 Using disposable gloves and a pre-cleaned, stainless steel spatula or spoon, extract the soil sample from the sampler, measure the recovery, and separate the wash from the true sample. Where allowed by regulatory agency(ies), disposable plastic spoons may be used.

5.3 Place the sample in a laboratory-supplied, pre-cleaned sample container. This should be done as quickly as possible and this is especially important when sampling for volatile organic compounds (VOCs). Samples to be analyzed for VOCs must be collected prior to other constituents.

5.4 The sample container will be labeled with appropriate information such as, client name, site location, sample identification (location, depth, etc.), date and time of collection, and sampler's initials.

5.5 Using the remaining portion of soil from the sampler, log the sample in detail and record sediment characteristics (color, odor, moisture, texture, density, consistency, organic content, layering, grain size, etc.).

5.6 If soil samples are to be composited in the field, then equal portions from selected locations will be placed on a clean plastic sheet and homogenized. Alternately, several samples may be submitted to the laboratory for compositing by weight. The method used is dependent upon regulatory requirements. Specific compositing procedures shall be approved by the appropriate regulatory agency and described in the work plan. Samples to be analyzed for VOCs will not be composited unless required by a regulatory agency.

5.7 After the sample has been collected, labeled, and logged in detail, it is placed in a zip-lock bag and stored in a cooler at 4°C.

5.8 A chain-of-custody form is completed for all samples collected. One copy is retained and two are sent with the samples in a zip-lock bag to the laboratory. A custody seal is placed on the cooler prior to shipment.

5.9 Samples collected from Monday to Friday are to be delivered to the laboratory within 24 hours of collection. If Saturday delivery is unavailable, samples collected on Friday must be delivered by Monday morning. Check the work plan to determine if any analytes require a shorter delivery time.

5.10 The field notebook and appropriate forms should include, but not be limited to the following: client name, site location, sample location, sample depth, sample identification, date and time collected, sampler's name, method of sample collection, number and type of containers, geologic description of material, description of decontamination procedures, etc. A site map should be prepared with exact measurements to each sample location in case follow-up sampling is necessary.

5.11 All reusable sampling equipment must be thoroughly cleaned in accordance with the decontamination SOP. Following the final decontamination (after all samples are collected) the sampling equipment is wrapped in aluminum foil. Discard any gloves, foil, plastic, etc. in an appropriate manner that is consistent with site conditions.

END OF PROCEDURE

Date: May 5, 2000

1.0 PURPOSE

The purpose of this standard operating procedure (SOP) is to establish guidelines for the sampling of ground-water monitoring wells for dissolved constituents. As part of the SOP for the sampling of ground-water monitoring wells, sample collection equipment and devices must be considered, and equipment decontamination and pre-sampling procedures (e.g., measuring water levels, sounding wells, and purging wells) must be implemented. Sampling objectives must be firmly established in the work plan before considering the above.

Valid water-chemistry data are integral to a hydrogeologic investigation that characterizes ground-water quality conditions. Water-quality data are used to evaluate both current and historic aquifer chemistry conditions, as well as to estimate future conditions (e.g., trends, migration pathways). Water-quality data can be used to construct ground-water quality maps to illustrate chemical conditions within the flow system, to generate water-quality plots to depict conditions with time and trends, and to perform statistical analyses to quantify data variability, trends, and cleanup levels.

2.0 EQUIPMENT AND MATERIALS

2.1 In order to sample ground water from monitoring wells, specific equipment and materials are required. The equipment and materials list may include, but not necessarily be limited to, the following:

a. Bailers (Teflon™ or stainless steel).

b. Pumps (centrifugal, peristaltic, bladder, electric submersible, bilge, hand-operated diaphragm, etc.).

c. Gas-displacement device(s).

d. Air-lift device(s).

e. Teflon™ tape, electrical tape.

f. Appropriate discharge hose.

g. Appropriate discharge tubing (e.g., polypropylene, teflon, etc.) if using a peristaltic pump.

h. Appropriate compressed gas if using bladder-type or gas-displacement device.

i. Portable generator and gasoline or alternate power supply if using an electric submersible pump.

j. Non-absorbent cord (e.g., polypropylene, etc.).

k. Plastic sheeting.

l. Tape measure (stainless steel, steel, fiberglass) with 0.01-foot measurement increments and chalk (blue carpenter's).

m. Electronic water-level indicators (e.g., m-scope, etc.) or electric water-level/product level indicators.

n. Non-phosphate, laboratory-grade detergent.

o. Distilled/Deionized water.

p. Potable water.

q. Paper towels, clean rags.

r. Roux Associates' field forms (e.g., daily log, well inspection checklist, sampling, etc.) and field notebook.

s. Well location and site map.

t. Well keys.

u. Stop watch, digital watch with second increments, or watch with a second hand.

v. Water Well Handbook.

w. Calculator.

x. Black pen and water-proof marker.

y. Tools (e.g., pipe wrenches, screwdrivers, hammer, pliers, flashlight, pen knife, etc.).

z. Appropriate health and safety equipment, as specified in the site health and safety plan (HASP).

aa. pH meter(s) and buffers.

bb. Conductivity meter(s) and standards.

cc. Thermometer(s).

dd. Extra batteries (meters, thermometers, flashlight).

ee. Filtration apparatus, filters, pre-filters.

ff. Plasticware (e.g., premeasured buckets, beakers, flasks, funnels).

gg. Disposable gloves.

hh. Water jugs.

ii. Laboratory-supplied sample containers with labels.

jj. Cooler(s).

kk. Ice (wet, blue packs).

ll. Masking, duct, and packing tape.

mm. Chain-of-custody form(s) and custody seal(s).

nn. Site sampling and analysis plan (SAP).

oo. Site health and safety plan (HASP).

pp. Packing material (e.g., bubble wrap)

qq. "Zip-lock" plastic bags.

rr. Overnight (express) mail forms.

3.0 DECONTAMINATION

3.1 Make sure all equipment is decontaminated and cleaned before use (refer to the SOP for Decontamination of Field Equipment for detailed decontamination methods, summaries for bailers and pumps are provided below). Use new, clean materials when decontamination is not appropriate (e.g., non-absorbent cord, disposable gloves). Document, and initial and date the decontamination procedures on the appropriate field form and in the field notebook.

a. Decontaminate a bailer by: 1) wearing disposable gloves, 2) disassembling (if appropriate) and scrubbing in a non-phosphate, laboratory-grade detergent and distilled/deionized water solution, and 3) rinsing first with potable water and then distilled/deionized water.

b. Decontaminate a pump by: 1) wearing disposable gloves, 2) flushing the pump and discharge hose (if not disposable) first with a non-phosphate, laboratory-grade detergent and potable water solution in an appropriate

container (clean bucket, garbage can, or 55-gallon drum) and then with distilled/deionized water or potable water, and 3) wiping pump-related equipment (e.g., electrical lines, cables, discharge hose) first with a clean cloth and detergent solution and then rinsing or wiping with a clean cloth and distilled/deionized water or potable water.

3.2 Note that the decontamination procedures for bailers and pumps are the minimum that must be performed. Check the work plan to determine if chemicals specified by individual state regulatory agencies must also be used for decontamination procedures (e.g., hexane, nitric acid, acetone, isopropanol, etc.).

4.0 CALIBRATION OF FIELD ANALYSIS EQUIPMENT

Calibrate field analysis equipment before use (e.g., thermometers, pH and conductivity meters, etc.). Refer to the specific SOP for field analysis for each respective piece of equipment. Document, and initial and date the calibration procedures on the appropriate field form, in the field notebook, and in the calibration log book.

5.0 PROCEDURE

5.1 Document, and initial and date well identification, pre-sampling information, and problems encountered on the appropriate field form and in the field notebook as needed.

5.2 Inspect the protective casing of the well and the well casing, and note any items of concern such as a missing lock, or bent or damaged casing(s).

5.3 Place plastic sheeting around the well to protect sampling equipment from potential cross contamination.

5.4 Remove the well cap or plug and, if necessary, clean the top of the well off with a clean rag. Place the cap or plug on the plastic sheeting. If the well is not vented, allow several minutes for the water level in the well to equilibrate. If fumes or gases are present, then diagnose these with the proper safety equipment. Never inhale the vapors.

5.5 Measure the depth to water (DTW) from the measuring point (MP) on the well using a steel tape and chalk or an electronic sounding device (m-scope). Refer to the specific SOPs for details regarding the use of a steel tape or a m-scope for measuring water levels. Calculate the water-level elevation. Document, and initial and date the information on the appropriate field form and in the field notebook.

5.6 Measuring the total depth of the well from the MP with a weighted steel tape. Calculate and record the volume of standing water in the well casing on the appropriate field form and in the field notebook.

5.7 Decontaminate the equipment used to measure the water level and sound the well with a non-phosphate, laboratory-grade detergent solution followed by a distilled/deionized water rinse.

5.8 Purge the well prior to sampling (refer to the SOP for Purging a Well). The well should be pumped or bailed to remove the volume of water specified in the work plan. Usually three to five casing volumes are removed if the recharge rate is adequate to accomplish this within a reasonable amount of time.

If the formation cannot produce enough water to sustain purging, then one of two options must be followed. These include: 1) pumping or bailing the well dry, or 2) pumping or bailing the well to "near-dry" conditions (i.e., leaving some water in the well). The option employed must be specified in the work plan and be in accordance with regulatory requirements.

If the well is purged dry, then all the standing water has been removed and upon recovery the well is ready for sampling. However, depending on the rate of recovery and the time needed to complete the sampling round, one of the following procedures may have to be implemented: 1) the well may have to be sampled over a period of more than one day; 2) the well may not yield enough water to collect a complete suite of samples and only select (most important) samples will be collected; or 3) the well may not recover which will preclude sampling. Regardless of the option that must be followed, the sampling procedure must be fully documented. When preparing to conduct a sampling round, review drilling, development and previous sampling information (if available) to identify low-yielding wells in order to purge them first, and potentially allow time for the well to recover for sampling.

5.9 Record the physical appearance of the water (i.e., color, turbidity, odor, etc.) on the appropriate field form and in the field notebook, as it is purged. Note any changes that occur during purging.

5.10 If a bailer is used to collect the sample, then:

a. Flush the decontaminated bailer three times with distilled/deionized water.

b. Tie the non-absorbent cord (polypropylene) to the bailer with a secure knot and then tie the free end of the bailer cord to the protective casing or, if possible, some nearby structure to prevent losing the bailer and cord down the well.

c. Lower the bailer slowly down the well and into the water column to minimize disturbance of the water surface. If a bottom-filling bailer is used, then do not submerge the top of the bailer; however, if a top-filling bailer is used, then submerge the bailer several feet below the water surface.

d. Remove and properly discard one bailer volume from the well to rinse the bailer with well water before sampling. Again, lower the bailer slowly down the well to the appropriate depth depending on the bailer type (as discussed above in 5.11 c). When removing the bailer from the well, do not allow the bailer cord to rest on the ground but coil it on the protective plastic sheeting placed around the well. Certain regulatory agencies require that the first bailer volume collected be utilized for the samples.

5.11 If a pump is used to collect the sample, then use the same pump used to purge the well and, if need be, reduce the discharge rate to facilitate filling sample containers and to avoid problems that can occur while filling sample containers (as listed in Number 5.14, below). Alternately, the purge pump may be removed and a thoroughly decontaminated bailer can be used to collect the sample.

5.12 Remove each appropriate container's cap only when ready to fill each with the water sample, and then replace and secure the cap immediately.

5.13 Fill each appropriate, pre-labeled sample container carefully and cautiously to prevent: 1) agitating or creating turbulence; 2) breaking the container; 3) entry of, or contact with, any other medium; and 4) spilling/splashing the sample and exposing the sampling team to contaminated water. Immediately place the filled sample container in a ice-filled (wet ice or blue pack) cooler for storage. If wet ice is used it is recommended that it be repackaged in zip-lock bags to help keep the cooler dry and the sample labels secure. Check the work plan as to whether wet ice or blue packs are specified for cooling the samples because certain regulatory agencies may specify the use of one and not the other.

5.14 "Top-off" containers for volatile organic compounds (VOCs) and tightly seal with Teflon™-lined septums held in place by open-top screw caps to prevent volatilization. Ensure that there are no bubbles by turning the container upside down and tapping it gently.

5.15 Filter water samples (Procedure 4.6) collected for dissolved metals analysis prior to preservation to remove the suspended sediment from the sample. If water samples are to be collected for total metals analysis, then collect a second set of samples without field filtering.

In the event that the regulatory agency(ies) want unfiltered samples for metals analysis, a second set of filtered samples should also be collected. Because unfiltered samples are indications of total metals (dissolved and suspended) they are not representative of aquifer conditions because ground water does not transport sediment (except in some rare cases). Thus, the results for dissolved metals in ground water should be based on filtered samples even if both filtered and unfiltered sets are presented in a report.

5.16 Add any necessary preservative(s) to the appropriate container(s) prior to, or after (preferred), the collection of the sample, unless the appropriate preservative(s) have already been added by the laboratory before shipment.

5.17 Collect quality control (QC) samples as required in the work plan to monitor sampling and laboratory performance. Refer to the SOP for Collection of Quality Control Samples.

5.18 Conduct field analyses after sample collection is complete by measuring and recording the temperature, conductivity, pH, etc. (as called for in the work plan). Note and record the "final" physical appearance of the water (after purging and sampling) on an appropriate field form and in the field notebook.

5.19 Wipe the well cap with a clean rag, replace the well cap and protective cover (if present). Lock the protective cover.

5.20 Verify that each sample is placed in an individual "zip-lock" bag, wrapped with "bubble wrap," placed in the cooler, and that the cooler has sufficient ice (wet ice or blue packs) to preserve the samples for transportation to the analytical laboratory.

5.21 Decontaminate bailers, hoses, and pumps as discussed in the decontamination SOP. Wrap decontaminated equipment with a suitable material (e.g., clean plastic bag or aluminum foil). Discard cords, rags, gloves, etc. in a manner consistent with site conditions.

5.22 Complete all necessary field forms, field notebook entries, and the chain-of-custody forms. Retain one copy of each chain-of-custody form. Secure the cooler with sufficient packing tape and a custody seal.

5.23 Samples collected from Monday through Friday will be delivered within 24 hours of collection. If Saturday delivery is not available, samples collected on Friday must be delivered by Monday morning. Consult the work plan to determine if any of the analytes require a shorter delivery time.

END OF PROCUDURE

Date: May 5, 2000

1.0 PURPOSE

The purpose of this standard operating procedure (SOP) is to establish guidelines for sample handling which will allow consistent and accurate results. Valid chemistry data are integral to investigations that characterize media-quality conditions. Thus, this SOP is designed to ensure that once samples are collected, they are preserved, packed and delivered in a manner which will maintain sample integrity to as great an extent as possible. The procedures outlined are applicable to most sampling events and any required modifications must be clearly described in the work plan.

2.0 CONSIDERATIONS

Sample containers, sampling equipment decontamination, quality assurance/quality control (QA/QC), sample preservation, and sample handling are all components of this SOP.

2.1 Sample Containers

Prior to collection of a sample, considerations must be given to the type of container that will be used to store and transport the sample. The type and number of containers selected is usually based on factors such as sample matrix, potential contaminants to be encountered, analytical methods requested, and the laboratory's internal quality assurance requirements. In most cases, the overriding considerations will be the analytical methodology, or the state or federal regulatory requirements because these regulations generally encompass the other factors. The sample container selected is usually based on some combination of the following criteria:

a. Reactivity of Container Material with Sample

Choosing the proper composition of sample containers will help to ensure that the chemical and physical integrity of the sample is maintained. For sampling potentially hazardous material, glass is the recommended container type because it is chemically inert to most substances. Plastic containers are not recommended for most hazardous wastes because the potential exists for contaminants to adsorb to the surface of the plastic or for the plasticizer to leach into the sample.

In some instances, however, the sample characteristics or analytes of interest may dictate that plastic containers be used instead of glass. Because some metals species will adhere to the sides of the glass containers in an aqueous matrix, plastic bottles (e.g., nalgene) must be used for samples collected for metals analysis. A separate, plastic

container should accompany glass containers if metals analysis is to be performed along with other analyses. Likewise, other sample characteristics may dictate that glass cannot be used. For example, in the case of a strong alkali waste or hydrofluoric solution, plastic containers may be more suitable because glass containers may be etched by these compounds and create adsorptive sites on the container's surface.

b. Volume of the Container

The volume of sample to be collected will be dictated by the analysis being performed and the sample matrix. The laboratory must supply bottles of sufficient volume to perform the required analysis. In most cases, the methodology dictates the volume of sample material required to complete the analysis. However, individual laboratories may provide larger volume containers for various analytes to ensure sufficient quantities for duplicates or other QC checks.

To facilitate transfer of the sample from the sampler into the container and to minimize spillage and sample disturbance, wide-mouth containers are recommended. Aqueous volatile organic samples must be placed into 40-milliliter (ml) glass vials with polytetrafluoroethylene (PTFE) (e.g., TeflonTM) septums. Non-aqueous volatile organic samples should be collected in the same type of vials or in 4-ounce (oz) wide-mouth jars provided by the laboratory. These jars should have PTFE-lined screw caps.

c. Color of Container

Whenever possible, amber glass containers should be used to prevent photodegradation of the sample, except when samples are being collected for metals analysis. If amber containers are not available, then containers holding samples should be protected from light (i.e., place in cooler with ice immediately after filling).

d. Container Closures

Container closures must screw on and off the containers and form a leak-proof seal. Container caps must not be removed until the container is ready to be filled with the sample, and the container cap must be replaced (securely) immediately after filling it. Closures should be constructed of a material which is inert with respect to the sampled material, such as PTFE (e.g., TeflonTM). Alternately, the closure may be separated from the sample by a closure liner that is inert to the sample material such as PTFE sheeting. If soil or sediment samples are being collected, the threads of the container must be wiped clean with a dedicated paper towel or cloth so the cap can be threaded properly.

e. Decontamination of Sample Containers

Sample containers must be laboratory cleaned by the laboratory performing the analysis. The cleaning procedure is dictated by the specific analysis to be performed on the sample. Sample containers must be carefully examined to ensure that all containers appear clean. Do not mistake the preservative as unwanted residue. The bottles should not be field cleaned. If there is any question regarding the integrity of the bottle, then the laboratory must be contacted immediately and the bottle(s) replaced.

f. Sample Bottle Storage and Transport

No matter where the sample bottles are, whether at the laboratory waiting to be packed for shipment or in the field waiting to be filled with sample, care must be taken to avoid contamination. Sample shuttles or coolers, and sample bottles must be stored and transported in clean environments. Sample bottles and clean sampling equipment must never be stored near solvents, gasoline, or other equipment that is a potential source of cross-contamination. When under chain of custody, sample bottles must be secured in locked vehicles, and custody sealed in shuttles or in the presence of authorized personnel. Information which documents that proper storage and transport procedures have been followed must be included in the field notebook and on appropriate field forms.

2.2 Decontamination of Sampling Equipment

Proper decontamination of all re-usable sampling equipment is critical for all sampling episodes. The SOP for Decontamination of Field Equipment and SOPs for method-specific or instrument-specific tasks must also be referred to for guidance for decontamination of various types of equipment.

2.3 Quality Assurance/Quality Control Samples

QA/QC samples are intended to provide control over the proper collection and tracking of environmental measurements, and subsequent review, interpretation and validation of generated analytical data. The SOPs for Collection of Quality Control Samples, for Evaluation and Validation of Data, and for Field Record Keeping and Quality Assurance/Quality Control must be referred to for detailed guidance regarding these respective procedures. SOPs for method-specific or instrument-specific tasks must also be referred to for guidance for QA/QC procedures.

2.4 Sample Preservation Requirements

Certain analytical methodologies for specific analytes require chemical additives in order to stabilize and maintain sample integrity. Generally, this is accomplished under the following two scenarios:

a. Sample bottles are preserved at the laboratory prior to shipment into the field.

b. Preservatives are added in the field immediately after the samples are collected.

Many laboratories provide pre-preserved bottles as a matter of convenience and to help ensure that samples will be preserved immediately upon collection. A problem associated with this method arises if not enough sample could be collected, resulting in too much preservative in the sample. More commonly encountered problems with this method include the possibility of insufficient preservative provided to achieve the desired pH level or the need for additional preservation due to chemical reactions caused by the addition of sample liquids to pre-preserved bottles. The use of pre-preserved bottles is acceptable; however, field sampling teams must always be prepared to add additional preservatives to samples if the aforementioned situations occur. Furthermore, care must be exercised not to overfill sample bottles containing preservatives to prevent the sample and preservative from spilling and therefore diluting the preservative (i.e., not having enough preservative for the volume of sample).

When samples are preserved after collection, special care must be taken. The transportation and handling of concentrated acids in the field requires additional preparation and adherence to appropriate preservation procedures. All preservation acids used in the field should be trace-metal or higher-grade.

2.5 Sample Handling

After the proper sample bottles have been received under chain-of-custody, properly decontaminated equipment has been used to collect the sample, and appropriate preservatives have been added to maintain sample integrity, the final step for the field personnel is checking the sample bottles prior to proper packing and delivery of the samples to the laboratory.

All samples should be organized and the labels checked for accuracy. The caps should be checked for tightness and any 40-ml volatile organic compound (VOC) bottles must be checked for bubbles. Each sample bottle must be placed in an individual "zip-lock" bag to protect the label, and placed on ice. The bottles must be carefully packed to prevent breakage during transport. When several bottles have been collected for an individual sample, they should not be placed adjacent to each other in the cooler to prevent possible breakage of all bottles for a given sample. If there are any samples which are known or suspected to be highly

contaminated, these should be placed in an individual cooler under separate chain-of-custody to prevent possible cross contamination. Sufficient ice (wet or blue packs) should be placed in the cooler to maintain the temperature at 4 degrees Celsius (°C) until delivery at the laboratory. Consult the work plan to determine if a particular ice is specified as the preservation for transportation (e.g., the United States Environmental Protection Agency does not like the use of blue packs because they claim that the samples will not hold at 4°C). If additional coolers are required, then they should be purchased. The chain-of-custody form should be properly completed, placed in a "zip-lock" bag, and placed in the cooler. One copy must be maintained for the project files. The cooler should be sealed with packing tape and a custody seal. The custody seal number should be noted in the field book. Samples collected from Monday through Friday will be delivered to the laboratory within 24 hours of collection. If Saturday delivery is not available, samples collected on Friday must be delivered by Monday morning. Check the work plan to determine if certain analytes require a shorter delivery time. If overnight mail is utilized, then the shipping bill must be maintained for the files and the laboratory must be called the following day to confirm receipt.

3.0 EQUIPMENT AND MATERIALS

3.1 General equipment and materials may include, but not necessarily be limited to, the following:

a. Sample bottles of proper size and type with labels.

b. Cooler with ice (wet or blue pack).

c. Field notebook, appropriate field form(s), chain-of-custody form(s), custody seals.

d. Black pen and indelible marker.

e. Packing tape, "bubble wrap," and "zip-lock" bags.

f. Overnight (express) mail forms and laboratory address.

g. Health and safety plan (HASP).

h. Work plan/scope of work.

i. Pertinent SOPs for specified tasks and their respective equipment and materials.

3.2 Preservatives for specific samples/analytes as specified by the laboratory. Preservatives must be stored in secure, spillproof glass containers with their content, concentration, and date of preparation and expiration clearly labeled.

3.3 Miscellaneous equipment and materials including, but not necessarily limited to, the following:

a. Graduated pipettes.

b. Pipette bulbs.

c. Litmus paper.

d. Glass stirring rods.

e. Protective goggles.

f. Disposable gloves.

g. Lab apron.

h. First aid kit.

i. Portable eye wash station.

j. Water supply for immediate flushing of spillage, if appropriate.

k. Shovel and container for immediate containerization of spillage-impacted soils, if appropriate.

4.0 PROCEDURE

4.1 Examine all bottles and verify that they are clean and of the proper type, number, and volume for the sampling to be conducted.

4.2 Label bottles carefully and clearly with project name and number, site location, sample identification, date, time, and the sampler's initials using an indelible marker.

4.3 Collect samples in the proper manner (refer to specific sampling SOPs).

4.4 Conduct preservation activities as required after each sample has been collected. Field preservation must be done immediately and must not be done later than 30 minutes after sample collection.

4.5 Conduct QC sampling, as required.

4.6 Seal each container carefully and place in an individual "zip lock" bag.

4.7 Organize and carefully pack all samples in the cooler immediately after collection (e.g., bubble wrap). Insulate samples so that breakage will not occur.

4.8 Complete and place the chain-of-custody form in the cooler after all samples have been collected. Maintain one copy for the project file. If the cooler is to be transferred several times prior to shipment or delivery to the laboratory, it may be easier to tape the chain-of-custody to the exterior of the sealed cooler. When exceptionally hazardous samples are known or suspected to be present, this should be identified on the chain-of-custody as a courtesy to the laboratory personnel.

4.9 Add additional ice as necessary to ensure that it will last until receipt by the laboratory.

4.10 Seal the cooler with packing tape and a custody seal. Record the number of the custody seal in the field notebook and on the field form. If there are any exceptionally hazardous samples, then shipping regulations should be examined to ensure that the sample containers and coolers are in compliance and properly labeled.

4.11 Samples collected from Monday through Friday will be delivered to the laboratory within 24 hours of collection. If Saturday delivery is not available, samples collected on Friday must be delivered by Monday morning. Check the work plan to determine if certain analytes require a shorter delivery time.

4.12 Maintain the shipping bill for the project files if overnight mail is utilized and call the laboratory the following day to confirm receipt.

END OF PROCEDURE

Chain of Custody

ROUX CHAIN OF CUSTODY

№ 11332 Y

ROUX ASSOCIATES, INC.
Environmental Consulting & Management
209 SHAFTER STREET
ISLANDIA, NEW YORK 11749-5074
(631) 232-2600 FAX: (631) 232-9898

ANALYSES

PAGE OF

PROJECT NAME | PROJECT NUMBER

PROJECT LOCATION

PROJECT MANAGER | SAMPLER(S)

SAMPLE DESIGNATION / LOCATION	DATE COLLECTED	TIME COLLECTED		SAMPLE MATRIX						TOTAL BOTTLES	NOTES

RELINQUISHED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N	RECEIVED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N
RELINQUISHED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N	RECEIVED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N

DELIVERY METHOD

ANALYTICAL LABORATORY

COMMENTS

CHAINOF CDR 12AUG98

APPENDIX B

Quality Assurance Project Plan

October 9, 2013

QUALITY ASSURANCE PROJECT PLAN

Post Road Corridor – White Plains
77 West Post Road
City of White Plains
County of Westchester, New York

Prepared for:

POST MAPLE 77, LLC
2309 Frederick Douglas Boulevard
New York, New York 10027-3612

ROUX ASSOCIATES, INC.

Environmental Consulting & Management

and REMEDIAL ENGINEERING, P.C.

209 Shafter Street, Islandia, New York 11749 ♦ 631-232-2600

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1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) has been prepared to describe the measures that will be taken to ensure that the data generated during performance of the Remedial Investigation (RI) at 77 West Post Road located in White Plains, New York (Site) are of quality sufficient to meet project-specific data quality objectives (DQOs). The QAPP was prepared in accordance with the guidance provided in New York State Department of Environmental Conservation (NYSDEC) Technical Guidance DER-10 (Technical Guidance for Site Investigation and Remediation), the Brownfield Cleanup Program Guide and the United States Environmental Protection Agency's (USEPA's) Guidance for the Data Quality Objectives Process (EPA QA/G-4).

2.0 BACKGROUND, OBJECTIVES, AND SCOPE

In order to achieve project objectives, Roux Associates has developed a scope of work that includes sampling of soil and groundwater. Soil vapor sampling is not proposed at this time, but may be undertaken if indicated by investigation results. A brief overview of each element of the RI scope of work is provided below. RI sampling locations are shown in Plate 3 of the RI Work Plan.

2.1 Soil

Samples of soil will be collected and analyzed at a minimum of 65 locations for the following analytes:

- Target Compound List (TCL) volatile organic compounds (VOCs) with a library search (VOCs+10) using United States Environmental Protection Agency (USEPA) Method 8260;
- TCL semivolatile organic compounds (SVOCs) with a library search (SVOCs+20) using USEPA Method 8270;
- Target Analyte List (TAL) metals using USEPA Method 6010; and
- A portion (25%) of all soil samples collected will also be analyzed for TCL pesticides (USEPA Method 8081) and TCL polychlorinated biphenyls (PCBs) (USEPA Method 8082).

2.2 Groundwater

Groundwater samples will be collected from three (3) existing monitoring wells (if they are determined to be in useable condition) and 20 new monitoring wells installed by Roux Associates during the investigation. After gauging for potential separate-phase petroleum product, each well will be sampled for the following analytes:

- Target Compound List (TCL) volatile organic compounds (VOCs) with a library search (VOCs+10) using United States Environmental Protection Agency (USEPA) Method 8260;
- TCL semivolatile organic compounds (SVOCs) with a library search (SVOCs+20) using USEPA Method 8270;
- Target Analyte List (TAL) metals using USEPA Method 6010; and
- TCL pesticides (USEPA Method 8081) and TCL polychlorinated biphenyls (PCBs) (USEPA Method 8082).

Field parameters, including temperature, pH, conductivity, redox potential, dissolved oxygen, and turbidity will also be measured.

2.3 Soil Vapor Samples

As discussed above, soil vapor sampling is not proposed at this time. The need for and potential location of soil vapor sampling will be evaluated based on the results of the RI VOC data. Should soil vapor sampling be conducted at the Site, sampling location and depths will be selected in consultation with the NYSDEC and will follow NYSDOH protocols.

3.0 PROJECT ORGANIZATION

The overall management structure and a general summary of the responsibilities of project team members are presented below.

Project Principal

Joseph Duminuco, of Roux Associates/Remedial Engineering will serve as Project Principal. The Project Principal is responsible for defining project objectives and bears ultimate responsibility for the successful completion of the investigation.

Project Manager

Richard Maxwell, of Roux Associates will serve as Project Manager. This individual will provide overall management for the implementation of the scope of work and will coordinate all field activities. The Project Manager is also responsible for data review/interpretation and report preparation. Activities of the Project Manager are supported by the Project Quality Assurance Coordinator.

Field Team Leader

A Roux Associates scientist or engineer will serve as the Field Team Leader. The Field Team Leader bears the responsibility for the successful execution of the field program, as scoped in the RI Work Plan and the Field Sampling Plan (FSP). The Field Team Leader will direct the activities of all technical staff in the field as well all subcontractors. The Field Team Leader will also assist in the interpretation of data and in report preparation. The Field Team Leader reports to the Project Manager.

Laboratory Project Manager

An analytical laboratory has not been selected to analyze the field samples for this project. Once selected information for the analytical laboratory will be forwarded to NYSDEC. The analytical laboratory will be responsible for sample container preparation, sample custody in the laboratory, and completion of the required analysis through oversight of the laboratory staff. The Laboratory Project Manager will ensure that quality assurance procedures are followed and that an acceptable laboratory report is prepared and submitted. The Laboratory Project Manager reports to the Field Team Leader.

Quality Assurance Officer

Wai Kwan, Ph.D. of Roux Associates will serve as the Quality Assurance Officer (QAO) for this project. The QAO is responsible for conducting reviews, inspections, and audits to ensure that the data collection is conducted in accordance with the FSP and QAPP. The QAO's responsibilities range from ensuring effective field equipment decontamination procedures and proper sample collection to the review of all laboratory analytical data for completeness and usefulness. The QAO reports to the Project Manager and makes independent recommendations to the Field Team Leader.

4.0 SAMPLING PROCEDURES

Detailed discussions of sampling, decontamination, and sample handling procedures are provided in the FSP (Appendix A of the RI Work Plan).

5.0 QUALITY ASSURANCE/QUALITY CONTROL

The primary intended use for the RI data is to characterize Site conditions and determine if remediation needs to be undertaken at the Site. The primary DQO of the soil, groundwater, and soil vapor sampling programs, therefore, is that data be accurate and precise, and hence representative of the actual Site conditions. Accuracy refers to the ability of the laboratory to obtain a true value (i.e., compared to a standard) and is assessed through the use of laboratory quality control (QC) samples, including laboratory control samples and matrix spike samples, as well as through the use of surrogates, which are compounds not typically found in the environment that are injected into the samples prior to analysis. Precision refers to the ability to replicate a value, and is assessed through both field and laboratory duplicate samples.

Sensitivity is also a critical issue in generating representative data. Laboratory equipment must be of sufficient sensitivity to detect target compounds and analytes at levels below NYSDEC standards and guidelines whenever possible. Equipment sensitivity can be decreased by field or laboratory contamination of samples, and by sample matrix effects. Assessment of instrument sensitivity is performed through the analysis of reagent blanks, near-detection-limit standards, and response factors. Potential field and/or laboratory contamination is assessed through use of trip blanks, method blanks, and equipment rinse blanks (also called “field blanks”).

Table B-1 lists the field and laboratory QC samples that will be analyzed to assess data accuracy and precision, as well as to determine if equipment sensitivity has been compromised.

All RI “assessment” analyses (i.e., TCL VOCs, SVOCs, pesticides/PCBs; and TAL metals) will be performed in accordance with the NYSDEC Analytical Services Protocol (ASP), using USEPA SW-846 methods. The laboratory selected to analyze the field samples collected during the RI shall maintain a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) Contract Laboratory Protocol (CLP) certification for each of the “assessment” analyses listed in Section 2.0.

All laboratory data are to be reported in NYSDEC ASP Category B deliverables and will be delivered to NYSDEC in electronic data deliverable (EDD) format as described on NYSDEC’s website (http://www.dec.ny.gov/chemical/62440.html). A Data Usability Report will be prepared

meeting the requirements in Section 2.2(a)1.ii and Appendix 2B of DER-10 for all data packages generated for the RI.

Table B-1. Field and Laboratory QC Summary

QC Check Type	Minimum Frequency	Use
Field QC		
Duplicate	1 per matrix per 20 samples or SDG*	Precision
Trip Blank	1 per VOC cooler	Sensitivity
Equipment Rinse Blank	1 per day	Sensitivity
Laboratory QC		
Laboratory Control Sample	1 per matrix per SDG	Accuracy
Matrix Spike/Matrix Spike Duplicate/Matrix Duplicate*	1 per matrix per SDG	Accuracy/Precision
Surrogate Spike	All organics samples	Accuracy
Laboratory Duplicate	1 per matrix per SDG	Precision
Method Blank	1 per matrix per SDG	Sensitivity

Notes:

* SDG - Sample Delivery Group - Assumes a single extraction or preparation

** Provided to lab by field sampling personnel

APPENDIX C

Site Health and Safety Plan

October 9, 2013

SITE SPECIFIC
HEALTH AND SAFETY PLAN

Post Road Corridor – White Plains
77 West Post Road
City of White Plains
County of Westchester, New York

Prepared for:

POST MAPLE 77, LLC
2309 Frederick Douglas Boulevard
New York, New York 10027-3612

ROUX ASSOCIATES, INC.

Environmental Consulting & Management

and REMEDIAL ENGINEERING, P.C.

209 Shafter Street, Islandia, New York 11749 ♦ 631-232-2600

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APPROVALS

By their signature, the undersigned certify that this Health and Safety Plan (HASP) is approved and will be utilized at the project site located at 77 West Post Road, White Plains, New York.

Ray Fitzpatrick Office Health and Safety Manager Roux Associates, Inc.	Date
Joseph Duminuco Project Principal Roux Associates, Inc.	Date
Richard Maxwell Project Manager/SHSO Roux Associates, Inc.	Date

1.0 INTRODUCTION

This Site-specific Health and Safety Plan (HASP) has been prepared in accordance with 29 CFR 1910.120 Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) and Roux Associates, Inc. (Roux Associates) Standard Operating Procedures (SOPs). It addresses all activities described below that are associated with the property located at 77 West Post Road, White Plains, New York (Site) (Figure 1). The HASP will be implemented by the designated Site Health and Safety Officer (SSO) during work at the Site. The HASP attempts to identify all potential hazards at the Site; however, Site conditions are dynamic and new hazards may appear constantly. Personnel must remain alert to existing and potential hazards as Site conditions change and protect themselves accordingly.

Compliance with this HASP is required of all persons and subcontractors who perform fieldwork or enter the Site. The contents of this HASP may change or undergo revision based upon additional information made available to health and safety personnel, monitoring results, or changes in the technical scope of work. Any changes proposed must be reviewed and approved by the Office Health and Safety Manager (OHSM), with the SSO implementing the changes to the HASP.

Prior to performing work each task should be evaluated to determine the appropriate procedures that need to be followed.

1.1 Scope of Work

In general, the tasks will include the following:

- Implementation of Remedial Investigation activities consisting of monitoring well installation, groundwater sampling, and soil borings/samples.

Any change in scope will require a revision of this HASP to address any new hazards.

2.0 EMERGENCY INFORMATION AND NOTIFICATION

Multiple emergency services may be obtained by calling 911. More specific numbers for local services are listed below.

Emergency Medical Service 911

Police: White Plains Police Department 911

Fire: 911

Hospital: White Plains Hospital 914-681-0600

National Response Center 800-424-8802

Poison Control Center 800-222-1222

CHEMTREC 800-262-8200

Fire: White Plains Volunteer Fire Department 911

Center for Disease Control 800-311-3435

USEPA (Region II) 212-637-5000

NYSDEC Emergency Spill Response 800-457-7362

HealthSource Medical Services of Islandia 631-435-0110
(For non-emergency medical services)

Directions and maps to the White Plains Hospital are provided in Figure 3.

2.1 Notification

As soon as first aid and/or emergency response needs have been met, the following parties are to be contacted by telephone: (Direct contact, no phone messages).

		Office:	**Cell:**
1. Project Manager/SHSO:	Richard Maxwell	631-232-2600	631-921-9531
2. Project Principal:	Joseph Duminuco	631-232-2600	631-921-6279
3. Office Health and Safety Manager:	Ray Fitzpatrick	631-232-2600	631-484-1168
4. Office Manager:	Brian Morrissey	631-232-2600	631-921-6355

Accident reporting guidelines are outlined in section 13.5 of this HASP.

3.0 HEALTH AND SAFETY PERSONNEL

This section briefly describes all Site personnel and their health and safety responsibilities for the RI work to be implemented at the Site. All personnel are responsible for ensuring compliance with the HASP.

Project Principal (PP) – Joseph Duminuco – Roux Associates

- Has the overall responsibility for the health and safety of Site personnel.
- Ensures that adequate resources are provided to the field health and safety staff to carry out their responsibilities as outlined below.

Office Health and Safety Manager (OHSM) – Ray Fitzpatrick – Roux Associates

- Implements the HASP.
- Performs or oversees site-specific training and approves revised or new safety protocols or field operations.
- Coordinates revisions of this HASP with Project Principal.
- Responsible for the development of new task safety protocols and procedures and resolution of any outstanding safety issues which may arise during the performance of site work.
- Review and approve all health and safety training and medical surveillance records for personnel and subcontractors.

Site Safety and Health Officer (SSO) – Richard Maxwell – Roux Associates

- Directs and coordinates health and safety monitoring activities.
- Ensures that field teams utilize proper personal protective equipment.
- Conducts initial onsite specific training prior to personnel and/or subcontractors commencing work.
- Conducts and documents daily pre-job safety briefings.
- Ensures that field team members comply with this HASP.
- Completes and maintains all accident investigation and reporting forms.
- Notifies PP, PM and OHSM of all accidents/incidents.

- Notifies PP of daily field operations and work progress, who will then communicate at the end of the day to the designated representative the following:
    1. End of day tasks completed
    2. Next day's planned activities
    3. Third party issues
    4. Change of Plans – approvals
- Determines upgrade or downgrade of personal protective equipment (PPE) based on Site conditions and/or real time monitoring results.
- Ensures that monitoring instruments are calibrated daily or as manufacturers suggested instructions determine.
- Submits and maintains health and safety field log books, daily safety logs, training logs, air monitoring result reports, weekly safety report.

Field Personnel and Subcontractors

- Report any unsafe or potentially hazardous conditions to the SSO.
- Maintain knowledge of the information, instructions, and emergency response actions contained in the HASP.
- Comply with rules, regulations, and procedures as set forth in this HASP and any revisions, which are instituted.
- Prevent admittance to work Site by unauthorized personnel.

In the case that there is a change in any of the above personnel, all onsite personnel will be notified of the change. The new responsible party shall review and sign that they have been given a documented verbal full HASP review by Roux Associates and are aware of their responsibilities as outlined in this HASP.

4.0 SITE LOCATION, DESCRIPTION, AND HISTORY

Descriptions of the Site and surrounding property usage are included in the following sections. The location of the Site is presented in Figure 1.

4.1 Property Location and Description

The Site consists of ten separate parcels (identified as Parcels A through D and Parcels F through K), nine of which are located between West Post Road and Maple Avenue (Figure 2). One additional parcel (Parcel K) is located at the intersection of West Post Road and South Lexington Avenue.

- 99-103 W. Post Road (Parcel A)
  Parcel A is 0.21 acres in area and is currently vacant without improvements.

- 5 Rathbun Avenue (Parcel B)
  Parcel B is 0.09 acres in area and is currently vacant without improvements.

- 3 Brady Place (Parcel C)
  The Parcel is 0.06 acres in area and is currently vacant without improvements.

- 95 West Post Road (Parcel D)
  The Parcel is 0.09 acres in area and is currently vacant. The Parcel is improved by one abandoned building previously utilized as an automobile sales office; an associated parking area is located south of the building.

- 79-83 West Post Road (Parcel F)
  The Parcel is 0.38 acres in area and is currently vacant. The Parcel is improved by an asphalt paved parking lot; no other improvements exist.

- 77 West Post Road (Parcel G)
  The Parcel is 0.88 acres in area, is currently vacant, and is improved by two abandoned single story buildings formerly utilized for automobile repairs and sales from the 1970's through 2008. Available documentation indicated that the Parcel was utilized for mixed commercial and residential uses up to the 1970's.

- 55 West Post Road (Parcel H)
  The Parcel is 0.91 acres in area and is currently vacant. The Parcel is improved by one single-story building with a basement that was formerly utilized for automobile repairs and sales from the 1950's through 2008.

- 35 and 41-45 West Post Road (Parcels I and J)
  The Parcel consists of two lots 35 West Post Road (0.28 acres in area) which is currently vacant and improved with one 14,400 square foot, two story abandoned building primarily used for automobile repair but also used as a showroom/office building and 41-45 West Post Road (0.28 acres in area) which is improved by an asphalt paved parking lot that

provided parking space for 35 West Post Road; therefore, the two lots are considered and referred to as one Parcel.

- 190-192 South Lexington Avenue (Parcel K)

  The Parcel is approximately 0.47 acres in area, is currently vacant, and is undeveloped. The Parcel is comprised of grass and small trees along a perimeter fence located adjacent to West Post Road and South Lexington Avenue.

5.0 WASTE DESCRIPTION/CHARACTERIZATION

5.1 General

The following information is presented in order to identify the types of materials that may be encountered at the Site. The detailed information on these materials was obtained from:

- Sax's Dangerous Properties of Industrial Materials – Lewis Eight Edition
- Chemical Hazards of the Workplace – Proctor/Hughes
- Condensed Chemical Dictionary – Hawley
- Rapid Guide to Hazardous Chemical in the Workplace – Lewis 1990
- NIOSH Pocket Guide to Chemical Hazards – 2005
- ACGIH TLV Values and Biological Exposure Indices
- OSHA 29 CFR 1910.1000

5.2 Chemical Data Sheets

Several chemicals that may potentially be present in soils and groundwater at the Site, based on previous soil, soil vapor and groundwater sampling results and historic operations conducted at the Site that have been identified. The Summary of Toxicological Data is found in Table 1 and is provided for review of chemicals that may be encountered. The Summary of Toxicological Data Sheets provides information such as the chemicals characteristics, health hazards, protection, and exposure limits.

5.2.1 Contaminants of Concern

Soil and groundwater contaminants that may be encountered during drilling and sampling activities include both organic and inorganic compounds. Prior investigations at the site have indicated detection of Petroleum-related and Chlorinated Volatile Organic Compounds (CVOCs) in soil and groundwater. The toxicological, physical, and chemical properties of potential contaminants are presented in Table 1.

6.0 HAZARD ASSESSMENT

The potential to encounter chemical hazards is dependent upon the work activity performed (intrusive versus non-intrusive) and the duration and location of the work activity. Such hazards could include inhalation and/or skin contact with chemicals/gases that could cause: dermatitis, skin burns, being overcome by vapors or asphyxiation.

Physical hazards that may be encountered during Site work include heat and cold stress, being crushed, head injuries, punctures, cuts, falls, electrocution, bruises and other physical hazards due to motor vehicle operation, equipment use and power tools

Biological hazards may exist during Site activities. These hazards include exposure to insect bites/stings, animals and animal wastes, mold and bloodborne pathogens.

Prior to the beginning of each new phase of work, a job safety analysis (JSA) (Appendix A) will be prepared by the SSO with assistance from the OHSM. The analysis will address the hazards for each activity performed in the phase and will present the procedures and safeguards necessary to eliminate the hazards or reduce the risk. JSAs for each task will be reviewed with onsite personnel at each morning tailgate meeting and as tasks change throughout the day.

6.1 Chemical Hazards

The potential for personnel and subcontractors to come in contact with chemical hazards may occur during the following tasks:

- Installation and sampling of soil borings, and
- Installation, gauging, bailing/purging, and sampling of monitoring wells.

For chronic and acute toxicity data, refer to Summary of Toxicological Data Sheets in Table 1 for further details on compound characteristics.

6.1.1 Exposure Pathways

Exposure to these compounds during ongoing activities may occur through inhalation of contaminated dust particles, inhalation of VOCs and SVOCs, dermal absorption, and accidental ingestion of the contaminant by either direct or indirect cross-contamination activities.

6.1.2 Operational Action Levels

A decision-making protocol for an upgrade in levels of protection and/or withdrawal of personnel from an area based on exposure levels is outlined in Table 2.

6.1.3 Additional Precautions

Dermal absorption or skin contact with chemical compounds is possible during intrusive activities and while gauging, purging or sampling a monitoring well at the Site. The use of PPE in accordance with Section 8.2 and strict adherence to proper decontamination procedures should significantly reduce the risk of skin contact.

The potential for accidental ingestion of potentially hazardous chemicals is expected to be remote, when good hygiene practices are used.

6.2 Physical Hazards

A variety of physical hazards may be present during Site activities. These hazards are similar to those associated with any construction-type project and include equipment operation and hazardous walking and working surfaces. The referenced hazards are not unique and are generally familiar to most hazardous waste site workers at construction sites. Task-specific safety requirements for each phase will be covered during safety briefings.

6.2.1 Heat Stress

Heat stress is a significant potential hazard, associated with the use of protective equipment in a hot weather environment. The human body is designed to function at a certain internal temperature. When metabolism or external sources (fire or hot summer day) cause the body temperature to rise, the body seeks to protect itself by triggering cooling mechanisms. The SSO will monitor the air temperature (as described later in this section) to determine potential adverse effects the weather can cause onsite personnel. Excess heat is dissipated by two means:

- Changes in blood flow to dissipate heat by convection, which can be seen as "flushing" or reddening of the skin in extreme cases.
- Perspiration, the release of water through skin and sweat glands. While working in hot environments, evaporation of perspiration is the primary cooling mechanism.

Protective clothing worn to guard against chemical contact effectively stops the evaporation of perspiration. Thus the use of protective clothing increases heat stress problems.

The major disorders due to heat stress are heat cramps, heat exhaustion, and heat stroke. Heat cramps are painful spasms, which occur in the skeletal muscles of workers who sweat profusely in the heat and drink large quantities of water, but fail to replace the bodies lost salts or electrolytes. Drinking water while continuing to lose salt tends to dilute the body's extracellular fluids. Soon water seeps by osmosis into active muscles and causes pain. Muscles fatigued from work are usually most susceptible to cramps.

Extreme weakness or fatigue, dizziness, nausea, and headache characterize heat exhaustion. In serious cases, a person may vomit or lose consciousness. The skin is clammy and moist, complexion pale or flushed, and body temperature normal or slightly higher than normal. Treatment is rest in a cool place and replacement of body water lost by perspiration. Mild cases may recover spontaneously with this treatment; severe cases may require care for several days. There are no permanent effects. As first aid treatment, the person shall be moved to a cool place. Body heat should be reduced artificially, but not too rapidly, by soaking the person's clothes in water and fanning them.

Heat stroke is considered a medical emergency and is caused by the breakdown of the body's regulating mechanisms. The skin is very dry and hot with red mottled or bluish appearance. Unconsciousness, mental confusion, or convulsions may occur. Without quick and adequate treatment, the result can be death or permanent brain damage.

Steps that can be taken to reduce heat stress are:

- Acclimate the body. Allow a period of adjustment to make further heat exposure endurable.
- Drink more liquids to replace the body water lost during sweating.
- Rest is necessary and should be conducted under the direction of the SSO.
- Wear personal cooling devices. These are two basic designs; units with pockets for holding frozen packets and units that circulate fluid from a reservoir through tubes to different parts of the body. Both designs can be in the form of a vest, jacket, or coverall. Some circulating units also have a cap for cooling the head.

Heat stress is a significant hazard associated with using protective equipment in hot weather environments. Local weather conditions may produce conditions, which will require restricted work schedules in order to protect employees.

Appendix B contains procedures for heat stress; these will be used as a guideline and to provide additional information.

6.2.2 Cold Stress

Cold temperatures are a significant potential hazard. Examples of cold temperature hazards are frostbite and hypothermia.

Frostbite is the most common injury resulting from exposure to cold. The extremities of the body are most often affected. The signs of frostbite are:

- The skin turns white or grayish-yellow.
- Pain is sometimes felt early but subsides later. Often there is no pain.
- The affected parts feel intensely cold and numb.

Hypothermia is characterized by shivering, numbness, drowsiness, muscular weakness, and a low internal body temperature when the body feels extremely warm. This can lead to unconsciousness and death. With both frostbite and hypothermia, the affected areas need to be warmed quickly. Immersion in warm water is an effective means of warming the affected areas quickly. In such cases, medical assistance will be sought.

To prevent these effects from occurring, persons working in the cold shall wear adequate clothing and reduce the time spent in the cold area. The field SSO is responsible for determining appropriate time personnel shall spend in adverse weather conditions and will monitor this.

Appendix B, which contains the Heat and Cold Stress Guidelines, provides additional information.

6.3 Biological Hazards

The biological hazards, which have the potential to cause adverse health effects, are from exposure to domestic flies, mosquitoes, insects, animals and animal wastes, mold and bloodborne pathogens.

6.3.1 Insect Stings

Stings from insects are often painful, cause swelling and can be fatal if a severe allergic reaction such as anaphylactic shock occurs. If a sting occurs, the stinger should be scraped out of the skin, opposite of the sting direction. The area should be washed with soap and water followed by application of an ice pack.

If the victim has a history of allergic reaction, he shall be taken to the nearest medical facility. If the victim has medication to reverse the effects of the sting, it should be taken immediately.

If the victim experiences a severe reaction, a constricting band should be placed between the sting and the heart. The bitten area should be kept below the heart if possible. A physician shall be contacted immediately for further instructions.

6.3.2 Animals and Animal Wastes

Due to the site currently being vacant, there lies the potential for various wildlife at the site, including, but not limited to, pigeons, bats, mice, rats, squirrels, raccoons, and feral cats. Certain animals can represent significant sources (vectors) of disease transmission. Precautions to avoid or minimize potential contact with (biting) animals (such as some of the above listed) or animal waste and/or deceased animals should be considered prior to all field activities. Rats, squirrels, raccoons, feral cats, and other wild animals can inflict painful bites which can also cause disease (as in the case of rabid animals). Site personnel should avoid contact with any of the above.

If contact occurs, be sure to clean the area thoroughly with soap and water as soon as possible. If a bite occurs, the area shall be cleaned thoroughly immediately with soap and water and medical attention shall be sought.

6.3.3 Bloodborne Pathogens

The majority of the occupational tasks onsite will not involve a significant risk of exposure to blood, blood components, or body fluids. The highest risk of acquiring any bloodborne pathogen for onsite employees will be following an injury. When administering first aid care, there are potential hazards associated with bloodborne pathogens that cause diseases such as Human Immunodeficiency Virus (HIV), Hepatitis B (HBV), Hepatitis A (HAV), Hepatitis C (HCV), or the

Herpes Simplex Virus (HSV). An employee who has not received the appropriate certification should never execute first aid and/or CPR.

In order to minimize any potential pathogen exposure, all employees should use the hand washing facilities on a regular basis. Additionally, the following universal precautions shall be followed to prevent further potential risk:

- Direct skin or mucous membrane contact with blood shall be avoided.
- Open skin cuts or sores shall be covered to prevent contamination from infectious agents.
- Body parts shall be washed immediately after contact with blood or body fluids that might contain blood, even when gloves or other barriers have been used.
- Gloves and disposable materials used to clean spilled blood shall be properly disposed of in an approved hazardous waste container.
- First aid responders shall wear latex or thin mil nitrile gloves when performing any procedure risking contact with blood or body substances.
- Safety glasses with attached side shields will be worn to protect the eyes from splashing or aerosolization of body fluids.
- A CPR mask will be worn when performing CPR to avoid mouth-to-mouth contact.
- Appropriate work gloves will be worn to minimize the risk of injury to the hands and fingers when working on all equipment with sharp or rough edges.
- Never pick up broken glass or possible contaminated material with your unprotected hands.
- Never handle wildlife (living or deceased) encountered onsite.

6.4 Hazard Assessment

Task	Hazards	Risk of Exposure
Installation, gauging, purging and sampling of Monitoring Wells	Inhalation/Skin Contact	Moderate/High
	Heat Stress/Cold Stress	Moderate
	Physical Injury	Moderate
Installation and sampling of Soil Borings	Inhalation/Skin Contact	Moderate/High
	Heat Stress/Cold Stress	Moderate
	Physical Injury	Moderate

7.0 TRAINING

7.1 General Health and Safety Training

In accordance with Roux Associates' corporate policies, and pursuant to 29 CFR 1910.120, hazardous waste site workers shall, at the time of the job assignment, have received a minimum of 40 hours of initial health and safety training for hazardous waste site operations. As a minimum, the training shall have consisted of instruction in the topics outlined in the above reference. Personnel who have not met the requirements for initial training will not be allowed to work in any Site activities in which they may be exposed to hazards (chemical or physical).

Completion of a 40-hour Health and Safety Training Course for Hazardous Waste Operations or an approved equivalent will fulfill the requirements of this section.

Roux Associates' SSO has the responsibility of ensuring that personnel assigned to this project comply with these requirements.

7.2 Annual Eight-Hour Refresher Training

Current, annual 8-hour refresher training will be required of all hazardous waste site field personnel in order to maintain their qualifications for fieldwork. The following topics will be reviewed; toxicology, respiratory protection, medical surveillance, decontamination procedures, and personal protective clothing. In addition, topics deemed necessary by Roux Associates' Health and Safety Director may be added to the above list.

7.3 Site-Specific Training

Site personnel will receive documented training that will specifically address the activities, procedures, monitoring and equipment for Site operations. It will include Site and facility layout, hazards, first aid equipment locations and emergency services at the Site, and will highlight all provisions contained within this HASP. This training will also allow field workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity.

7.4 Onsite Safety Meetings

Daily documented pre-work safety meetings will be presented each morning to discuss the scope-of-work for that day, potential safety concerns and control measures for those identified safety hazards as per the JSAs for the upcoming activities.

The briefings will also provide a forum to facilitate conformance with safety requirements and to identify performance deficiencies related to safety during daily activities or as a result of safety audits by Roux Associates or other involved parties.

7.5 First Aid and CPR

The SSO will identify those individuals having first aid and CPR training in order to ensure that emergency medical treatment is available during field activities. The training will be consistent with the requirements of the American Red Cross Association and, as applicable, the American Heart Association. Certification and appropriate training documentation will be kept with the Site personnel records.

7.6 Additional Training / Procedures

The OHSM may require additional or specialized training throughout the project. Such training shall be in the safe operation of heavy or power tool equipment or hazard communication training or other topic deemed Site appropriate.

8.0 MEDICAL SURVEILLANCE PROCEDURES

8.1 General

A Medical Surveillance Program has been established as part of this plan and is included in Appendix C. Roux Associates and subcontractor personnel performing field work at the Site are required to have passed a complete medical surveillance examination in accordance with 29 CFR 1910.120(f). A physician's medical release for work will be confirmed by the SSO before an employee can begin Site activities. Such examinations shall include a statement as to the worker's present health status, the ability to work in a hazardous environment (including any required PPE, which may be used during temperature extremes), and the worker's ability to wear respiratory protection.

In the event that personal medical information is needed for emergency treatment, information will be made available to the treating health care professional through Roux Associates' Human Resources Department and the OHSM.

9.0 SITE CONTROL, PERSONAL PROTECTIVE EQUIPMENT, AND COMMUNICATIONS

A modified Site control approach may be utilized since activities will be limited to site inspection and groundwater sampling. If additional work is necessary, the following four-zone approach will be used in order to prevent the spread of contamination from the disturbed areas onsite.

9.1 Site Control

If remedial activities are necessary, a four-zone approach will be employed. The four zones include: the Exclusion Zone (EZ), the Contamination Reduction Zone (CRZ), Contamination Reduction Corridor (CRC) and the Support Zone (SZ). A stepped remedial approach will be managed and the zones modified as the work progresses. Each of the areas will be defined through the use of control barricades and/or construction/hazard fencing. A clearly marked delineation between the SZ and the remaining three zones, the CRZ, CRC and EZ, will be maintained. The preferred method will utilize high visibility orange fencing and hand-driven metal posts, or orange cones. Signage will be posted to further identify and delineate these areas.

9.1.1 Support Zone

The Support Zone (SZ) is an uncontaminated area that will be the field support area for the Site operations. The SZ will contain the temporary project trailers and provides for field team communications and staging for emergency response. Appropriate sanitary facilities and safety equipment will be located in this zone. Potentially contaminated personnel or materials are not allowed in this zone. The only exception will be appropriately packaged/decontaminated and labeled samples. Meteorological conditions will be observed and noted from this zone, as well as those factors pertinent to heat and cold stress.

9.1.2 Contamination Reduction Zone

A Contamination Reduction Zone (CRZ) is established between the exclusion zone and the support zone. The CRZ contains the Contamination Reduction Corridor (CRC) and provides an area for decontamination of personnel and equipment. The CRZ will be used for general Site entry and egress in addition to access for heavy equipment and emergency support services. Personnel are not allowed in the CRZ without:

- A buddy (co-worker);
- Appropriate PPE;

- Medical authorization;
- Training certification; and
- A need to be in the zone.

9.1.3 Exclusion Zone

The area where contamination exists is considered to be the Exclusion Zone (EZ). All areas where excavation and handling of contaminated materials take place are considered the EZ. This zone will be clearly delineated by orange high visibility fencing. Safety tape may be used as a secondary delineation within the EZ. The zone delineation markings may be opened in areas for varying lengths of time to accommodate equipment operation or specific construction activities. The SSO may establish more than one EZ where different levels of protection may be employed or where different hazards exist. Personnel are not allowed in the EZ without:

- A buddy (co-worker);
- Appropriate PPE;
- Medical authorization;
- Training certification; and
- A need to be in the zone.

9.2 Personal Protective Equipment

The level of protection worn by field personnel will be enforced by the SSO. Levels of protection for general operations are provided below and are defined in this section. Levels of protection may be upgraded at the discretion of the SSO. All decisions on the level of protection will be based upon a conservative interpretation by the SSO of the information provided by air monitoring results, environmental results and other appropriate information. Any changes in the level of protection shall be recorded in the health and safety field logbook.

9.2.1 Personal Protective Equipment Specifications

The initial level of personal protective equipment is Level D. It is not anticipated that either Level B or Level C protection will be necessary.

The Minimum level of PPE for entry onto the Site is Level D PPE. The following equipment shall be used:

- Work uniform (long pants, sleeved shirt)
- Hard hat
- Steel toe work boots
- Safety glasses with attached side shields
- Boot covers (as needed)
- Hearing protection (as needed)
- High visibility clothing (shirt or vest)

Modified Level D PPE consists of the following:

- Regular Tyvek coveralls (Poly-coated Tyvek as required)
- Outer gloves: cut-resistant, leather, cotton (as required)
- Inner gloves: latex or nitrile (doubled) as required
- Chemical resistant boots over work boots (as required)
- Steel toe work boots
- Hard hat Safety glasses with attached side shields
- Hearing protection as needed

High visibility clothing (shirt or vest). Although not anticipated, any tasks requiring Level B personal protective equipment (PPE) will utilize the following equipment:

- Positive pressure, full facepiece, self-contained breathing apparatus (SCBA) or positive pressure, supplied air respirator with escape SCBA (NIOSH approved)
- Disposable coveralls (Tyvek, Poly-coated Tyvek, or Saranex)
- Gloves, inner: latex or nitrile
- Gloves, outer: cut-resistant
- Chemical resistant boots over the work boots
- Steel toe work boots

- Hard hat
- Hearing protection (as needed)
- Boot cover (as needed)

High visibility clothing (shirt or vest). For tasks requiring Level C PPE, the following equipment may be used in any combination:

- Full-face, air purifying, canister-equipped respirators (NIOSH approved) utilizing Organic Vapor/Acid Gas and P-100 filters (half-face if approved by SSO)
- Disposable coveralls (Tyvek) as required
- Gloves, inner: latex or nitrile as required
- Gloves, outer: cut-resistant
- Chemical resistant boots over the work boots as required
- Steel toe work boots
- Hard hat
- Hearing protection (as needed)
- Safety glasses with attached side shields (if half-mask is utilized)
- Boot covers (as needed)
- High visibility clothing (shirt or vest)

9.2.2 Site Specific Levels of Protection

Levels of protection for the proposed scope of work may be upgraded or downgraded depending on direct-reading instruments or personnel monitoring. The following are the initial levels of protection that shall be used for each planned field activity:

Activity	Initial Level of PPE
Installation, Gauging, Purging and Sampling of Monitoring Wells	D
Installation and sampling of Soil Borings	D

9.3 Communications

If working in level C/B respiratory protection is required, personnel may find that communication becomes a more difficult task and process to accomplish. Distance and space further complicate this. In order to address this problem, electronic instruments, mechanical devices, or hand signals will be used as follows:

Telephones – Mobile telephones will be carried by designated personnel for communication with emergency support services/facilities.

Radios – Two-way radios will be utilized onsite for communications between field personnel in areas where visual contact cannot be maintained and where hand signals cannot be employed.

Hand Signals – This communication method will be employed by members of the field team along with use of the buddy system. Signals become especially important when in the vicinity of heavy moving equipment and when using Level B respiratory equipment. The signals shall become familiar to the entire field team before Site operations commence, and will be reinforced and reviewed during site-specific training.

Signal	**Meaning**
Hand gripping throat	Out of air; can't breathe
Grip partner's wrist	Leave area immediately; no debate
Hands on top of head	Need assistance
Thumbs up	OK; I'm all right; I understand
Thumbs down	No; unable to understand you, I'm not all right

10.0 MONITORING PROCEDURES

10.1 General

Monitoring will be performed as necessary to verify the adequacy of respiratory protection, to aid in Site layout, and to document worker exposure. If real-time breathing zone air monitoring in these areas indicates the presence of potentially hazardous materials in exceedances of the Action Levels for Worker Breathing Zone (Table 2), the OHSM will be contacted and a plan for implementing appropriate control measures will be developed. A documented safety briefing to communicate the new procedures to onsite personnel will be conducted. All monitoring instruments shall be operated by qualified personnel only and will be calibrated daily prior to use or, more often, as necessary. Additional monitoring may be required if exclusion zones are employed for specific site activities. General air monitoring will be performed in accordance with the Community Air Monitoring Plan included in Appendix J during intrusive Site activities.

10.2 Instrumentation

The following monitoring instruments will be available for use during field operations as necessary. There will be a minimum of one of each piece of equipment on the Site at all times during intrusive activities:

- Photoionization Detector (PID) with 10.6 EV probe or Flame Ionization Detector (FID) or equivalent.
- Dust/Particulate Monitor (DM), MIE Miniram, or equivalent.

A PID will be used to monitor VOCs in active work areas during intrusive activities. VOCs shall also be measured upwind of the work areas to determine background concentrations.

A particulate monitor shall be used to measure concentrations of dust and particulate matter.

When deemed necessary, a CGI/O_2/CO (or equivalent) meter shall be used to monitor for combustible gases, oxygen content and/ or carbon monoxide during confined space entry or when operating in areas with poor ventilation as the HSO deems necessary.

Calibration records shall be documented and recorded daily and included in the daily air monitoring report. This report will be specific to work area monitoring. All instruments shall be calibrated before and after each daily use in accordance with manufacturer's procedures.

10.3 Action Levels

Action levels for the upgrading of PPE requirements in the HASP will apply to all Site work during investigation and remediation activities at the Site. Action levels are for known contaminants using direct reading instruments in the Breathing Zone (BZ) for VOCs and particulates, and at the source for combustible gases. The BZ will be determined by the SSO, but is typically 4 to 5 feet above the work area surface or elevation. The action levels to be utilized for the Site are found in Table 2.

11.0 SAFETY CONSIDERATIONS

11.1 General

In addition to the specific requirements of this HASP, common sense should be used at all times. The following general safety rules and practices will be in effect at the site.

- Ignition sources within 35 feet of potentially flammable or contaminated material are strictly prohibited.
- Movement of vehicles and equipment, and other activities will be planned and performed with consideration for the location, height, and relative position of aboveground utilities and fixtures, including signs; lights; canopies; buildings and other structures and construction; and natural features such as trees, boulders, bodies of water, and terrain.
- Approved and appropriate safety equipment (as specified in this HASP), such as eye protection, hard hats, hand protection (nitrile, leather and/or cut resistant gloves as necessary), foot protection, and respirators, must be worn in areas where required.
- No eating, chewing tobacco, gum chewing or drinking will be allowed outside the SZ.
- Contaminated tools and hands must be kept away from the face.
- Personnel must use personal hygiene safe guards (washing up via hand towelettes or potable water) at the end of the shift.
- Each sample must be treated and handled as though it were contaminated.
- Persons with long hair and/or loose-fitting clothing that could become entangled in equipment (e.g., pumps, etc.) must take adequate precautions.
- Horseplay is prohibited in the work area.
- Work while under the influence of intoxicants, narcotics, or controlled substances is strictly prohibited.

11.2 Sample Handling

Personnel responsible for handling of samples will wear the prescribed modified Level D protection. Samples are to be identified as to their hazard and packaged as to prevent spillage or breakage. Any unusual sample conditions shall be noted. Laboratory personnel and all field personnel shall be advised of sample hazard levels and the potential contaminants present. This can be accomplished by a phone call to the lab coordinator and/or including a written statement with the samples reviewing lab safety procedures in handling in order to assure that the practices are appropriate for the suspected contaminants in the sample.

12.0 DECONTAMINATION AND DISPOSAL PROCEDURES

12.1 Contamination Prevention

Contamination prevention should minimize worker exposure and help ensure valid sample results by precluding cross-contamination. Procedures for contamination avoidance include:

Personnel

- Do not walk through areas of obvious or known contamination.
- Do not directly handle or touch contaminated materials.
- Make sure that there are no cuts or tears on PPE.
- Fasten all closures in suits; cover with tape, if necessary.
- Particular care should be taken to protect any skin injuries.
- Stay upwind of airborne contaminants.
- Do not carry cigarettes, cosmetics, gum, etc., into contaminated areas.

Sampling/Monitoring

- When required by the SSO, cover instruments with clear plastic, leaving openings for sampling ports and air exhaust.

12.2 Personnel Decontamination

If an exclusion zone (EZ) is employed at the site, a field wash for equipment and PPE shall be set up and maintained for all persons exiting the EZ. The system will include a gross wash and rinse for all disposable clothing and boots worn in the EZ. As necessary, equipment and facilities will be available for personnel to wash their hands, arms, neck, and face.

12.3 Equipment Decontamination

All potentially contaminated equipment used at the Site will be decontaminated to prevent contaminants from leaving the Site. The decontamination area will provide for the containment of all wastewater from the decontamination process. Respirators and any other PPE that comes in contact with contaminated materials shall pass through a field wash in the decontamination area, and a thorough decontamination at the end of the day. All decontamination rinse water will be collected and managed in accordance with all applicable regulations.

12.4 Decontamination during Medical Emergencies

If emergency life-saving first aid and/or medical treatment are required, normal decontamination procedures may need to be abbreviated or omitted. The Site SSO or designee will accompany contaminated victims to the medical facility to advise on matters involving decontamination, when necessary. The outer garments can be removed if they do not cause delays, interfere with treatment, or aggravate the problem. Respiratory equipment must always be removed. Protective clothing can be cut away. If the outer contaminated garments cannot be safely removed, a plastic barrier between the individual and clean surfaces should be used to help prevent contaminating the inside of ambulances and/or medical personnel. Outer garments are then removed at the medical facility. Attempt to wash or rinse the victim if it is known that the individual has been contaminated with an extremely toxic or corrosive material, which could also cause severe injury or loss of life to emergency response personnel. For minor medical problems (ambulatory) or injuries, the normal decontamination procedures will be followed. Note that heat stroke requires prompt treatment to prevent irreversible damage or death. Protective clothing must be promptly removed. Less serious forms of heat stress also require prompt attention and removal of protective clothing immediately. Unless the victim is obviously contaminated, decontamination should be omitted or minimized, and treatment begun immediately.

12.5 Disposal Procedures

A system of segregating all waste will be developed by the SSO.

All discarded materials, waste materials, or other objects shall be handled in such a way as to preclude the potential for spreading contamination, creating a sanitary hazard, or causing litter to be left onsite. All potentially contaminated materials (e.g., clothing, gloves, etc.,) will be bagged or drummed as necessary, labeled and segregated for disposal. All non-contaminated materials shall be collected, bagged and labeled for appropriate disposal as domestic waste. All waste materials will be staged at the site.

13.0 EMERGENCY PLAN

Should an emergency situation occur, the emergency plan, outlined in this section, shall be known by all onsite personnel prior to the start of work. The emergency plan will be available for use at all times during Site work. The plan provides the phone numbers for the fire, police, ambulance, hospital, poison control centers, and directions to the hospital from the Site. This information is to be found in Section 2 of the HASP.

Various individual Site characteristics will determine preliminary actions taken to assure that this emergency plan is successfully implemented in the event of a Site emergency. Careful consideration must be given to the proximity of neighborhood housing or places of employment, and to the relative possibility of Site release of vapors, which could affect the surrounding community.

The emergency coordinator shall implement the contingency plan whenever conditions at the Site warrant such action. The coordinator will be responsible for coordination of the evacuation, emergency treatment, and transport of Site personnel as necessary, and notification of emergency response units and the appropriate management staff.

In cases where the project principal or project manager is not available, the SSO shall serve as the alternate emergency coordinator.

The SSO during an emergency will perform air monitoring as needed, as well as lend assistance and provide health and safety information to responding emergency personnel.

Site Personnel will endeavor to keep non-essential personnel away from the incident until the appropriate emergency resources arrive. At that time the responders will take control of the Site. Site personnel may be asked to lend assistance to emergency personnel such as during evacuations, help with the injured, etc.

13.1 Evacuation

Evacuation procedures will be discussed prior to the start of work and periodically during safety meetings. In the event of an emergency situation, such as fire, or explosion, an air horn, automobile horn, or other appropriate device will be sounded for three (3) sharp blasts indicating

the initiation of evacuation procedures. The emergency evacuation route shall be known by all site workers. Under no circumstances will incoming personnel or visitors be allowed to proceed into the area once the emergency signal has been given. The SSO or project manager must ensure that access for emergency equipment is provided and that all combustion apparatuses have been shut down once the alarm has been sounded. All Site personnel will assemble in the designated nearest safe location. Once the safety of all personnel is established, the fire department and other emergency response groups will be notified by telephone of the emergency.

13.2 Personnel Injury

Emergency first aid shall be applied onsite as appropriate. For non-emergency situations, treatment should be sought, if needed, through the approved occupational health clinic. If necessary, the individual shall be decontaminated, if needed, and transported to the nearest hospital. The SSO will contact the Human Resources Director and OHSM if medical information is needed.

The ambulance/rescue squad shall be contacted for transport as necessary in an emergency. However, since some situations may require transport of an injured party by other means, the injured person shall be escorted to the occupational health clinic or hospital. Maps to these facilities are shown in Figure 3.

13.3 Accident/Incident Reporting

As soon as first aid and/or emergency response needs have been met, the following parties are to be contacted by telephone: (Direct contact, no phone messages).

		Office:	**Cell:**
1. Project Manager:	Richard Maxwell	631-232-2600	631-921-9531
2. Project Principal:	Joseph Duminuco	631-232-2600	631-921-6279
3. Office Health and Safety Manager:	Ray Fitzpatrick	631-232-2600	631-484-1168
4. Office Manager:	Brian Morrissey	631-232-2600	631-921-6355

Written confirmation of verbal reports are to be submitted within 24 hours. The report form entitled "Accident Report and Investigation Form" (Appendix D) is to be used for this purpose.

All representatives contacted by telephone are to receive a copy of this report. In addition to filling out the Accident Report and Investigation Form, if a Roux employee is involved in a motor vehicle accident, the employee must also complete the Acord form (Appendix E).

For reporting purposes, the term accident refers to fatalities, lost time injuries, spill or exposure to hazardous materials (radioactive materials, toxic materials, explosive or flammable materials), fire, explosion, property damage, or potential occurrence (i.e., near miss) of the above.

Any information released from the health care provider, which is not deemed confidential patient information, is to be attached to the appropriate form. Any medical information, which is released by patient consent, is to be filed in the individual's medical record and treated as confidential.

13.4 Personnel Exposure

Skin Contact:	Use copious amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention. Eyes should be rinsed for 15 minutes upon chemical contamination.
Inhalation:	Move to fresh air and/or, if necessary, decontaminate/transport to hospital.
Ingestion:	Decontamination and transport to emergency medical facility.
Puncture Wound or Laceration:	Decontamination and transport to emergency medical facility.

13.5 Adverse Weather Conditions

In the event of adverse weather conditions, the SSO or project manager will determine if work can continue without sacrificing the health and safety of all field workers. Some of the items to be considered prior to determining if work should continue are:

- Potential for heat stress and heat-related injuries.
- Potential for cold stress and cold-related injuries.
- Treacherous weather-related conditions.
- Limited visibility.
- Electrical storm potential.

Site activities will be limited to daylight hours and acceptable weather conditions. Inclement working conditions include heavy rain, fog, high winds, and lightning. Observe daily weather reports and evacuate if necessary in case of inclement weather conditions.

13.5.1 Electrical Storm Guidelines

In the event that lightning and/or thunder are observed while working onsite, all onsite activities shall stop and personnel shall seek proper shelter (e.g., substantial building, enclosed vehicle, etc.). Work shall not resume until the threat of lighting has subsided and no lightning or thunder has been observed for 30 minutes. If the possibility of lightning is forecast for the day, advise the onsite personnel or the risks and proper procedure at the pre-work safety briefing. Continuously monitor for changing weather conditions and allow enough time to properly stop work if lightning if forecast.

14.0 LOGS, REPORTS AND RECORD KEEPING

The following is a summary of required health and safety logs, reports, and record keeping for this project.

14.1 Medical and Training Records

The employer keeps medical and training records. The subcontractor employer must provide verification of training and medical qualifications to the SSO. The SSO will keep a log of personnel meeting appropriate training and medical qualifications for Site work. The log will be kept in the project file. Roux Associates will maintain medical records in accordance with 29 CFR 1910.20.

14.2 Onsite Log

The SSO or project manager will keep a log of onsite personnel daily in the designated field book.

14.3 Exposure Records

Applicable personal monitoring results, laboratory reports, calculations, and air sampling data sheets are part of an employee exposure record. These records will be kept by Roux Associates in accordance with 29 CFR 1910.20.

14.4 Near Loss Reports

A near loss report must be completed following procedures given in Appendix F. The originals will be sent to Roux Associates for maintenance. Copies will be distributed as stated. A copy of the forms will be kept in the project file.

14.5 Accident/Incident Reports

For any injury (OSHA Recordable or not), including "FYI" injuries (injuries where pain was felt, but not even first aid treatment was needed), and illnesses, all work on the activity where the injury/illness occurred will be stopped. An accident/incident report must be completed following procedures given in Appendix D. The originals will be sent to Roux Associates for maintenance. Copies will be distributed as stated. A copy of the forms will be kept in the project file.

14.6 OSHA Form 300

An OSHA Form 300 (Log of Occupational Injuries and Illnesses) (Appendix G) will be kept at the Site. All reportable injuries or illnesses will be recorded on this form. At the end of the project, the original will be sent to Roux Associates for maintenance.

14.7 Daily Health and Safety Briefing

The Daily Health and Safety Briefing form in Appendix I will be completed daily by the SSO and submitted to the project manager.

15.0 FIELD TEAM REVIEW

Each Roux Associates employee or subcontractor shall sign this section after site-specific training is completed and before being permitted to work at the Site.

I have read and had Roux Associates verbally review this Health and Safety Plan prepared for this Site with me. I understand and will comply with the provisions contained therein.

Site/Project: Post Road Corridor
77 West Post Road
White Plains, New York

Date	Name	Signature	Company

TABLES

1. Toxicological, Physical and Chemical Properties of Compounds Potentially Present at the Site
2. Action Levels for Worker Breathing Zone

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
1,1,1-Trichloroethane	71-55-6	TWA 350 ppm STEL 440 ppm C 440 ppm	C 350 ppm (1900 mg/m^3) [15-minute]	TWA 350 ppm (1900 mg/m^3)	700 ppm	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin; headache, lassitude (weakness, exhaustion), central nervous system depression, poor equilibrium; dermatitis; cardiac arrhythmias;	Eyes, skin, central nervous system, cardiovascular system, liver	Colorless liquid with a mild, chloroform-like odor. BP: 165°F UEL: 12.5% LEL: 7.5%
1,1,2-Trichloroethane	79-00-5	TWA 10 ppm	Ca TWA 10 ppm (45 mg/m^3) [skin]	TWA 10 ppm (45 mg/m^3) [skin]	Ca [100 ppm]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, nose; central nervous system depression; liver, kidney damage; dermatitis; [potential occupational carcinogen]	Eyes, respiratory system, central nervous system, liver, kidneys	Colorless liquid with a sweet, chloroform-like odor. BP: 237°F UEL: 15.5% LEL: 6%
1,1-Dichloroethane	75-34-3	TWA 100 ppm	TWA 100 ppm (400 mg/m^3)	TWA 100 ppm (400 mg/m^3)	3000 ppm	inhalation, ingestion, skin and/or eye contact	Irritation skin; central nervous system depression; liver, kidney, lung damage	Skin, liver, kidneys, lungs, central nervous system	Colorless, oily liquid with a chloroform-like odor. BP: 135°F Fl.P: 2°F UEL: 11.4% LEL: 5.4%
1,1-Dichloroethene	75-35-4	TWA 5 ppm	Ca (lowest feasible concentration)	TWA 1ppm	Ca [N.D.]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, throat; dizziness, headache, nausea, dyspnea (breathing difficulty); liver, kidney disturbance; pneumonitis; [potential occupational carcinogen]	Eyes, skin, respiratory system, central nervous system, liver, kidneys	Colorless liquid or gas (above 89°F) with a mild, sweet, chloroform-like odor. BP: 89°F Fl.P: -2°F UEL: 15.5% LEL: 6.5% Class IA Flammable Liquid
1,2,4-Trimethylbenzene	95-63-6	None established	TWA 25 ppm (125mg/m^3)	None established	N.D.	Inhalation; ingestion; skin and/or eye contact	Eye, skin, nose, and throat, resp syst irritation; bronchitis; hypochromic anemia; headache, drowsiness, weakness, dizziness, nausea, incoordination, vomit, confusion; chemical pneumonitis	Eyes, skin, resp sys, CNS, blood	Clear, colorless liquid with a distinctive, aromatic odor BP: 337°F FL.P: 112°F UEL: 6.4% LEL: 0.9% Class II Flammable liquid
1,2,4-Trimethylbenzene	95-63-6	TWA 25 ppm (125 mg	TWA 25 ppm (125 mg/m^3)	None established	N.D.	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat, respiratory system; bronchitis; hypochromic anemia; headache, drowsiness, fatigue, dizziness, nausea, incoordination; vomiting, confusion; chemical pneumonitis (aspiration liquid)	Eyes, skin, respiratory system, central nervous system, blood	Clear, colorless liquid with a distinctive, aromatic odor. BP: 337°F Fl.P: 112°F UEL: 6.4% LEL: 0.9% Class II Flammable Liquid
1,2-Dichlorobenzene	95-50-1	TWA 25 ppm STEL 50 ppm	C 50 ppm (300 mg/m^3)	C 50 ppm (300 mg/m^3)	200 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, nose; liver, kidney damage; skin blisters	Eyes, skin, respiratory system, liver, kidneys	Colorless to pale-yellow liquid with a pleasant, aromatic odor. [herbicide] BP: 357°F Fl.P: 151°F UEL: 9.2% LEL: 2.2% Class IIIA Combustible Liquid

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
1,2-Dichloroethane	107-06-2	TWA 10 ppm	Ca TWA 1 ppm (4 mg/m^3) STEL 2 ppm (8 mg/m^3)	TWA 50 ppm C 100 ppm 200 ppm [5-minute maximum peak in any 3 hours]	Ca [50 ppm]	inhalation, ingestion, skin absorption, skin and/or eye contact	Irritation eyes, corneal opacity; central nervous system depression; nausea, vomiting; dermatitis; liver, kidney, cardiovascular system damage; [potential occupational carcinogen]	Eyes, skin, kidneys, liver, central nervous system, cardiovascular system	Colorless liquid with a pleasant, chloroform-like odor. [Note: Decomposes slowly, becomes acidic & darkens in color.] BP: 182°F Fl.P: 56°F UEL: 16% LEL: 6.2% Class IB Flammable Liquid
1,2-Dichloroethene (total)	540-59-0	TWA 200 ppm (790 m	TWA 200 ppm (790 mg/m^3)	TWA 200 ppm (790 mg/m^3)	1000 ppm	inhalation, ingestion, skin and/or eye contact	Irritation eyes, respiratory system; central nervous system depression	Eyes, respiratory system, central nervous system	Colorless liquid (usually a mixture of the cis & trans isomers) with a slightly acrid, chloroform-like odor BP: 118-140°F Fl.P: 36-39°F UEL: 12.8% LEL: 5.6% Class IB Flammable Liquid
1,3,5-Trimethylbenzene	108-67-8	None established	TWA 25 ppm (125mg/m^3)	None established	N.D.	Inhalation; ingestion; skin and/or eye contact	Eye, skin, nose, and throat, resp syst irritation; bronchitis; hypochromic anemia; headache, drowsiness, weakness, dizziness, nausea, incoordination, vomit, confusion; chemical pneumonitis	Eyes, skin, resp sys, CNS, blood	Clear, colorless liquid with a distinctive, aromatic odor BP: 329°F FL.P: 122°F Class II Flammable liquid
1,3,5-Trimethylbenzene	108-67-8	TWA 25 ppm (125 mg	TWA 25 ppm (125 mg/m^3)	None established	N.D	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat, respiratory system; bronchitis; hypochromic anemia; headache, drowsiness, lassitude (weakness, exhaustion), dizziness, nausea, incoordination; vomiting, confusion; chemical pneumonitis (aspiration liquid)	Eyes, skin, respiratory system, central nervous system, blood	Clear, colorless liquid with a distinctive, aromatic odor. BP: 329°F Fl.P: 122°F Class II Flammable Liquid
1,4-Dichlorobenzene	106-46-7	TWA 10 ppm	Ca	TWA 75 ppm (450 mg/m^3)	Ca [150 ppm]	inhalation, skin absorption, ingestion, skin and/or eye contact	Eye irritation, swelling periorbital (situated around the eye); profuse rhinitis; headache, anorexia, nausea, vomiting; weight loss, jaundice, cirrhosis; in animals: liver, kidney injury; [potential occupational carcinogen]	Liver, respiratory system, eyes, kidneys, skin	Colorless or white crystalline solid with a mothball-like odor. [insecticide] BP: 345°F Fl.P: 150°F LEL: 2.5% Combustible Solid
2,4-Dimethylphenol	105-67-9	None established	None established	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, respiratory system, mouth, throat, stomach; dizziness, weakness, fatigue, nausea, headache; systemic damage; moderate to severe eye injury.	Skin, CVS, eyes, CNS	Clear, colorless liquid with a faint ether or chloroform-like odor BP: 178°F

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
2-Butanone (MEK)	78-93-3	TWA 200 ppm (590 mg/m^3) STEL 300 ppm (885 mg/m^3)	TWA 200 ppm (590 mg/m^3) STEL 300 ppm (885 mg/m^3)	TWA 200 ppm (590 mg/m^3)	3000 ppm	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose; headache; dizziness; vomiting; dermatitis	Eyes, skin, respiratory system, central nervous system	Colorless liquid with a moderately sharp, fragrant, mint- or acetone-like odor. BP: 175°F Fl.P: 16°F UEL(200°F): 11.4% LEL(200°F): 1.4% Class IB Flammable Liquid
Acenaphthene	83-32-9	None established	None established	None established	None established	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, respiratory system	Eyes, skin, respiratory system	Brown solid
Acetone	67-64-1	TWA 500 ppm STEL 50 ppm	TWA 250 ppm (590 mg/m^3)	TWA 1000 ppm (2400 mg/m^3)	2500 ppm [10%LEL]	inhalation, ingestion, skin and/or eye contact	Irritation eyes, nose, throat; headache, dizziness, central nervous system depression; dermatitis	Eyes, skin, respiratory system, central nervous system	Colorless liquid with a fragrant, mint-like odor BP: 133°F Fl.P: 0°F UEL: 12.8% LEL: 2.5% Class IB Flammable Liquid
Anthracene	65996-93-2	TWA 0.2 mg/m^3	Ca TWA 0.1 mg/m^3 (cyclohexane-extractable fraction)	TWA 0.2 mg/m^3 (benzene-soluble fraction)	Ca [80 mg/m^3]	inhalation, skin and/or eye contact	Dermatitis, bronchitis, [potential occupational carcinogen]	respiratory system, skin, bladder, kidneys	Black or dark-brown amorphous residue. Combustible Solids
Antimony	7440-36-0	TWA 0.5 mg/m^3	TWA 0.5 mg/m^3	TWA 0.5 mg/m^3	50 mg/m^3 (as Sb)	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat, mouth; cough; dizziness; headache; nausea, vomiting, diarrhea; stomach cramps; insomnia; anorexia; unable to smell properly	Eyes, skin, respiratory system, cardiovascular system	Silver-white, lustrous, hard, brittle solid; scale-like crystals; or a dark-gray, lustrous powder. BP: 2975°F
Arsenic (inorganic)	7440-38-2 (metal)	TWA 0.01 mg/m3	Ca C 0.002 mg/m3 [15-min]	TWA 0.010 mg/m3	Ca [5 mg/m3 (as As)]	Inhalation; ingestion; skin absorption; skin and/or eye contact	Ulceration of nasal septum, dermatitis, GI disturbances, peripheral neuropathy, resp irritation, hyperpigmentation of skin, [potential occupational carcinogen]	Liver, kidneys, skin, lungs, lymphatic sys	Metal: sliver-gray or tin-white, brittle, odorless solid BP: sublimes
Asbestos	1332-21-4	TWA 0.1 f/cc	Ca 100,000 fibers/m3	TWA 0.1 fiber/cm3	Ca [IDLH value has not been determined]	Inhalation; ingestion; skin and/or eye contact	Asbestosis (chronic exposure), dyspnea, interstitial fibrosis, restricted pulmonary function, finger clubbing, irritation eyes, [potential occupational carcinogen]	Respiratory system, eyes,	White or greenish (chrysotile), blue (crocidolite), or gray-green (amosite), fibrous, odorless solids. BP: decomposes
Asphalt fumes	8052-42-4	TWA 0.5 mg/m^3(fumes)	Ca C 5 mg/m3 [15 min]	None established	Ca [IDLH value has not been determined]	Skin absorption; inhalation; skin and/or eye contact	Irritation eyes, resp sys	Eyes, respiratory system	Black or dark brown cement-like substance Combustible solid
Barium	7440-39-3	TWA 0.5 mg/m3	None established	TWA 0.5 mg/m3	None established	Inhalation, ingestion, skin contact	Irritation skin, respiratory system, (	Skin, eyes, respiratory system	Yellow white powder BP: 1640 C
Benzene	71-43-2	TWA 0.5 ppm STEL 2.5 ppm	Ca TWA 0.1 ppm STEL 1 ppm	TWA 1 ppm STEL 5 ppm	Ca [500 ppm]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lassitude (weakness, exhaustion); dermatitis; bone marrow depression; [potential occupational carcinogen]	Eyes, skin, respiratory system, blood, central nervous system, bone marrow	Colorless to light yellow liquid with an aromatic odor [Note: Solid below 42 °F] BP: 176°F Fl.Pt = 12°F LEL: 1.2% UEL: 7.8% Class B Flammable liquid

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Benzo[a]anthracene	56-55-3	None established	None established	None established	None established	Inhalation; ingestion; skin absorption; skin and/or eye contact	Irritation eyes, skin, respiratory system, CNS	Skin	Pale Yellow crystal, solid BP: 438 C
Benzo[a]pyrene	50-32-8	None established	TWA 0.1 mg/m3	TWA 0.2 mg/m3	None established	Inhalation; ingestion; skin absorption; skin and/or eye contact	POISON. This material is an experimental carcinogen, mutagen, tumorigen, neoplastigen and teratogen. It is a probable carcinogen in humans and a known human mutagen. IARC Group 2A carcinogen. It is believed to cause bladder, skin and lung cancer. Exposure to it may damage the developing foetus. May cause reproductive damage. Skin, respiratory and eye irritant or burns.	Skin, eye, bladder, lung, reproductive	Yellow crystals or powder [found in cigarette smoke, coal tar, fuel exhaust gas and in many other sources] BP: 495 C
Benzo[b]fluoranthene	205-99-2	None established	TWA 0.1 mg/m3	TWA 0.2 mg/m3	None established	Inhalation; ingestion; skin and/or eye contact	No data were identified on the toxicity of benzo[b]fluoranthene to humans. Based on results of studies in animals, IARC concluded that benzo[b]fluoranthene is possibly carcinogenic to humans	Respiratory system, skin, bladder, kidneys	Off-white to tan powder
Benzo[k]fluoranthene	207-08-9	None established	None established	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, respiratory tract, gastrointestinal; fatal if swallowed, inhaled, absorbed through the skin; vomiting, nausea, diarrhea	Lungs, respiratory system	Yellow crystals BP: 480 C
Beryllium	7440-41-7 (metal)	TWA 0.002 mg/m^3	Ca C 0.0005 mg/m^3	TWA 0.002 mg/m^3 C 0.005 mg/m^3 (30 minutes) with a maximum peak of 0.025 mg/m^3	Ca [4 mg/m^3 (as Be)]	inhalation, skin and/or eye contact	Berylliosis (chronic exposure): anorexia, weight loss, lassitude (weakness, exhaustion), chest pain, cough, clubbing of fingers, cyanosis, pulmonary insufficiency; irritation eyes; dermatitis; [potential occupational carcinogen]	Eyes, skin, respiratory system	Metal: A hard, brittle, gray-white solid. BP: 4532°F
Bis(2-ethylhexyl) phthalate	117-81-7	TWA 5 mg/m^3	TWA 5 mg/m^3 STEL 10 mg/m^3 (do not exceed during andy 15-minute work period)	TWA 5 mg/m^3	None established	inhalation, skin and/or eye contact	Irritation eyes, skin, nose, throat; affect the nervous system and liver; damage to male reproductive glands	Eyes, skin, nose, respiratory system, nervous system, reproductive system, liver	Colorless to light colored, thick liquid with slight odor
Butane	106-97-8	TWA 1000 ppm	TWA 800 ppm (1900 mg/m^3)	None established	None established	inhalation, skin and/or eye contact (liquid)	Drowsiness, narcosis, asphyxia; liquid: frostbite	central nervous system	Colorless gas with a gasoline-like or natural gas odor. BP: 31°F UEL: 8.4% LEL: 1.6% Flammable Gas

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Cadmium	7440-43-9 (metal)	TWA 0.01 mg/m^3	Ca	TWA 0.005 mg/m^3	Ca [9 mg/m^3 (as Cd)]	inhalation, ingestion	Pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen]	respiratory system, kidneys, prostate, blood	Metal: Silver-white, blue-tinged lustrous, odorless solid. BP: 1409°F
Carbon Disulfide	75-15-0	TWA 1 ppm	TWA 1 ppm (3 mg/m^3) STEL 10 ppm (30 mg/m^3) [skin]	TWA 20 ppm C 30 ppm 100 ppm (30-minute maximum peak)	500 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	Dizziness, headache, poor sleep, lassitude (weakness, exhaustion), anxiety, anorexia, weight loss; psychosis; polyneuropathy; Parkinson-like syndrome; ocular changes; coronary heart disease; gastritis; kidney, liver injury; eye, skin burns; dermatitis; reproductive effects	central nervous system, peripheral nervous system, cardiovascular system, eyes, kidneys, liver, skin, reproductive system	Colorless to faint-yellow liquid with a sweet ether-like odor. BP: 116°F Fl.P: -22°F UEL: 50.0% LEL: 1.3% Class IB Flammable Liquid
Chlorobenzene	108-90-7	TWA 10 ppm	None established	TWA 75 ppm (350 mg/m^3)	1000 ppm	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose; drowsiness, incoordination; central nervous system depression; in animals: liver, lung, kidney injury	Eyes, skin, respiratory system, central nervous system, liver	Colorless liquid with an almond-like odor BP: 270°F Fl.P: 82°F UEL: 9.6% LEL: 1.3%
Chloroethane	75-00-3	TWA 100ppm	Handle with caution in the workplace	TWA 1000 ppm (2600 mg/m^3)	3800 ppm [10%LEL]	inhalation, skin absorption (liquid), ingestion (liquid), skin and/or eye contact	Incoordination, inebriation; abdominal cramps; cardiac arrhythmias, cardiac arrest; liver, kidney damage	Liver, kidneys, respiratory system, cardiovascular system, central nervous system	Colorless gas or liquid (below 54°F) with a pungent, ether-like odor. BP: 54°F Fl.P: NA (Gas) -58°F (Liquid) UEL: 15.4% LEL: 3.8%
Chloroform	67-66-3	TWA 10 ppm	Ca STEL 2 ppm (9.78 mg/m^3) [60-minute]	C 50 ppm (240 mg/m^3)	Ca [500 ppm]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; dizziness, mental dullness, nausea, confusion; headache, lassitude (weakness, exhaustion); anesthesia; enlarged liver; [potential occupational carcinogen]	Liver, kidneys, heart, eyes, skin, central nervous system	Colorless liquid with a pleasant odor BP: 143°F
Chromium	7440-47-3	TWA 0.5 mg/m^3 (metal and Cr III compounds) TWA 0.05 mg/m^3 (water-soluble Cr IV compounds) TWA 0.01 mg/m^3 (insoluble Cr IV compounds)	TWA 0.5 mg/m^3	TWA 1 mg/m^3	250 mg/m^3 (as Cr)	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin; lung fibrosis (histologic)	Eyes, skin, respiratory system	Blue-white to steel-gray, lustrous, brittle, hard, odorless solid. BP: 4788°F
Chrysene; Phenanthrene; Pyrene; Coal tar pitch volatiles	65996-93-2	TWA 0.2 mg/m3	Ca TWA 0.1 mg/m^3 (cyclohexane-extractable fraction)	TWA 0.2 mg/m^3 (benzene-soluble fraction)	Ca [80 mg/m^3]	Inhalation, skin and/or eye contact	Dermatitis, bronchitis, [potential occupational carcinogen]	Respiratory system, skin, bladder, kidneys	Black or dark-brown amorphous residue. Combustible Solids

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
cis-1,2-Dichloroethene	158-59-2	TWA 200 ppm	TWA 200 ppm	TWA 200 ppm	None established	inhalation, skin absorption, ingestion	Harmful if swallowed, inhaled, or absorbed through skin. Irritant. Narcotic. Suspected carcinogen	Skin	Colorless liquid BP: 60 C Fl.P: 4 C UEL: 12.8% LEL: 9.7 %
Copper	7440-50-8	TWA 0.2mg/m^3 (fume) 1 mg/m^3 (dusts and mists)	TWA 1 mg/m^3	TWA 1 mg/m^3	100 mg/m^3 (as Cu)	Inhalation, ingestion, skin and/or eye contact	Irritation eyes, respiratory system; cough, dyspnea (breathing difficulty), wheezing	Eyes, skin, respiratory system, liver, kidneys (increase(d) risk with Wilson's disease)	Noncombustible Solid in bulk form, but powdered form may ignite. BP: 4703°F
Dibenzo[a,h]anthracene	53-70-3	None established	None established	None established	None established	Inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin	Eyes, skin; skin photosensitization.	Colorless crystalline powder BP: 524°C
Diesel Fuel #2	68476-34-6	None established	None established	Designated as an OSHA Select Carcinogen	None established	ingestion, skin and/or eye contact	Kidney damage; potential lung damage; suspected carcinogen; irritation of eyes, skin, respiratory tract; dizziness, headache, nausea; chemical pneumonitis (from aspiration of liquid); dry, red skin; irritant contact dermatitis; eye redness, pain.	Eyes, skin, kidneys	Clear yellow brown combustible liquid; floats on water; distinct diesel petroleum hydrocarbon odor. BP: 356-716°F Fl.P: 154.4-165.2°F LEL: 0.6% UEL: 7.0%
Ethylbenzene	100-41-4	TWA 100 ppm STEL 125 ppm	TWA 100 ppm (435 mg/m^3) STEL 125 ppm (545 mg/m^3)	TWA 100 ppm (435 mg/m^3)	800 ppm [10%LEL]	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, mucous membrane; headache; dermatitis; narcosis, coma	Eyes, skin, respiratory system, central nervous system	Colorless liquid with an aromatic odor. BP: 277°F Fl.P: 55°F UEL: 6.7% LEL: 0.8% Class IB Flammable Liquid
Fluoranthene	206-44-0	None established	None established	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; possible burns; heart and liver injury, pulmonary edema, respiratory arrest, gastrointestinal disturbances.	Heart, liver, lungs.	Yellow needles.
Fluorene	86-73-7	None established	None established	None established	None established	inhalation, ingestion, skin and/or eye contact	Irritation skin, digestive tract	Skin	White crystals BP: 563°F
Fuel Oil #2	68476-30-2	TWA 100mg/m^3 (aerosol and vapor, as total hydrocarbons)	None established	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; CNS effects; nausea, vomiting, headache, cramping, dizziness, weakness, loss of coordination,, drowsiness; kidney, liver damage	Eyes, skin, CNS	Clear or yellow to red oily liquid, kerosene-like odor BP: 347 - 689 °F UEL:5-6% LEL: 0.7-1.0%
Gasoline	8006-61-9	TWA 300 ppm STEL 500 ppm	Carcinogen	None established	Ca [IDLH value has not been determined]	Skin absorption; inhalation; ingestion; skin and/or eye contact	Eyes and skin irritation, mucous membrane; dermatitis; headache; listlessness, blurred vision, dizziness, slurred speech, confusion, convulsions; chemical pneumonitis; possible liver, kidney damage [Potential occupational carcinogen]	Eyes, skin, respiratory system, CNS, Liver, Kidneys	Clear liquid with a characteristic odor, aromatic Fl.Pt = -45°F LEL = 1.4% UEL = 7.6% Classs 1B Flammable Liquid

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Hexachlorobutadiene	87-68-3	TWA 0.02 ppm	Ca TWA 0.02 ppm (0.24 mg/m^3) [skin]	None established	Ca [N.D.]	inhalation, skin absorption, ingestion, skin and/or eye contact	In animals: irritation eyes, skin, respiratory system; kidney damage; [potential occupational carcinogen]	Eyes, skin, respiratory system, kidneys	Clear, colorless liquid with a mild, turpentine-like odor. BP: 419°F
Hydrogen Sulfide	7783-06-4	TWA (1 ppm) STEL (5 ppm) (adopted values for which changes are proposed in the NIC)	C 10 ppm (15 mg/m^3) [10-minute]	C 20 ppm 50 ppm [10-minute maximum peak]	100 ppm	inhalation, skin and/or eye contact	Irritation eyes, respiratory system; apnea, coma, convulsions; conjunctivitis, eye pain, lacrimation (discharge of tears), photophobia (abnormal visual intolerance to light), corneal vesiculation; dizziness, headache, lassitude (weakness, exhaustion), irritability, insomnia; gastrointestinal disturbance; liquid: frostbite	Eyes, respiratory system, central nervous system	Colorless gas with a strong odor of rotten eggs. BP: -77°F UEL: 44.0% LEL: 4.0% Flammable Gas
Indeno[1,2,3-cd]pyrene	193-39-5	None established	None established	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; possible human carcinogen (skin); weakness; affect liver, lung tissue, renal tissue; impariment of blood forming tissue	Skin	Fluorescent green-yellow crystalline solid BP: 536 C
Indeno[1,2,3-cd]pyrene	193-39-5	None established	None established	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; possible human carcinogen (skin); weakness; affect liver, lung tissue, renal tissue; impariment of blood forming tissue	Skin	Yellowish crystal solid BP: 536 C
Isopropylbenzene	98-82-8	TWA 50 ppm	TWA 50 ppm (245 mg/m^3) [skin]	TWA 50 ppm (245 mg/m^3) [skin]	900 ppm [10%LEL]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, mucous membrane; dermatitis; headache, narcosis, coma	Eyes, skin, respiratory system, central nervous system	Colorless liquid with a sharp, penetrating, aromatic odor. BP: 306°F Fl.P: 96°F UEL: 6.5% LEL: 0.9%
Kerosene	8008-20-6	TWA 200 mg/m^3	TWA 100 mg/m^3	None established	IDLH value has not been determined	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat; burning sensation in chest; headache, nausea, lassitude (weakness, exhaustion), restlessness, incoordination, confusion, drowsiness; vomiting, diarrhea; dermatitis; chemical pneumonitis (aspiration liquid)	Eyes, skin, respiratory system, central nervous system	Colorless to yellowish, oily liquid with a strong, characteristic odor. BP: 347-617°F Fl.P: 100-162°F UEL: 5% LEL: 0.7% Class II Combustible Liquid
Lead	7439-92-1	TWA 0.05 mg/m^3	TWA (8-hour) 0.050 mg/m^3	TWA 0.050 mg/m^3	100 mg/m^3 (as Pb)	inhalation, ingestion, skin and/or eye contact	Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension	Eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue	A heavy, ductile, soft, gray solid. BP: 3164°F Noncombustible Solid in bulk form

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Manganese	7439-96-5 (metal)	TWA 0.2 mg/m^3	TWA 1 mg/m^3 STEL 3 mg/m^3	C 5 mg/m^3	500 mg/m^3 (as Mn)	inhalation, ingestion	Manganism; asthenia, insomnia, mental confusion; metal fume fever: dry throat, cough, chest tightness, dyspnea (breathing difficulty), rales, flu-like fever; low-back pain; vomiting; malaise (vague feeling of discomfort); lassitude (weakness, exhaustion); kidney damage	respiratory system, central nervous system, blood, kidneys	A lustrous, brittle, silvery solid. BP: 3564°F
Mercury (organo) alkyl compounds (as Hg)	7439-97-6	TWA 0.01 mg/m^3 STEL 0.03 mg/m^3 [skin]	TWA 0.01 mg/m^3 STEL 0.03 mg/m^3 [skin]	TWA 0.01 mg/m^3 C 0.04 mg/m^3	2 mg/m^3 (as Hg)	inhalation, skin absorption, ingestion, skin and/or eye contact	Paresthesia; ataxia, dysarthria; vision, hearing disturbance; spasticity, jerking limbs; dizziness; salivation; lacrimation (discharge of tears); nausea, vomiting, diarrhea, constipation; skin burns; emotional disturbance; kidney injury; possible teratogenic effects	Eyes, skin, central nervous system, peripheral nervous system, kidneys	Appearance and odor vary depending upon the specific (organo) alkyl mercury compound
Mercury compounds [except (organo) alkyls] (as Hg) Mercury	7439-97-6	TWA 0.025 mg/m^3 (elemental and inorganic forms)	Hg Vapor: TWA 0.05 mg/m^3 [skin] Other: C 0.1 mg/m3 [skin]	TWA 0.1 mg/m^3	10 mg/m^3 (as Hg)	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria	Eyes, skin, respiratory system, central nervous system, kidneys	Metal: Silver-white, heavy, odorless liquid. [Note: "Other" Hg compounds include all inorganic & aryl Hg compounds except (organo) alkyls.] BP: 674°F
Methyl tert-butyl ether (MTBE)	1634-04-4	TWA 50 ppm	No established REL	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, mucous membrane, respiratory; dizziness, nausea, headache, intoxication	Eyes, skin, mucous membrane, respiratory system, central nervous system	Colorless liquid BP: 55.2 C
Methylene Chloride	75-09-2	TWA 50 ppm, A3 - suspected human carcinogen	Ca	TWA 25 ppm STEL 125 ppm	Ca [2300 ppm]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; lassitude (weakness, exhaustion), drowsiness, dizziness; numbness, tingle limbs; nausea; [potential occupational carcinogen]	Eyes, skin, cardiovascular system, central nervous system	Colorless liquid with a chloroform-like odor BP: 104°F UEL: 23% LEL: 13%
Naphtha (coal tar)	8030-30-6	None established	TWA 100 ppm (400 mg/m^3)	TWA 100 ppm (400 mg/m^3)	1000 ppm [10%LEL]	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose; dizziness, drowsiness; dermatitis; in animals: liver, kidney damage	Eyes, skin, respiratory system, central nervous system, liver, kidneys	Reddish-brown, mobile liquid with an aromatic odor BP: 320-428°F Fl.P: 100-109°F Class II Combustible Liquid

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Naphthalene	91-20-3	TWA 10 ppm STEL 15 ppm	TWA 10 ppm (50 mg/m^3) STEL 15 ppm (75 mg/m^3)	TWA 10 ppm (50 mg/m^3)	250 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes; headache, confusion, excitement, malaise (vague feeling of discomfort); nausea, vomiting, abdominal pain; irritation bladder; profuse sweating; jaundice; hematuria (blood in the urine), renal shutdown; dermatitis, optical neuritis, corneal damage	Eyes, skin, blood, liver, kidneys, central nervous system	Colorless to brown solid with an odor of mothballs. BP: 424°F Fl.P: 174°F UEL: 5.9% LEL: 0.9%
n-Butylbenzene	104-51-8	None established	None established	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; CNS depression, lung damage; nausea, vomiting, headache, dizziness, weakness, loss of coordination, blured vision, drowsiness, confusion, disorientation	Eyes, skin,repiratory system, central nervous system	Colorless liquid with a sweet odor BP: 183 C Fl.P: 59 C UEL: 5.8% LEL: 0.8%
Nickel	7440-02-0 (Metal)	TWA 1.5 mg/m^3 (elemental) TWA 0.1 mg/m^3 (soluble inorganic compounds) TWA 0.2 mg/m^3 (insoluble inorganic compounds) TWA 0.1 mg/m^3 (Nickle subsulfide)	Ca TWA 0.015 mg/m^3	TWA 1 mg/m^3	Ca [10 mg/m^3 (as Ni)]	inhalation, ingestion, skin and/or eye contact	Sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen]	Nasal cavities, lungs, skin	Metal: Lustrous, silvery, odorless solid. BP: 5139°F
Nitrobenzene	98-95-3	TWA 1 ppm	TWA 1 ppm (5 mg/m^3) [skin]	TWA 1 ppm (5 mg/m^3) [skin]	200 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; anoxia; dermatitis; anemia; methemoglobinemia; in animals: liver, kidney damage; testicular effects	Eyes, skin, blood, liver, kidneys, cardiovascular system, reproductive system	Yellow, oily liquid with a pungent odor like paste shoe polish. BP: 411°F Fl.P: 190°F LEL(200°F): 1.8%
n-Propylbenzene	103-65-1	None established	None established	None established	None established	inhalation, ingestion, skin and/or eye contact	Harmful if swallowed, Irritation eyes, skin, digestive tract, respiratory tract, central nervous system	Eyes, skin, central nervous system, respiratory system	colorless or light yellow liquid BP: 159 C Fl.P: 47 C UEL: 6% LEL: 0.8%
Petroleum hydrocarbons(Petroleum distillates)	8002-05-9	None established	TWA 350 mg/m^3 C 1800 mg/m^3 [15 min]	TWA 500 ppm (2000 mg/m^3)	1,100 [10% LEL]	Inhalation; ingestion; skin and/or eye contact	Irritation eyes, skin, nose, throat; dizziness, drowsiness, headache, nausea; dried/cracked skin; chemical pneumonitis	CNS, eyes, respiratory system, skin	Colorless liquid with a gasoline or kerosene-like odor BP: 86-460°F Fl. Pt = -40 to -86°F UEL: 5.9% LEL: 1.1% Flammable liquid

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Phenol	108-95-2	TWA 5 ppm	TWA 5 ppm (19 mg/m^3) C 15.6 ppm (60 mg/m^3) [15-minute] [skin]	TWA 5 ppm (19 mg/m^3) [skin]	250 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, nose, throat; anorexia, weight loss; lassitude (weakness, exhaustion), muscle ache, pain; dark urine; cyanosis; liver, kidney damage; skin burns; dermatitis; ochronosis; tremor, convulsions, twitching	Eyes, skin, respiratory system, liver, kidneys	Colorless to light-pink, crystalline solid with a sweet, acrid odor. BP: 359°F UEL: 8.6% LEL: 1.8%
p-Isopropyltoluene	99-87-6	None established	None established	None established	None established	inhalation, skin absorption, eye contact	Irritation skin	CNS, skin	Colorless, clear liquid, sweetish aromatic odor BP: 350.8°F Class III Flammable liquid
sec-Butylbenzene	135-98-8	None established	None established	None established	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, upper airway; central nervous system, headache, dizziness; gastrointestinal disturbance	Respiratory system, central nervous system, eyes, skin;	Colorless liquid BP: 344°F Fl.P: 126 °F UEL: 6.9% LEL: 0.8% Combustible liquid
Selenium	7782-49-2	TWA 0.2 mg/m^3	TWA 0.2 mg/m^3	TWA 0.2 mg/m^3	1 mg/m^3 (as Se)	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat; visual disturbance; headache; chills, fever; dyspnea (breathing difficulty), bronchitis; metallic taste, garlic breath, gastrointestinal disturbance; dermatitis; eye, skin burns; in animals: anemia; liver necrosis, cirrhosis; kidney, spleen damage	Eyes, skin, respiratory system, liver, kidneys, blood, spleen	Amorphous or crystalline, red to gray solid. [Note: Occurs as an impurity in most sulfide ores.] BP: 1265°F
Silver	7440-22-4 (metal)	TWA 0.1 mg/m^3 (metal, dust, fumes) TWA 0.01 mg/m^3 (Soluble compounds, as Ag)	TWA 0.01 mg/m^3	TWA 0.01 mg/m^3	10 mg/m^3 (as Ag)	inhalation, ingestion, skin and/or eye contact	Blue-gray eyes, nasal septum, throat, skin; irritation, ulceration skin; gastrointestinal disturbance	Nasal septum, skin, eyes	Metal: White, lustrous solid BP: 3632°F
Slop Oil	69029-75-0	None established	None established	None established	None established	Inhalation; ingestion	Irritation eyes, skin, gastrointestinal tract	Eyes, skin, gastrointestinal tract	Clear light to dark amber liquid, with mild hydrocarbon odor. BP: >500°F Fl.P : 250°F
Sulfuric Acid	7664-93-9	TWA 0.2 mg/m^3	TWA 1 mg/m^3	TWA 1 mg/m^3	15 mg/m^3	inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatis; dental erosion; eye, skin burns; dermatitis	Eyes, skin, respiratory system, teeth	Colorless to dark-brown, oily, odorless liquid. BP: 554°F Noncombustible Liquid
tert-Butylbenzene	98-06-6	None established	None established	None established	None established	inhalation, skin absorption, ingestion,	Eye and respiratory irritant; CNS depression; liver or kidney damage	Respiratory system, central nervous system, eyes, liver, kidney	Colorless liquid with an aromatic odor BP: 168 - 169 C Fl.P: 34 C UEL:5.6 % LEL: 0.8 %

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

Compound	CAS #	ACGIH TLV	NIOSH REL	OSHA PEL	IDLH	Routes of Exposure	Toxic Properties	Target Organs	Physical/Chemical Properties
Tetrachloroethene	127-18-4	TWA 25 ppm STEL 100 ppm (STEL) listed as A3, animal carcinogen	Ca Minimize workplace exposure concentrations	TWA 100 ppm C 200 ppm (for 5 minutes in any 3-hour period), with a maximum peak of 300 ppm	Ca [150 ppm]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen]	Eyes, skin, respiratory system, liver, kidneys, central nervous system	Colorless liquid with a mild, chloroform-like odor. BP: 250°F Noncombustible Liquid
Toluene	108-88-3	TWA 20 ppm	TWA 100 ppm (375 mg/m^3) STEL 150 ppm (560 mg/m^3)	TWA 200 ppm C 300 ppm 500 ppm (10-minute maximum peak)	500 ppm	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, nose; lassitude (weakness, exhaustion), confusion, euphoria, dizziness, headache; dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, insomnia; paresthesia; dermatitis; liver, kidney damage	Eyes, skin, respiratory system, central nervous system, liver, kidneys	Colorless liquid with a sweet, pungent, benzene-like odor. BP: 232°F Fl.P: 40°F UEL: 7.1% LEL: 1.1% Class IB Flammable Liquid
trans-1,2-Dichloroethene	156-60-5	TWA 200 ppm	None established	TWA 200 ppm STEL 250 ppm (skin)	None established	inhalation, skin absorption, ingestion, skin and/or eye contact	Narcotic. Irritation eyes, skin, respiratory tract, mucous membrane; CNS depression.	Respiratory tract, mucous membrane, eyes, skin, CNS	Colorless liquid with a fruity pleasant odor BP: 48°C Fl.P 6C UEL: 12.8% LEL: 9.7%
Trichloroethene	79-01-6	TWA 10 ppm STEL 25 ppm	Ca	TWA 100 ppm C 200 ppm 300 ppm (5-minute maximum peak in any 2 hours)	Ca [1000 ppm]	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen]	Eyes, skin, respiratory system, heart, liver, kidneys, central nervous system	Colorless liquid (unless dyed blue) with a chloroform-like odor. BP: 189°F UEL(77°F): 10.5% LEL(77°F): 8%
Vinyl Chloride	75-01-4	TWA 1 ppm	Carcinogen	TWA 1 ppm C 5 ppm [15-minute]	Ca [IDLH value has not been determined]	inhalation, skin, and/or eye contact (liquid)	Lassitude (weakness, exhaustion); abdominal pain, gastrointestinal bleeding; enlarged liver; pallor or cyanosis of extremities; liquid: frostbite; [potential occupational carcinogen]	Liver, central nervous system, blood, respiratory system, lymphatic system	Colorless gas or liquid (below 7°F) with a pleasant odor at high concentrations. BP: 7°F UEL: 33.0% LEL: 3.6% Flammable Gas
Xylene (m, o & p isomers)	108-38-3, 95-47-6, 106-42-3	TWA 100 ppm (435 mg/m^3) STEL 150 ppm	TWA 100 ppm (435 mg/m^3)	TWA 100 ppm (435 mg/m^3)	900 ppm	Skin absorption, inhalation, ingestion, skin, and/or eye contact	Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis	Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys	Colorless liquid with an aromatic odor BP: 282°F, 292°F, 281°F Fl. Pt. 82°F, 90°F, 81°F LEL: 1.1%, 0.9%, 1.1% UEL: 7.0%, 6.7%, 7.0% Classs C Flammable Liquid
Zinc	7440-66-6	TWA 10 mg/m3 (Inhalable fraction)	None established	TWA 10 mg/m3 (for zinc oxide fume)	None established	skin and/or eye contact, inhalation, ingestion	Irritation eyes, skin, respiratory tract; gastrointestinal disturbances	Eyes, skin, respiratory system	Bluish gray solid BP: 1664.6°F Flammable

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at 77 West Post Road, White Plains, New York

References

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Sax, N.I. and R.J. Lewis. 1989. Dangerous Properties of Industrial Materials. 7th Edition. Van Nostrand Reinhold. New York.
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NIOSH Pocket Guide to Chemical Hazards. 2005. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health

Abbreviations:

ACGIH – American Conference of Governmental Industrial Hygienists.
BP – boiling point at 1 atmosphere, °F
C – Ceiling, is a concentration that should not be exceeded during and part of the working exposure.
Ca - considered by NIOSH to be a potential occupational carcinogen
CAS# Chemical Abstracts Service registry number which is unique for each chemical.
Fl. Pt. – Flash point
IDLH - Immediately Dangerous to Life and Health concentrations represent the maximum concentration from which, in the event of respirator failure, one could escape within 30 minutes without a respirator and without experiencing any escape-impairing or irreversible health effects.
LEL – Lower explosive (flammable) limit in air, % by volume (at room temperature)
mg/m^3 – Milligrams of substance per cubic meter of air
NIOSH -National Institute for Occupational Safety and Health.
OSHA – Occupational Safety and Health Administration
PEL - OSHA Permissible Exposure Limit (usually) a time weighted average concentration that must not be exceeded during any 8 hour work shift of a 40 hr work week.
ppm – parts per million
REL – NIOSH Recommended Limit indicated a time weighted average concentration that must not be exceeded during any 10 hour work shift of a 40 hr work week
STEL – Short-term exposure limit
TLV -ACGIH Threshold Limit Values (usually 8 hour time weighted average concentrations).
TWA – 8-hour, time-weighted average
UEL – Upper explosive (flammable) limit in air, % by volume (at room temperature)

TABLE 2

ACTION LEVELS FOR WORKER BREATHING ZONE

Instrument	Action Level *	Level of Respiratory Protection/Action
PID	0 to <5 ppm (one minute sustained)	Level D *
PID	>5 to <50 ppm (one minute sustained)	Utilize APR (Level C)
PID	>50 to <100 ppm (one minute sustained)	Level B
PID	>100 ppm	Stop work** (ventilate, apply foam)
CGI/H2S Meter	<5 ppm	Level D
CGI/H2S Meter	>5% to <25 ppm	Level B
CGI/H2S Meter	>25 ppm	Stop work**
CGI/CO Meter	>25 ppm	Level B
CGI/CO Meter	>50 ppm	Stop work** (ventilate area)
CGI/O2 Meter	<10% LEL, in excavation 19.5% oxygen – 23.5%	Level D Level D
CGI/O2 Meter	>10% LEL, in excavation <19.5% or >23.5% oxygen	Allow to vent, apply foam** Stop work, Oxygen Deficient or Enriched ATM**
CGI/CO Meter	>25 to <35 ppm (five minutes sustained) >35 ppm	Allow to vent ** (five minutes sustained) Stop work **

Note:

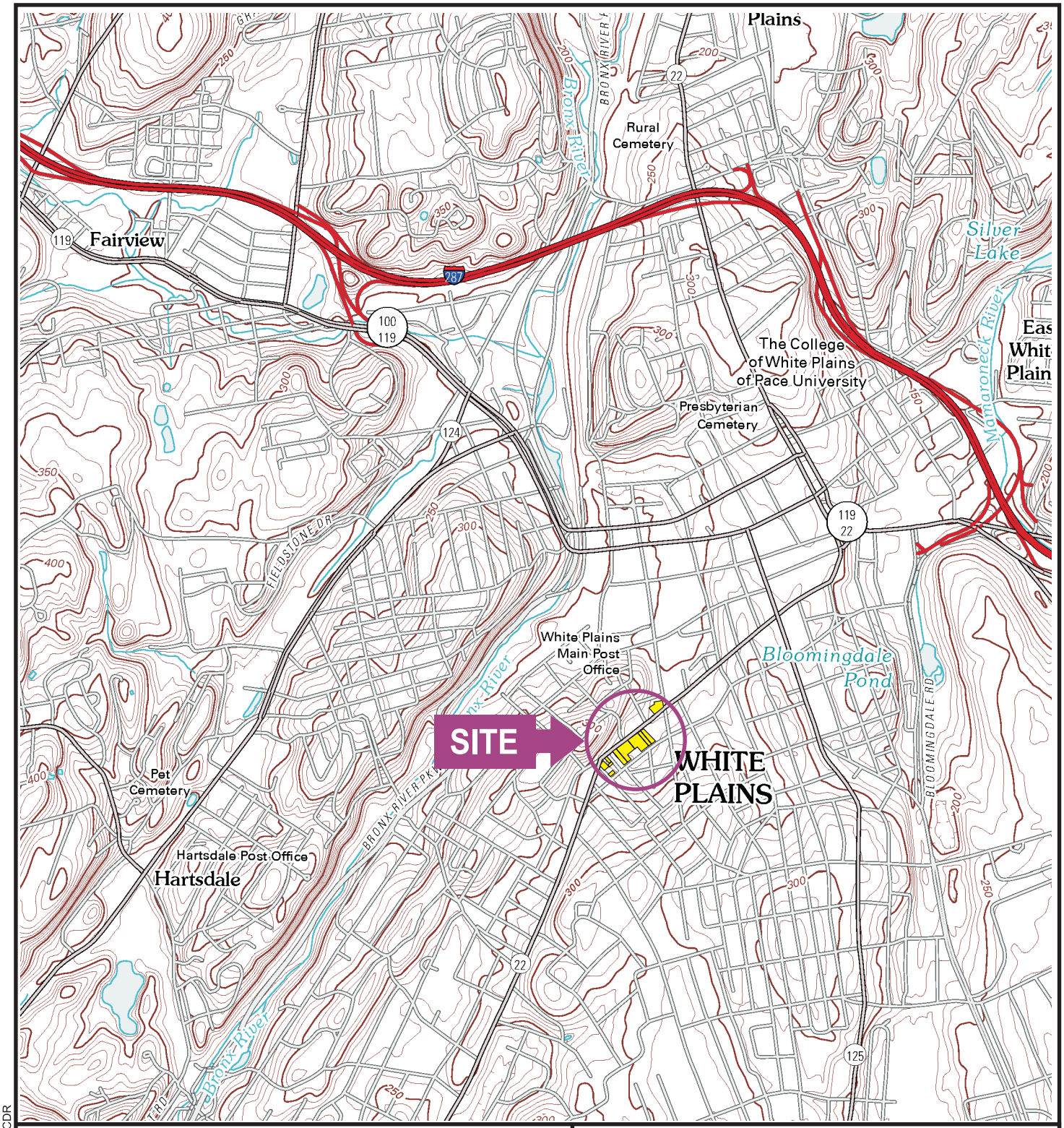
Action levels are based on above background levels.

* Instrument readings will be taken in the breathing zone of the workers, unless otherwise indicated.

** Suspend work in immediate area. Conduct air monitoring periodically to determine when work can continue. Implement mitigative measures.

FIGURES

1. Site Location Map
2. Site Layout Plan
3. Hospital Route Map



QUADRANGLE LOCATION

SOURCE:
USGS; 2010, White Plains, NY
7.5 Minute Topographic Quadrangle

N

0 2000'

Title:

SITE LOCATION MAP

SITE HASP
POST ROAD CORRIDOR - WHITE PLAINS
77 WEST POST ROAD, WHITE PLAINS, NY

Prepared for:

POST MAPLE 77, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: R.M.	Date: 15MAY13	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	1
Project Mgr.: R.M.	Project No.: 2195.0001Y000	
File: 2195.0001Y106.03.CDR		

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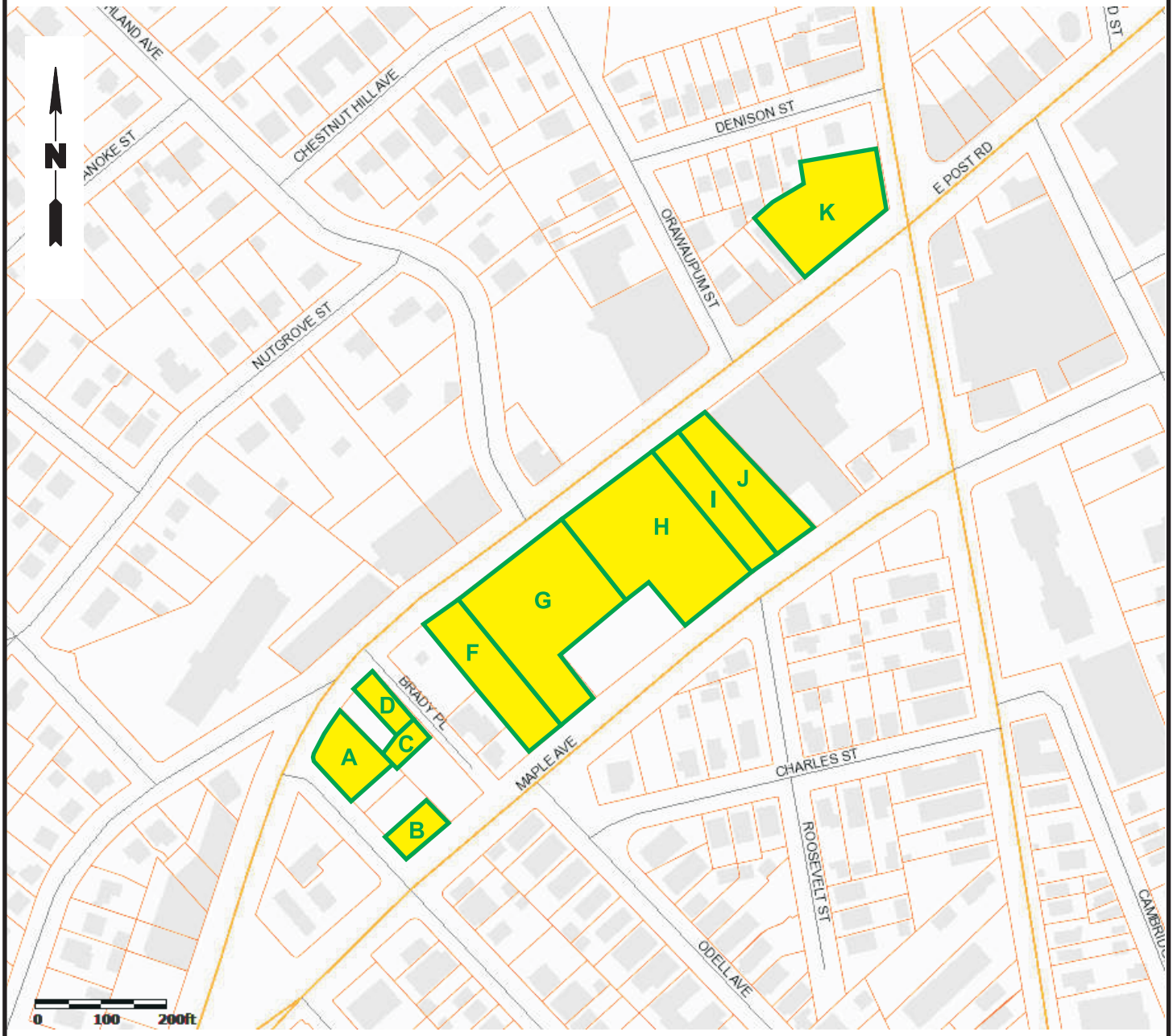

Legend

Site Location and Tax Parcel
(See tax parcel reference list below.)

SOURCE: Westchester County Geographic Information Systems Website.

REF.	ADDRESS	TAX I.D.
A	99-103 W. Post Rd	130.34-6-1
B	5 Rathbun Avenue	130.34-6-6
C	3 Brady Place	130.34-6-4
D	95 W. Post Rd	130.34-6-3
F	79-83 W. Post Rd	130.34-5-2
G	77 W. Post Rd	130.34-5-3
H	55 W. Post Rd	130.34-5-4
I	41-45 W. Post Rd	130.34-5-5
J	35 W. Post Rd	130.34-5-6
K	190-192 S. Lexington Ave	130.27-8-3

Title:

SITE LAYOUT

SITE HASP
POST ROAD CORRIDOR - WHITE PLAINS
77 WEST POST ROAD, WHITE PLAINS, NY

Prepared for:

POST MAPLE 77, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: R.M.	Date: 15MAY13	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	2
Project Mgr.: R.M.	Project No.: 2195.0001Y000	
File: 2195.0001Y106.03.CDR		

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DIRECTIONS

- Exit site and head northeast on W New York Post Road/ E Post Road toward Highland Avenue. (0.3 mi.)
- Arrive at White Plains Hospital on right at 41 E Post Road, White Plains, NY.

Title:

HOSPITAL ROUTE MAP

SITE HASP
POST ROAD CORRIDOR - WHITE PLAINS
77 WEST POST ROAD, WHITE PLAINS, NY

Prepared for:

POST MAPLE 77, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: R.M.	Date: 15MAY13	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	3
Project Mgr.: R.M.	Project No.: 2195.0001Y000	
File: 2195.0001Y106.03.CDR		

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APPENDICES

A. Job Safety Analysis
B. Heat and Cold Stress Guidelines
C. Medical Data Form
D. Accident Report and Investigation Form
E. Acord Automobile Loss Form
F. Near Loss Reporting Form
G. OSHA 300
H. Job Safety and Health Protection Poster
I. Health and Safety Briefing/Tailgate Meeting Form
J. Generic Community Air Monitoring Plan

APPENDIX A

Job Safety Analysis

JOB SAFETY ANALYSIS	Ctrl. No. GEN-004	DATE 12/6/2012	☐ NEW ☒ REVISED	PAGE 1 of 2

JSA TYPE CATEGORY:	WORK TYPE:	WORK ACTIVITY (Description):	
Generic	**Drilling**	**Direct Push Soil Borings / Well Installation**	
DEVELOPMENT TEAM	**POSITION / TITLE**	**REVIEWED BY:**	**POSITION / TITLE**
Jeffrey Wills	Project Hydrogeologist	Curtis Taylor	Health and Safety Officer
		Michael Ritorto	Project Hydrogeologist

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST ☒ HARD HAT ☐ LIFELINE / BODY HARNESS ☒ SAFETY GLASSES	☐ GOGGLES ☐ FACE SHIELD ☒ HEARING PROTECTION: (as needed) ☒ SAFETY SHOES: Composite-toe or steel toe boots	☐ AIR PURIFYING RESPIRATOR ☐ SUPPLIED RESPIRATOR ☒ PPE CLOTHING: Fluorescent reflective vest or high visibility clothing, Long Sleeve Shirt	☒ GLOVES: Leather, Nitrile and cut resistant ☒ OTHER: Insect Repellant, sunscreen (as needed)

REQUIRED AND / OR RECOMMENDED EQUIPMENT

Geoprobe or Truck-Mounted Direct Push Drill Rig, Hand Tools, Photoionization Detector and/or Multi-Gas Meter (or equivalent), Macrocore liners, Liner Opening Tool, 42" Cones & Flags

COMMITMENT TO LPS - All personnel onsite will actively participate in SPSA performance by verbalizing SPSAs throughout the day.

Exclusion Zone Policy – All non-essential personnel will maintain a distance of 10' feet from drilling equipment while moving/engaged.

"SHOW ME YOUR HANDS"
Driller and helper should show that hands are clear from controls and moving parts

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Mobilization of drilling rig (ensure the Subsurface Clearance Protocol and Drill Rig Checklist are completed)	1a. **CONTACT**: Equipment/property damage.	1a. The drill rig's tower/derrick will be lowered and secured prior to mobilization. 1a. A spotter should be utilized while moving the drill rig. If personnel move into the path of the drill rig, the drill rig will be stopped until the path is again clear. Use a spotter for all required backing operations. 1a. Set-up the work area and position equipment in a manner that eliminates or reduces the need for backing of support trucks and trailers. 1a. When backing up truck rig with an attached trailer use a second spotter if there is tight clearance simultaneously on multiple sides of the equipment or if turning angles limit driver visibility. 1a. Inspect the driving path for uneven terrain. Level or avoid if needed. 1a. Drill rig should have a minimum **exclusion zone of 10 feet** for non-essential personnel (i.e., driller helper, geologist) when the rig is moving/ in operation.
	1b. **FALL**: Slip/trip/fall hazards.	1b Inspect walking path for uneven terrain, weather-related hazards (i.e., ice, puddles, snow, etc.), and obstructions prior to mobilizing equipment. 1b. Do not climb over stored materials/equipment; walk around. Practice good housekeeping. 1b. Use established pathways and walk on stable, secure ground.
2. Raising tower/derrick of drill rig	2a. **CONTACT**: Overhead hazards.	2a. Prior to raising the tower/derrick, the area above the drilling rig will be inspected for wires, tree limbs, piping, or other structures, that could come in contact with the rig's tower and/or drilling rods or tools. 2a. Maintain a safe distance from overhead structures.
	2b. **CONTACT**: Pinch Points when raising the rig and instability of rig	2b. Inspect the equipment prior to use and avoid pinch points. 2b. Lower out riggers on rig to ensure stability prior to raising rig tower/derrick. 2b. If the rig needs to be mounted, be sure to use three points of contact.
3. Advancement of drilling equipment and well installation	3a. **CONTACT**: Flying debris	3a. Be aware of and avoid potential lines of fire and wear required PPE such as eye, ear, and hand protection.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

[2] A hazard is a potential danger. Break hazards into five types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

3. Advancement of drilling equipment and well installation (Continued)	3b. **EXPOSURE**: Noise and dust.	3b. Wet borehole area with sprayer to minimize dust. 3b. Stand upwind and keep body away from rig. 3b. Dust mask should be worn if conditions warrant. 3b. Wear hearing protection when the drill rig is in operation.
	3c. **CAUGHT**: Limb/extremity pinching; abrasion/crushing.	3c. Always wear leather gloves when making connections and using hand tools; wear cut-resistant (i.e., Kevlar) gloves when handling cutting tools. 3c. Inspect the equipment prior to use for potential pinch points. Keep hands away from being between pinch points and use of tools is preferable compared to fingers and hands. 3c. Inspect drill head for worn surface or missing teeth; replace if damaged or blunt. 3c. Ensure all jewelry is removed, loose clothing is secured, and PPE is secured close to the body. 3c. All non-essential personnel should stay away from the immediate work area; position body out of the line-of-fire of equipment. 3c. Drillers and helpers will understand and use the “Show Me Your Hands” Policy. 3c. Spinning rods/casing have an **exclusion zone of 10 feet** while in operation.
	3d. **CONTACT**: Equipment imbalance during advancement of drill equipment.	3d. Drillers will advance the borehole with caution to avoid causing the rig to become imbalanced and/or tip. 3d. The blocking and leveling devices used to secure the rig will be inspected by drillers and Roux personnel regularly to see if shifting has occurred. 3d. In addition, personnel and equipment that are non-essential to the advancement of the borehole will be positioned away from the rig at a distance that is at least as far as the boom is high (**minimum exclusion zone of 10 feet**).
	3e. **EXPOSURE**: Inhalation of contamination/vapors.	3e. Air monitoring using a calibrated photoionization detector (PID) will be used to periodically to monitor the breathing zone of the work area. 3e. If a reading of >5ppm is recorded, the Roux field personnel must temporarily cease work, instruct all Site personnel to step away from the area of elevated readings and inform the Roux PM of the condition. The Roux PM will then recommend additional precautions in accordance with the site specific health and safety plan.
	3f. **FALL**: Slip/trip/fall hazards.	3f. Contain drill cuttings and drilling water to prevent fall hazards from developing in work area. 3f. See 1b.
	3g. **EXERTION**: Potential for muscle strain/injury while lifting and installing well casings, lifting sand bags, and/or lifting rods.	3g. Keep back straight and bend at the knees. 3g. Utilize team lifting for objects over 50lbs. 3g. Use mechanical lifting device for odd shaped objects.
4. Decontaminate equipment.	4a. **EXPOSURE/CONTACT**: To contamination (e.g., Separate Phase Hydrocarbons (SPH), contaminated groundwater, vapors).	4a. Wear chemical-resistant disposable gloves and safety glasses. 4a. Contain decontamination water so that it does not spill. 4a. Use an absorbent pad to clean spills, if necessary. 4a. See 3b.
	4b. **EXPOSURE:** To chemicals in cleaning solution including ammonia.	4b. See 4a. Review MSDS to ensure appropriate precautions are taken and understood.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

[2] A hazard is a potential danger. Break hazards into five types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

JOB SAFETY ANALYSIS Ctrl. No. GEN-005	DATE 12/10/2012	☐ NEW ☒ REVISED	PAGE 1 of 2

JSA TYPE CATEGORY	WORK TYPE:	WORK ACTIVITY (Description):
Generic	**Gauging and Sampling**	**Gauging and Sampling**

DEVELOPMENT TEAM	POSITION / TITLE	REVIEWED BY:	POSITION / TITLE
Gina Masciello	Project Scientist	Curtis Taylor	SHSM
		Michael Ritorto	Project Hydrogeologist

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

☐ LIFE VEST	☐ GOGGLES	☐ AIR PURIFYING RESPIRATOR	☒ GLOVES: Leather, Nitrile and cut resistant
☒ HARD HAT	☐ FACE SHIELD	☐ SUPPLIED RESPIRATOR	☒ OTHER: Knee pads, Insect Repellant, sunscreen (as needed)
☐ LIFELINE / BODY HARNESS	☐ HEARING PROTECTION	☒ PPE CLOTHING: Fluorescent reflective vest or high visibility clothing	
☒ SAFETY GLASSES	☒ SAFETY SHOES: Composite-toe or steel toe boots		

REQUIRED AND / OR RECOMMENDED EQUIPMENT

42 inch Safety Cones, Caution Tape, Interface Probe and/or Water Level Meter, Buckets. Tools as needed: Socket Wrench, Screw Driver, Crow Bar, Mallet, and Wire Brush.

Commitment to LPS – All personnel onsite will actively participate in SPSA performance by verbalizing SPSAs throughout the day.

Assess [1]JOB STEPS	Analyze [2]POTENTIAL HAZARDS	Act [3]CRITICAL ACTIONS
1. Mobilization to monitoring well(s).	1a. **FALL:** Personal injury from slip/trip/fall due to uneven terrain and/or obstructions.	1a. Inspect pathway and plan for most suitable designated pathway prior to mobilization. 1a. Use established pathways, walk and/or drive on stable, secure, ground and avoid steep hills or uneven terrain.
	1b. **CONTACT:** With traffic/third parties.	1b. Identify potential traffic sources and delineate work area with 42 inch traffic safety cones. Position vehicle to protect against oncoming traffic. Use caution tape to provide a more visible delineation of the work area if necessary. 1b. Wear appropriate PPE including high visibility clothing or reflective vest. 1b. Face traffic, maintain eye contact with oncoming vehicles, and establish a safe exit route.
	1c. **EXPOSURE:** To biological hazards.	1c. Inspect work area for bees and insects. 1c. Use insect/tick repellent as necessary.
2. Open/close well.	2a. **OVEREXERTION:** Muscle strain.	2a. Use proper lifting techniques; keep back straight, lift with legs and bend knees when reaching to open/close well.
	2b. **CAUGHT:** Pinch points associated with removing/replacing manholes and working with hand tools.	2b. Wear leather gloves or cut resistant gloves when working with well cover and hand tools. 2b. Use proper tools (ratchet and pry bar for well cover) and inspect before use. 2b. Do not put fingers under well cover.
	2c. **EXPOSURE:** To potential hazardous vapors.	2c. No open flames/heat sources. 2c. To minimize exposure to vapors allow well to vent after opening it and before sampling activities begin. 2c. Stand up-wind, if possible, to avoid vapors.
3. Gauge well.	3a. **CONTACT:** With contamination (e.g. contaminated groundwater).	3a. Wear chemical-resistant disposable gloves and safety glasses when gauging well. 3a. Insert and remove probe slowly to avoid splashing. 3a. Use an absorbent pad to clean probe.
	3b. **CONTACT:** With traffic.	3b. See 1b.
4. Purge and sample well.	4a. **EXPOSURE/CONTACT:** To contamination (e.g., SPH, contaminated groundwater, vapors) and/or sample preservatives.	4a. Open and fill sample jars slowly to avoid splashing and contact with preservatives. 4a. Wear cut-resistant gloves and chemical-resistant disposable gloves when sampling. 4a. Fill sample containers over purge container to avoid spilling water onto the ground. 4a. Use an absorbent pad to clean spills.
Assess [1]JOB STEPS	**Analyze [2]POTENTIAL HAZARDS**	**Act [3]CRITICAL ACTIONS**

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

[2] A hazard is a potential danger. Break hazards into five types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension.

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

4. Purge and sample well (Continued).	4b. **CONTACT:** Personal injury from cuts, abrasions, or punctures by glassware or sharp objects.	4b. To avoid spills or breakage, place sample ware on even surface. 4b. Do not over tighten caps on glass sample ware. 4b. Wear cut-resistant (i.e., Kevlar) gloves and chemical-resistant disposable gloves when sampling and handling glassware (i.e., VOA vials) or when using cutting tools.
	4c. **EXERTION:** Muscle strain while carrying equipment.	4c. Use proper lifting techniques when handling/moving equipment; bend knees and keep back straight. 4c. Use mechanical assistance or team lifting techniques when equipment is 50lbs or heavier. 4c. Make multiple trips to carry equipment.
	4d. **CONTACT:** With traffic.	4d. See 1b.
5. Management of purge water.	5a. **EXPOSURE/CONTACT:** To contamination (e.g., SPH, contaminated groundwater, vapors).	5a. Do not overfill container and pour liquids in such a manner that they do not splash. 5a. Properly dispose of used materials/PPE in appropriate container in designated storage area.
	5b. **EXERTION:** Muscle strain from lifting/carrying and moving containers.	5b. Use proper lifting techniques when lifting / carrying or moving container(s) (see 4c.). 5b. Do not overfill container(s).
6. Decontaminate equipment.	6a. **EXPOSURE/CONTACT:** To contamination (e.g., SPH, contaminated groundwater, vapors).	6a. Work on the upwind side, where possible, of decon area. 6a. Wear chemical-resistant disposable gloves and safety glasses. 6a. Use an absorbent pad to clean spills.

[1] Each Job or Operation consists of a set of tasks / steps. Be sure to list all the steps needed to perform job.

[2] A hazard is a potential danger. Break hazards into five types: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards; Energy Source – electricity, pressure, compression/tension..

[3] Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the risk. List the recommended safe operating procedures. Say exactly what needs to be done - such as "use two persons to lift". Avoid general statements such as, "be careful".

APPENDIX B

Heat and Cold Stress Guidelines

Heat Stress

Heat stress is a significant potential hazard and can be associated with heavy physical activity and/or the use of personal protective equipment (PPE) in hot weather environments.

Heat cramps are brought on by prolonged exposure to heat. As an individual sweats, water and salts are lost by the body resulting in painful muscle cramps. The signs and symptoms of heat cramps are as follows:

- severe muscle cramps, usually in the legs and abdomen;
- exhaustion, often to the point of collapse; and
- dizziness or periods of faintness.

First aid treatment includes moving to a shaded area, rest, and fluid intake. Normally, the individual should recover within one-half hour. If the individual has not recovered within 30 minutes and the temperature has not decreased, the individual should be transported to a hospital for medical attention.

Heat exhaustion may occur in a healthy individual who has been exposed to excessive heat. The circulatory system of the individual fails as blood collects near the skin in an effort to rid the body of excess heat. The signs and symptoms of heat exhaustion are as follows:

- rapid and shallow breathing;
- weak pulse;
- cold and clammy skin with heavy perspiration;
- skin appears pale;
- fatigue and weakness;
- dizziness; and
- elevated body temperature.

First aid treatment includes cooling the victim, elevating the feet, and replacing fluids and electrolytes. If the individual has not recovered within 30 minutes and the temperature has not decreased, the individual should be transported to the hospital for medical attention.

Heat stroke occurs when an individual is exposed to excessive heat and stops sweating. This condition is classified as a **MEDICAL EMERGENCY**, requiring immediate cooling of the victim and transport to a medical facility. The signs and symptoms of heat stroke are as follows:

- dry, hot, red skin;
- body temperature approaching or above 105°F;
- large (dilated) pupils; and
- loss of consciousness – the individual may go into a coma.

First aid treatment requires immediate cooling and transportation to a medical facility.

Heat stress (heat cramps, heat exhaustion, and heat stroke) is a significant hazard if any type of protective equipment (semi-permeable or impermeable) which prevents evaporative cooling is worn in hot weather environments. Local weather conditions may require restricted work schedules in order to adequately protect personnel. The use of work/rest cycles (including working in the cooler periods of the day or evening) and training on the signs and symptoms of heat stress should help prevent heat-related illnesses from occurring. Work/rest cycles will depend on the work load required to perform each task, type of protective equipment, temperature, and humidity. Below is a table of the recommended Threshold Limit Values for Hot Environments from the American Conference of Industrial Hygienists (ACGIH)

	Work Load		
Work-Rest Regimen	**Light**	**Moderate**	**Heavy**
Continuous Work	86 °F	80 °F	77 °F
75% Work 25% Rest, each hour	87 °F	82 °F	78 °F
50% Work 50% Rest, each hour	89 °F	85 °F	82 °F
25% Work 75% Rest, each hour	90 °F	88 °F	86 °F

Note: These TLV's are based on the assumption that nearly all acclimatized, fully clothed workers with adequate water and salt intake should be able to function effectively under the given working conditions without exceeding a

deep body temperature of 38°C (100.4° F). They are also based on the assumption that the Wet Bulb Globe Temperature Index (WBGT) of the resting place is the same or very close to that of the workplace. Where the WBGT of the work area is different from that of the rest area, a time-weighted average should be used (consult the ACGIH 1992-1993 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices (1992).

These TLV's apply to physically fit and acclimatized individuals wearing light summer clothing. If heavier clothing that impedes sweat or has a higher insulation value is required, the permissible heat exposure TLV's must be reduced.

In addition, potable water and fluids containing electrolytes (e.g., Gatorade) will be available to replace lost body fluids.

Cold Stress

Cold stress is a danger at low temperatures and when the wind-chill factor is low. Prevention of cold-related illnesses is a function of whole-body protection. Adequate insulating clothing must be used when the air temperature is below 40°F. In addition, reduced work periods followed by rest in a warm area may be necessary in extreme conditions. Training on the signs and symptoms of cold stress should prevent cold-related illnesses from occurring. The signs and symptoms of cold stress include the following:

- severe shivering;
- abnormal behavior;
- slowing of body movement;
- confusion;
- weakness;
- stumbling or repeated falling;
- inability to walk;
- collapse; and/or
- unconsciousness.

First aid requires removing the victim from the cold environment and seeking medical attention immediately. Also, prevent further body heat loss by covering the victim lightly with blankets.

Do not cover the victim's face. If the victim is still conscious, administer hot drinks, and encourage activity, such as walking wrapped in a blanket.

Below is a table of the recommended Threshold Limit Values for Cold Environments from the American Conference of Industrial Hygienists (ACGIH):

Air Temperature	**No Wind**		**5 mph wind**		**10 mph wind**		**15 mph wind**		**20 mph wind**	
Degrees Fahrenheit °F	max. work period	# of breaks	max. work period	# of breaks	max. work period	# of breaks	max. work period	# of breaks	max. work period	# of breaks
-15 to -19 °F	(normal breaks) 1		(normal breaks) 1		75 min.	2	55 min.	3	40 min.	4
-20 to -24 °F	(normal breaks) 1		75 min.	2	55 min.	3	40 min.	4	30 min.	5
-25 to -29 °F	75 min.	2	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease	
-30 to -34 °F	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease			
-35 to -39 °F	40 min.	4	30 min.	5	Non-emergency work should cease					
-40 to -44 °F	30 min.	5	Non-emergency work should cease							
-45 °F and below	Non-emergency work should cease									

Notes:

1. Schedule applies to any 4-hour work period with moderate to heavy work activity, with warm-up breaks of ten (10) minutes in a warm location and with an extended break (e.g., lunch) at the end of the 4 hour work period in a warm location. For light to moderate work (limited physical movement), apply the schedule one step lower.
2. Table applies only if workers are wearing dry clothing and doing moderate to heavy work activity. For light to moderate work activity, move down one line to decrease maximum work period and increase the number of breaks.

APPENDIX C

Medical Data Form

MEDICAL DATA SHEET

This form must be completed by all onsite personnel prior to the commencement of activities, and shall be kept by the Site Health and Safety Officer during site activities. This form must be delivered to any attending physician when medical assistance is needed.

(This form should be typed or printed legibly.)

Site: _____

Name: _____ Home Telephone: _____
(Area Code/Telephone Number)

Address: _____

Date of Birth: _____ Height: _____ Weight: _____

Emergency Contact: _____ Telephone: _____
(Area Code/Telephone Number)

Drug Allergies or Other Allergies: _____

_____

Previous Illnesses or Exposures to Hazardous Substances: _____

_____

_____

Current Medication (Prescription and Non-Prescription): _____

_____

_____

Medical Restrictions: _____

_____

Name, Address and Telephone Number of Person Physician: _____

_____

APPENDIX D

Accident Report and Investigation Form

☐ **Roux Associates, Inc.** ☐ **Remedial Engineering, P.C.**
(Check applicable company name)

ACCIDENT REPORT

Joe Gentile, Corporate Health and Safety Manager
Cell: (610) 844-6911; Office: (856) 423-8800; Office FAX: (856) 423-3220; Home: (484) 373-0953

PART 1: ADMINISTRATIVE INFORMATION

Project #: _____
Project Name: _____
Project Location (street address/city/state)**:**
_____
_____

Client Corporate Name / Contact / Address / Phone #:
_____
_____
_____
_____
_____

Immediate Verbal Notifications Given To:

Corporate Health & Safety	☐Yes	☐No
Office Health & Safety	☐Yes	☐No
Office Manager	☐Yes	☐No
Project Principal	☐Yes	☐No
Project Manager	☐Yes	☐No
Client Contact	☐Yes	☐No

REPORT STATUS (time due):
☐ Initial (24 hr) ☐ Final (5-10 days)
Date: _____ Date: _____

Accident Report Delivered To:

Corporate Health & Safety	☐Yes	☐No
Office Health & Safety	☐Yes	☐No
Office Manager	☐Yes	☐No
Project Principal	☐Yes	☐No
Project Manager	☐Yes	☐No

REPORT TYPE: ☐ Loss ☐ Near Loss Estimated Costs: $ _____

OSHA CASE # Assigned by Corporate Health & Safety if Applicable: _____

Corporate Health & Safety Confirmed Final Accident Report
☐Yes ☐No

DATE OF INCIDENT: _____

TIME INCIDENT OCCURRED: _____ ☐AM ☐PM

INCIDENT LOCATION – City, State, and Country (If outside U.S.A.)
_____

INCIDENT TYPES: (Select most appropriate if Loss occurred.)
From lists below, please select the option that best categories the incident. When selecting an injury or illness, also indicate the severity level.

☐**INJURY** ☐**ILLNESS**

----------Severity Level----------

☐Fatality ☐First Aid ☐Medical
☐Restricted Work ☐Lost Time Treatment

OTHER INCIDENT TYPES

☐Spill / Release
Material involved:_____
Quantity (U.S. Gallons): _____

☐Misdirected Waste ☐Consent Order ☐NOV
☐Property Damage ☐Exceedance
☐Motor Vehicle ☐Fine / Penalty

ACTIVITY TYPE (Check most appropriate one.)

☐Decommissioning	☐Geoprobe	☐Sampling
☐Demolition	☐Motor Vehicle	☐System Start-up
☐Dewatering	☐Operations/ Maintenance	☐Trenching
☐Drilling		☐AST/UST Removal
☐Excavation	☐Pump/Pilot Test	☐Other_____
☐Gauging	☐Rigging/Lifting	

INJURY TYPE (Check all applicable.)

☐Abrasion	☐Occupational Illness
☐Amputation	☐Puncture
☐Burn	☐Rash
☐Cold/Heat Stress	☐Repetitive Motion
☐Inflammation	☐Sprain/Strain
☐Laceration	☐Other_____

BODY PART AFFECTED (Check all applicable.)

☐Respiratory	☐Shoulder	☐Face
☐Neck	☐Arm	☐Leg
☐Chest	☐Wrist	☐Knee
☐Abdomen	☐Hand/Fingers	☐Ankle
☐Groin	☐Eye	☐Foot/Toes
☐Back	☐Head	☐Other_____

I. PERSON(S) DIRECTLY / INDIRECTLY INVOLVED IN INCIDENT (Attach additional information as necessary/applicable.)

Name/Phone # of Each Person Directly/Indirectly Involved in Incident:	Designate: Roux/Remedial Employee Roux/Remedial Subcontractor Client Employee Client Contractor Third Party	As applicable, Current Occupation; Yrs in Current Occupation; Current Position; and Yrs in Current Position:	As applicable, Employer Name; Address; and Phone #:	As applicable, Supervisor Name; and Phone #:
1)				
2)				

II. PERSONS INJURED IN INCIDENT (Attach additional information as necessary/applicable.)

Name/Phone # of Each Person Injured in Incident:	Designate: Roux/Remedial Employee Roux/Remedial Subcontractor Client Employee Client Contractor Third Party	As applicable, Current Occupation; Yrs in Current Occupation; Current Position; and Yrs in Current Position:	As applicable, Employer Name; Address; and Phone #:	As applicable, Supervisor Name; and Phone #:	Description of Injury:
1)					
2)					

III. PROPERTY DAMAGED IN INCIDENT (Attach additional information as necessary/applicable.)

Property Damaged:	Property Location:	Owner Name, Address & Phone #:	Description of Damage:	Estimated Cost:
1)				$

2)				$

IV. WITNESSES TO INCIDENT (Attach additional information as necessary/applicable.)

Witness Name:	Address:	Phone #:
1)		
2)		

PART 2: WHAT HAPPENED AND INCIDENT DETAILS

PROVIDE FACTUAL DESCRIPTION OF INCIDENT (e.g., describe loss/near loss, injury, response / treatment).

I. AUTHORITIES/GOVERNMENTAL AGENCIES NOTIFIED (Attach additional information as necessary/applicable.)

Authority/Agency Notified:	Name/Phone #/Fax # of Person Notified:	Address of Person Notified:	Date & Time of Notification:	Exact Information Reported/Provided:

II. PUBLIC RESPONSES TO INCIDENT (if applicable)

Response/Inquiry By: (check one)	Entity Name:	Name/Phone # of Respondent/ Inquirer:	Address of Entity/Person:	Date & Time of Response/Inquiry:
☐Newspaper ☐Television ☐Community Group ☐Neighbors ☐Other _____				

Describe Response/Inquiry:

Roux/Remedial Response:

(Check all that apply.) (Attach photos, drawings, etc. to help illustrate the incident.)

ATTACHED INFORMATION: ☐Photo ☐Sketches ☐Vehicle Acord Form ☐Police Report ☐Other

Name(s) of person(s) who prepared Initial and Final Report:	**Title(s):**	**Phone number(s):**

PART 3: INVESTIGATION TEAM ANALYSIS

CONCLUSION: WHY IT HAPPENED (LIST CAUSAL FACTORS AND CORRESPONDING ROOT CAUSES)

(Root Causes: Lack of knowledge or skill, Doing the task according to procedures or acceptable practices takes more time or effort, Short-cuts or not following acceptable practices is reinforced or tolerated, Not following procedures or acceptable practices did not result in an accident, Lack of or inadequate procedures, Inadequate communications of expectations regarding procedures or acceptable practices, Inadequate tools or equipment, External Factors)

ROOT CAUSE(S) AND SOLUTION(S): HOW TO PREVENT INCIDENT FROM RECURRING

CAUSAL FACTOR	ROOT CAUSE		SOLUTION(S) [Must Match Root Cause(s)]		PERSON RESPONSIBLE	AGREED DUE DATE	ACTUAL COMPLETION DATE
			#	Solution(s)			
			1				
			2				
			3				

INVESTIGATION TEAM:

PRINT NAME	JOB POSITION	DATE	SIGNATURE

No One Gets Hurt!

APPENDIX E

Acord Automobile Loss Form

ACORD™ AUTOMOBILE LOSS NOTICE

DATE

PRODUCER	PHONE (A/C, No, Ext): 516-678-2626	COMPANY	NAIC CODE: 19410	MISCELLANEOUS INFO (Site & location code)
James C. Herrmann & Associates LTD 265 Sunrise Highway, Suite #20 Rockville Centre, NY 11570		Commerce & Industry		
		POLICY NUMBER CA-3777920	REFERENCE NUMBER	CAT #
CODE:	SUB CODE:	EFFECTIVE DATE 06/01/10	EXPIRATION DATE 06/01/11	DATE OF ACCIDENT AND TIME ☐ AM ☐ PM
AGENCY CUSTOMER ID:				PREVIOUSLY REPORTED ☐ YES ☐ NO

INSURED

NAME AND ADDRESS	SOC SEC # OR FEIN: 11-2579482
Roux Associates, Inc. 209 Shafter Street Islandia, NY 11749	
RESIDENCE PHONE (A/C, No) NA	BUSINESS PHONE (A/C, No, Ext) 631-232-2600

CONTACT

☐ CONTACT INSURED

NAME AND ADDRESS	WHERE TO CONTACT
Susan Sullivan, General Counsel Roux Associates, Inc. 209 Shafter Street Islandia, NY 11749	Fax Notice: 631-232-1525
	WHEN TO CONTACT
RESIDENCE PHONE (A/C, No)	BUSINESS PHONE (A/C, No, Ext) 631-232-2600

LOSS

LOCATION OF ACCIDENT (Include city & state)	AUTHORITY CONTACTED: REPORT #:	VIOLATIONS/CITATIONS
DESCRIPTION OF ACCIDENT (Use separate sheet, if necessary)		

POLICY INFORMATION

BODILY INJURY (Per Person)	BODILY INJURY (Per Accident)	PROPERTY DAMAGE	SINGLE LIMIT	MEDICAL PAYMENT	OTC DEDUCTIBLE	OTHER COVERAGE & DEDUCTIBLES (UM, no-fault, towing, etc)
LOSS PAYEE					COLLISION DED	

UMBRELLA/EXCESS ☐ UMBRELLA ☐ EXCESS CARRIER: LIMITS: AGGR PER CLAIM/OCC SIR/DED

INSURED VEHICLE

VEH #	YEAR	MAKE:	BODY TYPE:	PLATE NUMBER	STATE
		MODEL:	V.I.N.:		

OWNER'S NAME & ADDRESS	RESIDENCE PHONE (A/C, No): BUSINESS PHONE (A/C, No, Ext):
DRIVER'S NAME & ADDRESS ☐ (Check if same as owner)	RESIDENCE PHONE (A/C, No): BUSINESS PHONE (A/C, No, Ext):

RELATION TO INSURED (Employee, family, etc.)	DATE OF BIRTH	DRIVER'S LICENSE NUMBER	STATE	PURPOSE OF USE	USED WITH PERMISSION? ☐ YES ☐ NO
Employee					

DESCRIBE DAMAGE	ESTIMATE AMOUNT	WHERE CAN VEHICLE BE SEEN?	WHEN CAN VEH BE SEEN?	OTHER INSURANCE ON VEHICLE

PROPERTY DAMAGED

DESCRIBE PROPERTY (If auto, year, make, model, plate #)	OTHER VEH/PROP INS? ☐ YES ☐ NO	COMPANY OR AGENCY NAME: POLICY #:
OWNER'S NAME & ADDRESS		RESIDENCE PHONE (A/C, No): BUSINESS PHONE (A/C, No, Ext):
OTHER DRIVER'S NAME & ADDRESS ☐ (Check if same as owner)		RESIDENCE PHONE (A/C, No): BUSINESS PHONE (A/C, No, Ext):

DESCRIBE DAMAGE	ESTIMATE AMOUNT	WHERE CAN DAMAGE BE SEEN?

INJURED

NAME & ADDRESS	PHONE (A/C, No)	PED	INS VEH	OTH VEH	AGE	EXTENT OF INJURY

WITNESSES OR PASSENGERS

NAME & ADDRESS	PHONE (A/C, No)	INS VEH	OTH VEH	OTHER (Specify)

REMARKS (Include adjuster assigned)

REPORTED BY	REPORTED TO	SIGNATURE OF INSURED	SIGNATURE OF PRODUCER

Applicable in Arizona

For your protection, Arizona law requires the following statement to appear on this form. Any person who knowingly presents a false or fraudulent claim for payment of a loss is subject to criminal and civil penalties.

Applicable in Arkansas, District of Columbia, Kentucky, Louisiana, Maine, Michigan, New Jersey, New Mexico, Pennsylvania and Virginia

Any person who knowingly and with intent to defraud any insurance company or another person, files a statement of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact, material thereto, commits a fraudulent insurance act, which is a crime, subject to criminal prosecution and civil penalties. In D.C., LA, ME and VA insurance benefits may also be denied.

Applicable in California

Any person who knowingly files a statement of claim containing any false or misleading information is subject to criminal and civil penalties.

Applicable in Colorado

It is unlawful to knowingly provide false, incomplete, or misleading facts or information to an insurance company for the purpose of defrauding or attempting to defraud the company. Penalties may include imprisonment, fines, denial of insurance, and civil damages. Any insurance company or agent of an insurance company who knowingly provides false, incomplete, or misleading facts or information to a policy holder or claimant for the purpose of defrauding or attempting to defraud the policy holder or claimant with regard to a settlement or award payable from insurance proceeds shall be reported to the Colorado Division of Insurance within the Department of Regulatory Agencies.

Applicable in Florida and Idaho

Any person who knowingly and with the intent to injure, Defraud, or Deceive any Insurance Company Files a Statement of Claim Containing any False, Incomplete or Misleading information is Guilty of a Felony.*

* In Florida - Third Degree Felony

Applicable in Hawaii

For your protection, Hawaii law requires you to be informed that presenting a fraudulanet claim for payment of a loss or benefit is a crime punishable by fines or imprisonment , or both.

Applicable in Indiana

A person who knowingly and with intent to defraud an insurer files a statement of claim containing any false, incomplete, or misleading information commits a felony.

Applicable in Minnesota

A person who files a claim with intent to defraud or helps commit a fraud against an insurer is guilty of a crime.

Applicable in Nevada

Pursuant to NRS 686A.291, any person who knowingly and willfully files a statement of claim that contains any false, incomplete or misleading information concerning a material fact is guilty of a felony.

Applicable in New Hampshire

Any person who, with purpose to injure, defraud or deceive any insurance company, files a statement of claim containing any false, incomplete or misleading information is subject to prosecution and punishment for insurance fraud, as provided in RSA 638:20.

Applicable in New York

Any person who knowingly makes or knowingly assists, abets, solicits or conspires with another to make a false report of the theft, destruction, damage or conversion of any motor vehicle to a law enforcement agency, the Department of Motor Vehicles or an insurance company, commits a fraudulent insurance act, which is a crime, and shall also be subject to a civil penalty not to exceed five thousand dollars and the value of the subject motor vehicle or stated claim for each violation.

Applicable in Ohio

Any person who, with intent to defraud or knowing that he/she is facilitating a fraud against an insurer, submits an application or files a claim containing a false or deceptive statement is guilty of insurance fraud.

Applicable in Oklahoma

WARNING: Any person who knowingly and with intent to injure, defraud or deceive any insurer, makes any claim for the proceeds of an insurance policy containing any false, incomplete or misleading information is guilty of a felony.

APPENDIX F

Near Loss Reporting Form

NEAR LOSS REPORT FORM

Incident ID: _____

IMPORTANT: Do not include any personal non-work related medical information on this form

PART 1: ADMINISTRATIVE INFORMATION

Project Manager :		
Project Site Name:		
City:	**State/Province:**	**Country:**

PART 2: NEAR LOSS DETAILS

Date\Time Occurred (MM/DD/YYYY HH:MM)**:**	**Date\Time Submitted to IMPACT** (MM/DD/YYYY HH:MM)**:**

NEAR LOSS TYPE - What could have happened? - Select all that apply (1-7)

1. ☐ Fire / Explosion
2. ☐ Injury / Illness
3. ☐ Security (e.g theft, trespassing, vandalism)
4. ☐ Environmental (spill, permit exceedance, etc.)
5. ☐ Transportation of personnel (vehicle accident)
6. ☐ Property/Equipment Damage
7. ☐ Business Interruption

Event Leading to Potential Injury/Illness*:	**Activity:** Remediation	**Phase of Operation :** Remediation
Job Task*:	**Equipment Involved*:**	

WHAT HAPPENED? Do not include individuals' or company names. Ensure photos, sketches, etc. are not personally identifiable unless written consent has been obtained. **(NOTE: For IMPACT entry, this information must be in English.)**

Summary (1-2 sentences. Provide brief description of the incident. Provide facts only, no speculation or opinion)**:**

Near Loss Details (Brief factual details of what, where, when; include photos, sketches, etc. as attachments)**:**

Immediate Corrective Actions Taken:

NEAR LOSS INVOLVED:

Was a post-incident alcohol or drug test conducted? ☐ **1. Yes** ☐ **2. No**

Contractor Company Name:	**Subcontractor Company Name:**

PART 3: NEAR LOSS INVESTIGATION FINDINGS AND REPORT QUALITY REVIEW

Date Investigation Team Assigned (mm/dd/yyyy):

INVESTIGATION SUMMARY: Determine and list by number what behaviors and/or conditions may have contributed to the Near Loss. Then, use the "5-Why Technique" for each of these behaviors/conditions; provide a narrative for each that explains how the associated root cause(s) was determined. Do not include individuals' or company names. **(NOTE: For IMPACT entry, this information must be in English.)**

ROOT CAUSE NUMBER(S) AND SOLUTION(S): HOW TO REDUCE POSSIBILITY OF INCIDENT RECURRING

Selection of RCs and solutions reflects the analysis of investigation team and is not meant to be a legally binding conclusion as to the RC and/or solution.

Behavior/ Condition #	Root Cause # (1/line)	Solution(s) (must match Root Cause) (For IMPACT entry, solutions must be in English.)	Job Title Responsible for Completion	Completion Target Date	Completion Actual Date

QUALITY REVIEW Were the correct root cause(s) identified? Do root cause(s) and solution(s) match? Are solution(s) feasible / maintainable?

Job Title :	**Company :**

PART 4: VERIFICATION (Solutions Implemented) & VALIDATION (Solutions Effective)

Date	Solution	Verifier / Validator Job Title	Verifier / Validator Company	Details (of V & V performed)

* Use reference lists on the back side of this form

JOB TASK - Select the most appropriate one (primary job associated with incident-related work activity, avoid "Other" if possible)

- ♦ 1. Carbon Change
- ♦ 2. Construction
- ♦ 3. Demolition
- ♦ 4. Dewatering
- ♦ 5. Drilling (includes well
- ♦ 6. Excavation / Trenching
- ♦ 7. Gauging
- ♦ 8. Geoprobe / Direct Push
- ♦ 9. Mobil Remediation (includes vacuum event and chemical injection)
- ♦ 10. NAPL Recovery
- ♦ 11. O&M (remediation system)
- ♦ 12. Pavement Cutting
- ♦ 13. Pump Test
- ♦ 14. Sampling
- ♦ 15. Site Visit / Survey
- ♦ 16. Subsurface Clearance
- ♦ 17. System Install
- ♦ 18. System Startup
- ♦ 19. UST Removal (includes tank exposure and backfill)
- ♦ 20. Waste Management
- ♦ 21. Well Plugging/Abandonment
- ♦ 22. Other: _____

EVENT LEADING TO POTENTIAL INJURY/ILLNESS - Select the most appropriate one

Body Position/Force:

- ♦ 1. Line of Fire
- ♦ 2. Overexertion, Strain
- ♦ 3. Struck Against Object
- ♦ 4. Struck By Object
- ♦ 5. Personal Energy
- ♦ 6. Repetitive Strain Injury (RSI)
- ♦ 7. **Buried**
- ♦ 8. **Caught In, Under, Between**

Chemical Exposure:

- ♦ 9. Inhalation
- ♦ 10. Ingestion
- ♦ 11. Physical Contact

Contact By:

- ♦ 12. Animal, Insect, Plant
- ♦ 13. Blood / Potentially Infectious Materials
- ♦ 14. Electricity
- ♦ 15. Noise
- ♦ 16. Other Physical Agents
- ♦ 17. Radiation
- ♦ 18. Temperature Extremes
- ♦ 19. **Drowning**

Falls:

- ♦ 20. Fall, From Elevation
- ♦ 21. Fall, Same Level
- ♦ 22. Slip or Trip Without Fall
- ♦ 23. **Food Consumption**
- ♦ 24. **Suffocate/Asphyxiate (Lack of Oxygen)**
- ♦ 25. **Transportation Incident**
- ♦ 26. **Other** (describe)**:** _____

EQUIPMENT INVOLVED THAT CONTRIBUTED TO NEAR LOSS - Select all that apply

- ♦ 1. Air Stripper
- ♦ 2. API Separator
- ♦ 3. Automobile
- ♦ 4. Boom Material
- ♦ 5. Bulldozer
- ♦ 6. Cable
- ♦ 7. Carbon Drum / Vessel
- ♦ 8. Chain Block
- ♦ 9. Compressor, Air
- ♦ 10. Control Panel (local)
- ♦ 11. Crane (mobile)
- ♦ 12. Drill Rig
- ♦ 13. Drilling Equipment, Vacuum
- ♦ 14. Drum, Vertical
- ♦ 15. Dump Truck
- ♦ 16. Electric Heater
- ♦ 17. Electrical Power Supply
- ♦ 18. Engine, Internal Combustion
- ♦ 19. Equipment Safety Grounding
- ♦ 20. Excavator / Power Shovel
- ♦ 21. Exclusion Zone Equipment
- ♦ 22 Fan, Centrifugal / Blower
- ♦ 23 Fencing
- ♦ 24 Filter
- ♦ 25. Fire Extinguisher
- ♦ 26. Forklift
- ♦ 27. Front End Loader
- ♦ 28. Grader
- ♦ 29. Hand Tool, Hammer
- ♦ 30. Hand Tool, Knife
- ♦ 31. Hand Tool, Non-Powered
- ♦ 32. Hand Tool, Powered
- ♦ 33. Hand Tool, Powered, Drill
- ♦ 34. Hand Tool, Powered, Grinder
- ♦ 35. Hand Tool, Powered, Hydraulic Torque
- ♦ 36. Hand Tool, Powered, Saw
- ♦ 37. Hand Tool, Powered, Wrench, Impact
- ♦ 38. Hand Tool, Saw
- ♦ 39. Hand Tool, Screwdriver
- ♦ 40. Hand Tool, Shears
- ♦ 41. Hand Tool, Shovel
- ♦ 42. Hand Tool, Snip
- ♦ 43. Hand Tool, Wrench
- ♦ 44. Hoist
- ♦ 45, Hook/Clamp/Buckle, etc.
- ♦ 46. Jack
- ♦ 47. Ladder, Extension
- ♦ 48. Ladder, Platform
- ♦ 49. Ladder, Step
- ♦ 50. Lock / Tag
- ♦ 51. Maintenance Tool, General
- ♦ 52. Manifold
- ♦ 53, Manlift/Basket/Cherry Picker
- ♦ 54. Motor, Electric
- ♦ 55. Oxidizer
- ♦ 56. Pallet
- ♦ 57. Piping
- ♦ 58. Piping, Hose
- ♦ 59. Piping, Injection/Mixing Point
- ♦ 60. Powered Tools, Hydrojet
- ♦ 61. Pump, Centrifugal
- ♦ 62. Pump, Diaphragm
- ♦ 63. Pump, Reciprocating
- ♦ 64. Pump, Regenerative
- ♦ 65. Pump, Rotary
- ♦ 66. Pumps (transfer, electrical)
- ♦ 67. Pump, Submerged
- ♦ 68. PPE, Face Shield
- ♦ 69. PPE, Fall Protection
- ♦ 70. PPE, Gloves
- ♦ 71. PPE, Hard Hat / Helmet
- ♦ 72. PPE, Hearing Protection
- ♦ 73. PPE, Respiratory, Chemical
- ♦ 74. PPE, Respiratory, Particulate
- ♦ 75. PPE, Safety Glasses
- ♦ 76. PPE, Safety Goggles
- ♦ 77. PPE, Safety Shoes / Boots
- ♦ 78. PPE, Safety Vest / Clothing
- ♦ 79. Rope
- ♦ 80. Sampling Equipment, Bailer
- ♦ 81. Sampling Equipment, Geoprobe
- ♦ 82. Sampling Equipment, Hand Auger
- ♦ 83. Sampilng Equpment, PID
- ♦ 84. Sampling Equipment, Sample Container
- ♦ 85. Sampling Equipment, Split Spoon Sampler
- ♦ 86. Sling
- ♦ 87. Snow Blower
- ♦ 88. Snow Plow
- ♦ 89. Space Heater, Electric
- ♦ 90. System, Air Sparging
- ♦ 91. System, Carbon Treatment
- ♦ 92. System, Chemical Oxidation
- ♦ 93. System, Dual Phase Product Recover
- ♦ 94. System, Groundwater Pump and Treat
- ♦ 95. System, POET
- ♦ 96. System, Shed or Trailer
- ♦ 97. System, Vapor Extraction
- ♦ 98. System, Vapor Phase Treatment
- ♦ 99. System, Other
- ♦ 100. Tank, Surge
- ♦ 101. Tank, Underground
- ♦ 102. Telemetry System
- ♦ 103. Testing Devices
- ♦ 104. Tractor Trailer
- ♦ 105. Truck, Flatbed
- ♦ 106. Truck, Pickup
- ♦ 107. Truck, Tank Truck
- ♦ 108. Truck, Vacuum
- ♦ 109. Valve, Safety
- ♦ 110. Valve, Block
- ♦ 111. Well, Extraction
- ♦ 112. Well, Monitoring
- ♦ 113. Well, Recpvery
- ♦ 114. Winch
- ♦ 115. Wire Rope
- ♦ 116. No Equipment Involved
- ♦ 117. Not in List (describe): _____

ROOT CAUSE NUMBER(S)

PERSONAL FACTORS:

(1) LACK OF SKILL OR KNOWLEDGE
(2) DOING THE JOB ACCORDING TO PROCEDURES OR ACCEPTABLE PRACTICES TAKES MORE TIME OR EFFORT
(3) SHORT-CUTTING PROCEDURES OR ACCEPTABLE PRACTICES IS POSITIVELY REINFORCED OR TOLERATED
(4) IN PAST, DID NOT FOLLOW PROCEDURES OR ACCEPTABLE PRACTICES AND NO INCIDENT OCCURRED

JOB FACTORS:

(5) LACK OF OR INADEQUATE PROCEDURES
(6) INADEQUATE COMMUNICATION OF EXPECTATIONS REGARDING PROCEDURES OR ACCEPTABLE STANDARDS
(7) INADEQUATE TOOLS OR EQUIPMENT (available, maintained, etc.)

APPENDIX G

OSHA 300

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year _____

U.S. Department of Labor
Occupational Safety and Health Administration

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Form approved OMB no. 1218-0176

Establishment name _____

City _____ State _____

Identify the person			Describe the case			Classify the case											
						CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:					
(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g. Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g. Second degree burns on right forearm from acetylene torch)	Death	Days away from work	Remained at work		Away From Work (days)	On job transfer or restriction (days)	(M) Injury	Skin Disorder	Respiratory Condition	Poisoning	Hearing Loss	All other illnesses
								Job transfer or restriction	Other record-able cases								
						(G)	(H)	(I)	(J)	(K)	(L)	(1)	(2)	(3)	(4)	(5)	(6)
					Page totals	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

Injury	Skin Disorder	Respiratory Condition	Poisoning	Hearing Loss	All other illnesses
(1)	(2)	(3)	(4)	(5)	(6)

APPENDIX H

Job Safety and Health Protection Poster

You Have a Right to a Safe and Healthful Workplace.

IT'S THE LAW!

- You have the right to notify your employer or OSHA about workplace hazards. You may ask OSHA to keep your name confidential.
- You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace. You or your representative may participate in the inspection.
- You can file a complaint with OSHA within 30 days of discrimination by your employer for making safety and health complaints or for exercising your rights under the *OSH Act*.
- You have a right to see OSHA citations issued to your employer. Your employer must post the citations at or near the place of the alleged violation.
- Your employer must correct workplace hazards by the date indicated on the citation and must certify that these hazards have been reduced or eliminated.
- You have the right to copies of your medical records or records of your exposure to toxic and harmful substances or conditions.
- Your employer must post this notice in your workplace.

The *Occupational Safety and Health Act of 1970 (OSH Act)*, P.L. 91-596, assures safe and healthful working conditions for working men and women throughout the Nation. The Occupational Safety and Health Administration, in the U.S. Department of Labor, has the primary responsibility for administering the *OSH Act*. The rights listed here may vary depending on the particular circumstances. To file a complaint, report an emergency, or seek OSHA advice, assistance, or products, call 1-800-321-OSHA or your nearest OSHA office: • Atlanta (404) 562-2300 • Boston (617) 565-9860 • Chicago (312) 353-2220 • Dallas (214) 767-4731 • Denver (303) 844-1600 • Kansas City (816) 426-5861 • New York (212) 337-2378 • Philadelphia (215) 861-4900 • San Francisco (415) 975-4310 • Seattle (206) 553-5930. Teletypewriter (TTY) number is 1-877-889-5627. To file a complaint online or obtain more information on OSHA federal and state programs, visit OSHA's website at **www.osha.gov**. If your workplace is in a state operating under an OSHA-approved plan, your employer must post the required state equivalent of this poster.

1-800-321-OSHA
www.osha.gov

U.S. Department of Labor • **Occupational Safety and Health Administration** • **OSHA 3165**

APPENDIX I

Health and Safety Briefing/ Tailgate Meeting Form

HEALTH AND SAFETY BRIEFING / TAILGATE MEETING FORM

Site Name / Location _____

Date: _____ Weather Forecast: _____

Names of Personnel Attending Briefing

_____ _____ _____

_____ _____ _____

_____ _____ _____

Planned Work

_____

_____

_____

Instrument Calibration: Instrument/Time/Cal. Gas/Cal. Concentration/Actual Concentration

_____

_____

_____

Items Discussed

_____

_____

_____

_____

_____

Work Permit Type and Applicable Restrictions

_____

_____

_____

Signatures of Attending Personnel

_____ _____ _____

_____ _____ _____

_____ _____ _____

APPENDIX J

Generic
Community Air Monitoring Plan

APPENDIX J

C360129 HASP, May 2013
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

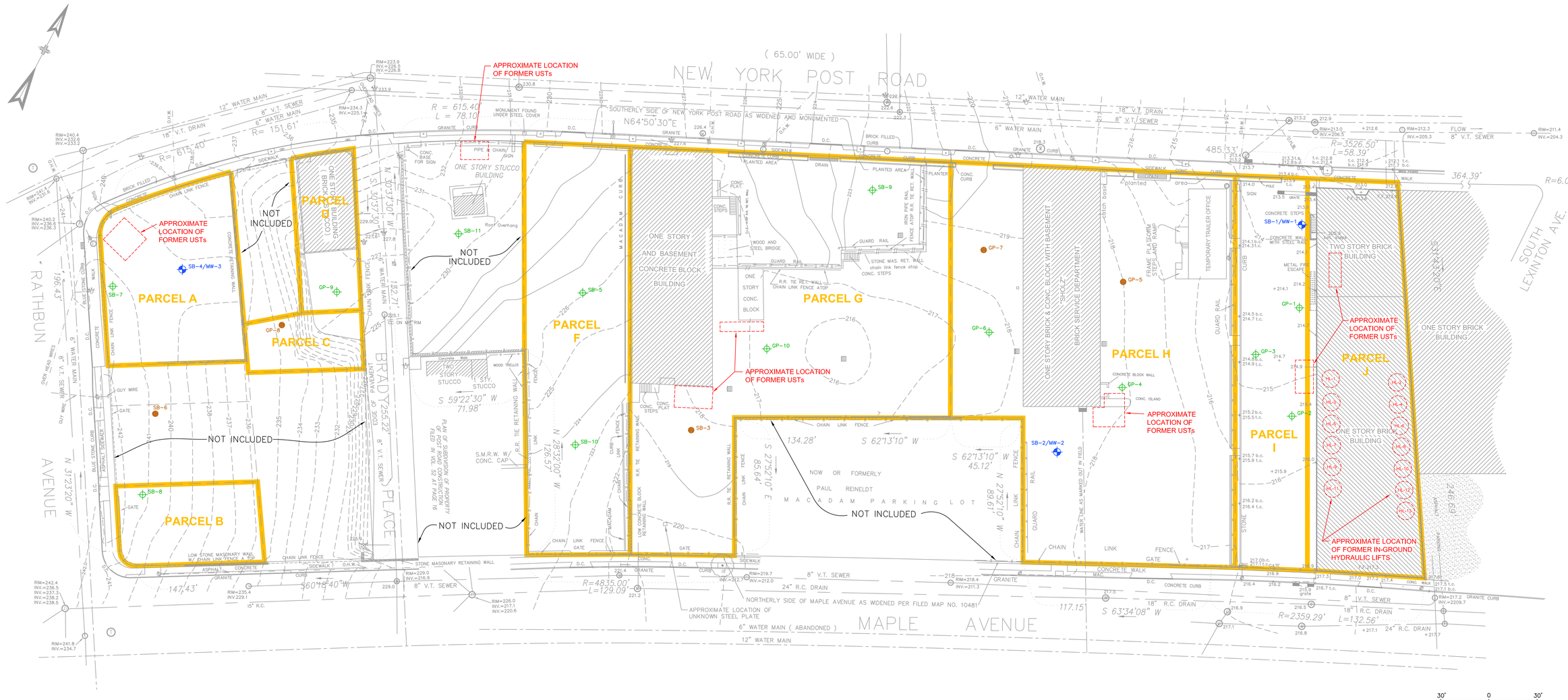
1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

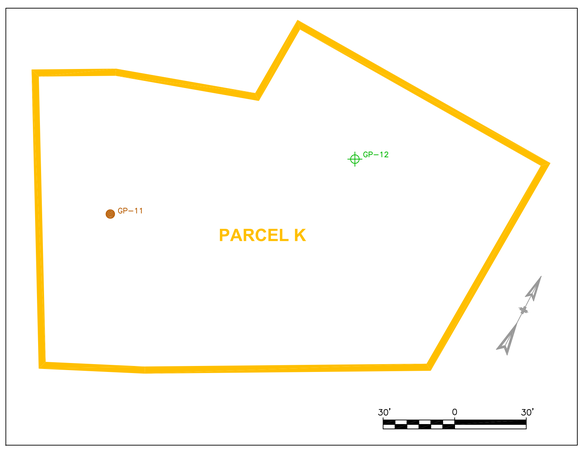
2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

PLATES

1. Site Plan
2. Soil and Groundwater Sample Exceedances
3. Proposed Soil Boring/Monitoring Well Locations





LEGEND

- EXISTING SOIL BORING COMPLETED AS TEMPORARY WELL
- EXISTING BORING COMPLETED AS MONITORING WELL
- EXISTING SOIL BORING
- MANHOLE
- CATCH BASIN
- BELL TELE. MANHOLE
- DRAIN
- DRAIN
- ELECTRIC MANHOLE
- UTILITY POLE
- SEWER MANHOLE
- TREE PIT (TYP. 5' x 5' & 2" dia. TREES) ALONG THE NEW YORK POST RD.
- D.C. DROP CURB
- O.H.W. OVER HEAD WIRES

ELEVATIONS SHOWN HEREON REFER TO THE CITY OF WHITE PLAINS DATUM.

Title:

SITE PLAN

RIWP
POST ROAD CORRIDOR – WHITE PLAINS
77 WEST POST ROAD, WHITE PLAINS, NY

Prepared For:

POST MAPLE 77, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: R.M.	Date: 28MAY13	PLATE
Prepared by: J.A.D.	Scale: AS SHOWN	1
Project Mgr: R.M.	Project: 2195.0001Y	
File: 2195.0001Y106.01.DWG		

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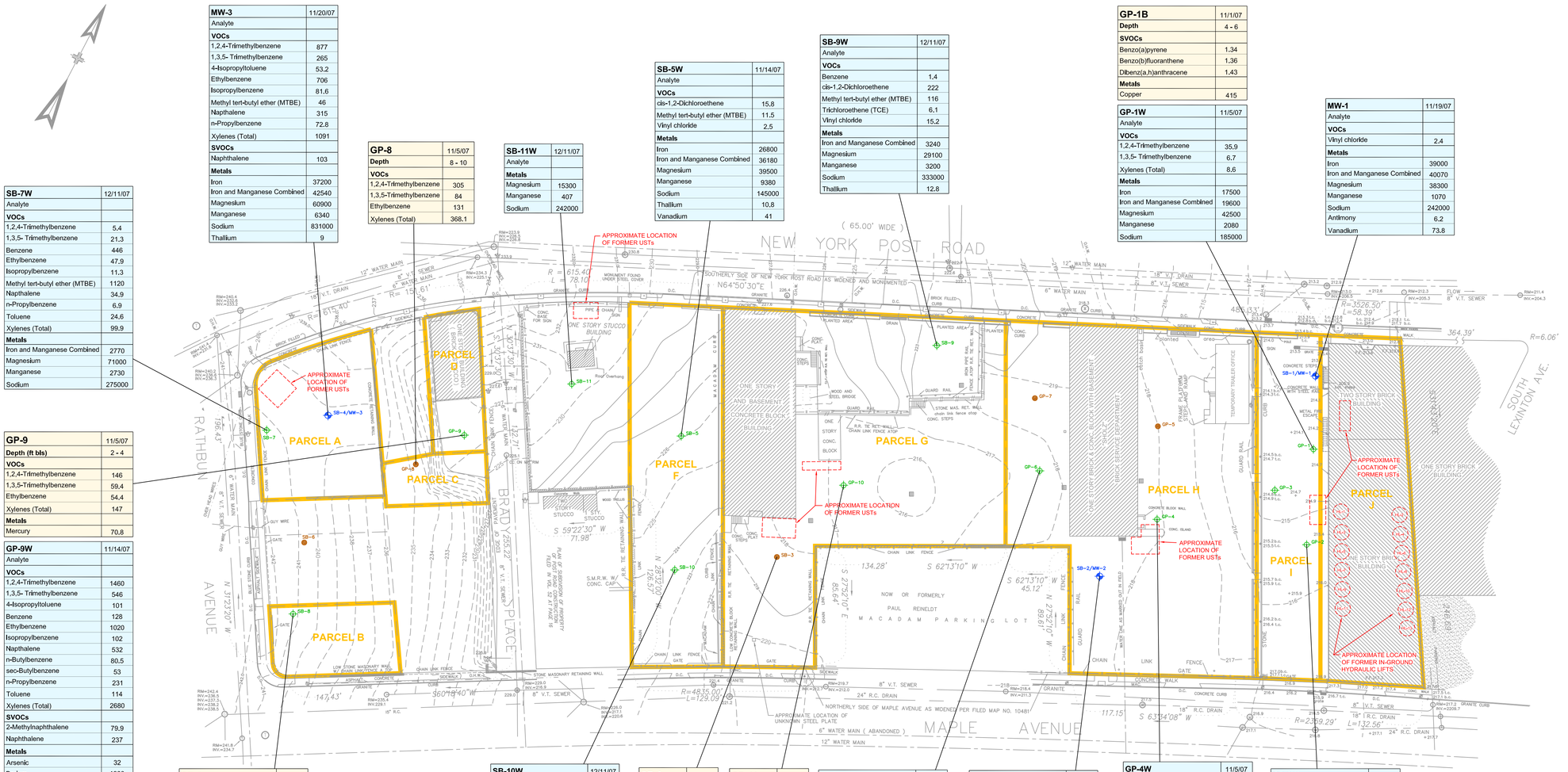


MW-3	11/20/07
Analyte	
VOCs	
1,2,4-Trimethylbenzene	877
1,3,5- Trimethylbenzene	265
4-Isopropyltoluene	53.2
Ethylbenzene	706
Isopropylbenzene	81.6
Methyl tert-butyl ether (MTBE)	46
Napthalene	315
n-Propylbenzene	72.8
Xylenes (Total)	1091
SVOCs	
Naphthalene	103
Metals	
Iron	37200
Iron and Manganese Combined	42540
Magnesium	60900
Manganese	6340
Sodium	831000
Thallium	9

GP-8	11/5/07
Depth	8 - 10
VOCs	
1,2,4-Trimethylbenzene	305
1,3,5-Trimethylbenzene	84
Ethylbenzene	131
Xylenes (Total)	368.1

SB-11W	12/11/07
Analyte	
Metals	
Magnesium	15300
Manganese	407
Sodium	242000

SB-5W	11/14/07
Analyte	
VOCs	
cis-1,2-Dichloroethene	15.8
Methyl tert-butyl ether (MTBE)	11.5
Vinyl chloride	2.5
Metals	
Iron	26800
Iron and Manganese Combined	36180
Magnesium	39500
Manganese	9380
Sodium	145000
Thallium	10.8
Vanadium	41

SB-9W	12/11/07
Analyte	
VOCs	
Benzene	1.4
cis-1,2-Dichloroethene	222
Methyl tert-butyl ether (MTBE)	116
Trichloroethene (TCE)	6.1
Vinyl chloride	15.2
Metals	
Iron and Manganese Combined	3240
Magnesium	29100
Manganese	3200
Sodium	333000
Thallium	12.8

GP-1B	11/1/07
Depth	4 - 6
SVOCs	
Benzo(a)pyrene	1.34
Benzo(b)fluoranthene	1.36
Dibenz(a,h)anthracene	1.43
Metals	
Copper	415

GP-1W	11/5/07
Analyte	
VOCs	
1,2,4-Trimethylbenzene	35.9
1,3,5- Trimethylbenzene	6.7
Xylenes (Total)	8.6
Metals	
Iron	17500
Iron and Manganese Combined	19600
Magnesium	42500
Manganese	2080
Sodium	185000

MW-1	11/19/07
Analyte	
VOCs	
Vinyl chloride	2.4
Metals	
Iron	39000
Iron and Manganese Combined	40070
Magnesium	38300
Manganese	1070
Sodium	242000
Antimony	6.2
Vanadium	73.8

SB-7W	12/11/07
Analyte	
VOCs	
1,2,4-Trimethylbenzene	5.4
1,3,5- Trimethylbenzene	21.3
Benzene	446
Ethylbenzene	47.9
Isopropylbenzene	11.3
Methyl tert-butyl ether (MTBE)	1120
Napthalene	34.9
n-Propylbenzene	6.9
Toluene	24.6
Xylenes (Total)	99.9
Metals	
Iron and Manganese Combined	2770
Magnesium	71000
Manganese	2730
Sodium	275000

GP-9	11/5/07
Depth (ft bls)	2 - 4
VOCs	
1,2,4-Trimethylbenzene	146
1,3,5-Trimethylbenzene	59.4
Ethylbenzene	54.4
Xylenes (Total)	147
Metals	
Mercury	70.8

GP-9W	11/14/07
Analyte	
VOCs	
1,2,4-Trimethylbenzene	1460
1,3,5- Trimethylbenzene	546
4-Isopropyltoluene	101
Benzene	128
Ethylbenzene	1020
Isopropylbenzene	102
Napthalene	532
n-Butylbenzene	80.5
sec-Butylbenzene	53
n-Propylbenzene	231
Toluene	114
Xylenes (Total)	2680
SVOCs	
2-Methylnaphthalene	79.9
Naphthalene	237
Metals	
Arsenic	32
Barium	1800
Beryllium	4.4
Chromium	148
Copper	410
Iron	163000
Iron and Manganese Combined	172100
Magnesium	92200
Manganese	9100
Sodium	328000
Nickel	141
Lead	351
Vanadium	328

SB-8	12/5/07
Depth (ft bls)	12 - 14
VOCs	
1,2,4-Trimethylbenzene	147

SB-8W	12/11/07
Analyte	
VOCs	
1,2,4-Trimethylbenzene	60.7
1,3,5- Trimethylbenzene	333
4-Isopropyltoluene	6.5
Benzene	28.6
Ethylbenzene	340
Isopropylbenzene	48.8
Methyl tert-butyl ether (MTBE)	62.5
Napthalene	147
sec-Butylbenzene	17.6
n-Propylbenzene	170
Xylenes (Total)	749
SVOCs	
Naphthalene	44.4
Metals	
Iron and Manganese Combined	3950
Magnesium	90200
Manganese	3900
Sodium	385000

SB-10W	12/11/07
Analyte	
VOCs	
Methyl tert-butyl ether (MTBE)	29.1
Metals	
Iron and Manganese Combined	2880
Magnesium	40800
Manganese	2850
Sodium	177000

SB-3	11/7/07
Depth (ft bls)	3 - 4
Metals	
Arsenic	21.9

GP-10	11/5/07
Depth (ft bls)	2 - 4
Metals	
Barium	483
Lead	1730

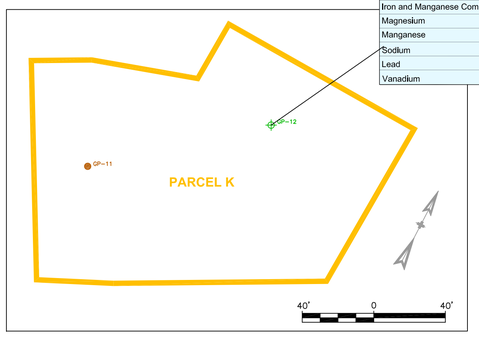
GP-6W	11/5/07
Analyte	
Metals	
Mercury	6.4
Arsenic	231
Barium	6070
Beryllium	18.8
Cadmium	27.5
Chromium	1640
Copper	1520
Iron	2160000
Iron and Manganese Combined	2175800
Magnesium	384000
Manganese	15000
Sodium	241000
Nickel	942
Lead	5750
Antimony	126
Thallium	112
Vanadium	1620
Zinc	5080

MW-2	11/19/07
Analyte	
Metals	
Iron	22400
Iron and Manganese Combined	23830
Magnesium	34700
Manganese	1430
Sodium	136000
Vanadium	44.4

GP-4W	11/5/07
Analyte	
VOCs	
Benzene	4.6
cis-1,2-Dichloroethene	22.4
n-Propylbenzene	129
Vinyl chloride	21.9
Metals	
Iron	48600
Iron and Manganese Combined	48980
Magnesium	9120
Manganese	383
Sodium	96800
Lead	137
Vanadium	41.8

GP-2W	11/5/07
Analyte	
Metals	
Iron	21500
Iron and Manganese Combined	23730
Magnesium	69700
Manganese	2230
Sodium	257000
Antimony	52
Vanadium	32.9

GP-12W	11/14/07
Analyte	
VOCs	
cis-1,2-Dichloroethene	11.3
Methyl tert-butyl ether (MTBE)	22.8
Metals	
Chromium	54.6
Iron	42700
Iron and Manganese Combined	45200
Magnesium	62800
Manganese	2500
Sodium	27700
Lead	120
Vanadium	72.4



SOIL STANDARDS

Parameter (Concentrations in mg/kg)	Standards* (mg/kg)
VOCs	
1,2,4-Trimethylbenzene	52
1,3,5-Trimethylbenzene	52
Ethylbenzene	41
Xylenes (Total)	100
SVOCs	
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Dibenz(a,h)anthracene	0.33
Metals	
Arsenic	16
Barium	400
Copper	270
Lead	400
Mercury	1

mg/kg Milligrams per kilogram
* NYSDEC Part 375 Restricted Residential Soil Cleanup Objectives
NYSDEC New York State Department of Environmental Conservation
VOCs Volatile Organic Compounds
SVOCs Semivolatile Organic Compounds

GROUNDWATER STANDARDS

Parameter (Concentrations in µg/L)	Standards* (µg/L)
VOCs	
1,2,4-Trimethylbenzene	5
1,3,5- Trimethylbenzene	5
4-Isopropyltoluene	5
Benzene	1
cis-1,2-Dichloroethene	5
Ethylbenzene	5
Isopropylbenzene	5
Methyl tert-butyl ether (MTBE)	10
Napthalene	10
n-Butylbenzene	5
sec-Butylbenzene	5
n-Propylbenzene	5
Toluene	5
Trichloroethene (TCE)	5
Vinyl chloride	2
Xylenes (Total)	5
SVOCs	
Benzo(a)anthracene	0.002
Naphthalene	10
Metals	
Mercury	0.7
Arsenic	25
Barium	1000
Beryllium	3
Cadmium	5
Chromium	50
Copper	200
Iron	300
Iron and Manganese Combined	500
Magnesium	7
Manganese	300
Sodium	20000
Nickel	100
Lead	25
Antimony	3
Thallium	1
Vanadium	14
Zinc	2000

µg/L Micrograms per liter
* NYSDEC AWQSGVs
NYSDEC New York State Department of Environmental Conservation
AWQSGVs Ambient Water-Quality Standards and Guidance Values
VOCs Volatile Organic Compounds
SVOCs Semivolatile Organic Compounds

LEGEND

- EXISTING SOIL BORING COMPLETED AS TEMPORARY WELL
- EXISTING BORING COMPLETED AS MONITORING WELL
- EXISTING SOIL BORING
- MANHOLE
- CATCH BASIN
- BELL TELE. MANHOLE
- DRAIN
- DRAIN
- ELECTRIC MANHOLE
- UTILITY POLE
- SEWER MANHOLE
- TREE PIT (TYP. 5' x 5' & 2" dia. TREES) ALONG THE NEW YORK POST RD.
- D.C. DROP CURB
- O.H.W. OVER HEAD WIRES

ELEVATIONS SHOWN HEREON REFER TO THE CITY OF WHITE PLAINS DATUM.

TYPICAL DATA BOX INFORMATION

SAMPLE ID	GP-10	11/5/07	SAMPLE DATE
	Depth (ft bls)	2 - 4	SAMPLE DEPTH
ANALYTES	Metals		
	Barium	483	CONCENTRATION
	Lead	1730	

Title:

SOIL AND GROUNDWATER SAMPLE ANALYTICAL EXCEEDANCES

RIWP
POST ROAD CORRIDOR – WHITE PLAINS
77 WEST POST ROAD, WHITE PLAINS, NY

Prepared For:
POST MAPLE 77, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: R.M.	Date: 28MAY13	PLATE
Prepared by: B.H.C.	Scale: AS SHOWN	2
Project Mgr: R.M.	Project: 2195.0001Y	
File: 2195.0001Y106.01.DWG		

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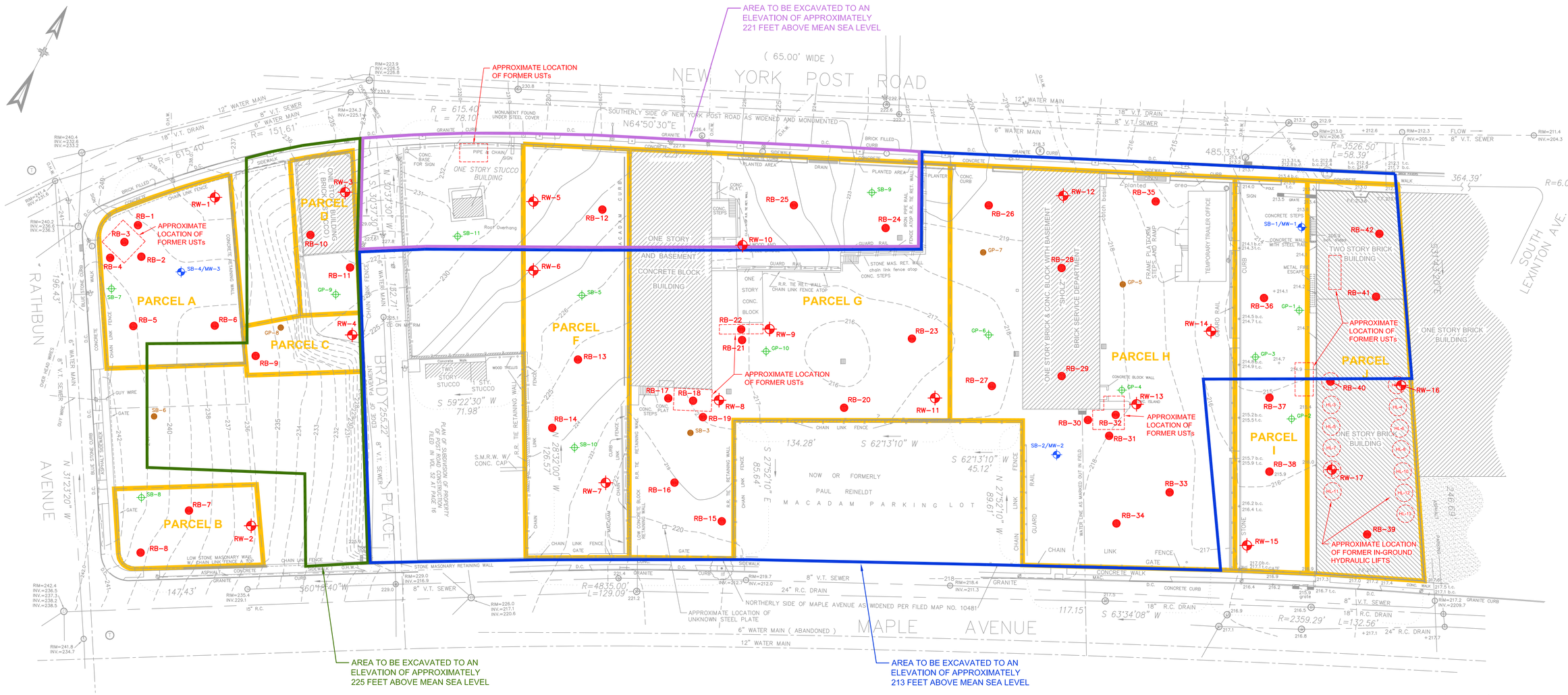

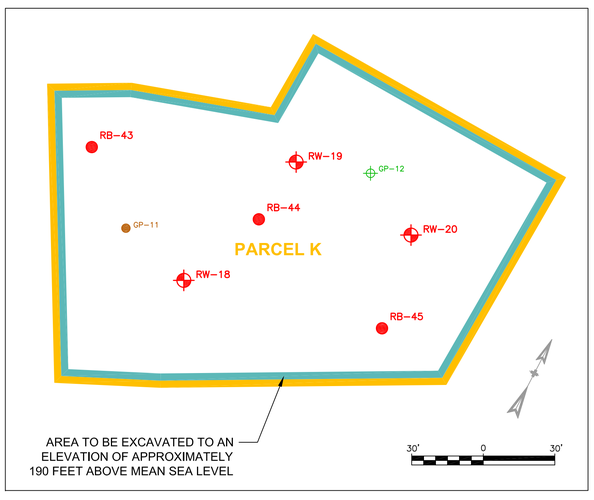

LEGEND

- PROPOSED SOIL BORING/MONITORING WELL
- PROPOSED SOIL BORING
- EXISTING SOIL BORING COMPLETED AS TEMPORARY WELL
- EXISTING BORING COMPLETED AS MONITORING WELL
- EXISTING SOIL BORING
- MANHOLE
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- D.C. DROP CURB
- O.H.W. OVER HEAD WIRES

NOTES

1. ELEVATIONS SHOWN HEREON REFER TO THE CITY OF WHITE PLAINS DATUM.
2. ELEVATIONS AT AREAS OUTSIDE SHOWN EXCAVATIONS ARE NOT EXPECTED TO CHANGE.

Title:

PROPOSED SOIL BORING/MONITORING WELL LOCATIONS

RIWP
POST ROAD CORRIDOR – WHITE PLAINS
77 WEST POST ROAD, WHITE PLAINS, NY

Prepared For:

POST MAPLE 77, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: R.M.	Date: 04OCT13	PLATE
Prepared by: J.A.D.	Scale: AS SHOWN	3
Project Mgr: R.M.	Project: 2195.0001Y	
File: 2195.0001Y106.01.DWG		

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