



October 5, 2009

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**RE: Waste Characterization Letter Report  
555 West 34<sup>th</sup> Street (the "Site")  
New York, New York  
BCP Site #C231049  
Langan Project No.: 170081001**

Dear Mr. Brecher:

Langan Engineering and Environmental Services, P.C. (Langan) prepared this Waste Characterization Report at the request of The Monian Group to characterize the subsurface soil and groundwater within the designated Amtrak Easement at 555 West 34<sup>th</sup> Street, NY, NY (Site). A site location map is provided as Figure 1. This report was prepared to characterize on-site soil and groundwater prior to proposed soil excavation to facilitate acceptance of the excavated soil at a disposal facility. In addition, the characterization of the groundwater will determine disposal options during dewatering.

## **BACKGROUND**

The Site is located at 555 West 34<sup>th</sup> Street, NY, NY. The Site is bounded to the north by the Javits Center, to the east by Eleventh Avenue, to the south by W. 30<sup>th</sup> Street, and to the west by Twelfth Avenue. The Site is identified as the Amtrak Easement. The area of investigation is located west of the bulkhead wall where the ground elevation is approximately 20 feet below street grade. A Site Plan is provided as Figure 2.

Previous remedial investigations conducted in the vicinity of the Site (not in the Amtrak Easement) identified historic urban fill. Analytical results of samples collected indicated several constituents at concentrations above New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum #4046 (TAGM)

Recommended Soil Cleanup Objectives (RSCOs) and New Jersey Department of Environmental Protection (NJDEP) Non-Residential Soil Cleanup Criteria (SCC).

## **SAMPLING METHODOLOGIES**

A grid system was developed to ensure that samples collected are representative of soil conditions across the Site. Five soil borings were advanced in each of the six grids (G-1 through G-6) to depths ranging from 4 feet below ground surface (bgs) to 16 feet bgs. Temporary groundwater monitoring wells were installed in G-1, G-5 and G-6. Seventy soil samples, including 57 grab and 13 composite soil samples, and two groundwater samples were collected. A groundwater sample could not be collected from the temporary well MW-2 located in G-6 due to lack of recharge. Composite samples were collected by homogenizing soil collected from two and three soil borings within each sampling grid. A Sample Location Plan is provided on Figure 3 and daily field reports are located in Attachment A.

Prior to the initiation of the waste characterization activities a ground penetrating radar (GPR) survey was conducted by Hydro Tech Environmental, Inc. (Hydro Tech). During drilling, removal of the surface water utilizing a Vac-truck was ongoing. Following the GPR survey to delineate underground utilities, direct push Geoprobe<sup>®</sup> borings were advanced by Hydro Tech, and soil and groundwater samples were collected by Langan on July 8, 2009, and August 3 through August 14, 2009. A Langan engineer supervised the site work, screened the soil samples for organic vapors using a hand held photo-ionization detector (PID), and collected waste characterization samples for laboratory analysis. The soil samples were also inspected for staining, odors, and other indications of contamination. Observations were recorded in a field log by the field engineer at the time of inspection.

Soil borings were advanced to depths ranging from a minimum of 4 feet bgs to a maximum of 16 feet bgs. Soil samples were collected continuously from the ground surface to the final sample depth using dedicated, acetate-lined Geoprobe<sup>®</sup> Macrocore samplers in four-foot intervals. Soil boring logs are presented in Attachment B. During drilling of the soil borings in G-1 and G-2 a slight petroleum odor was noted.

Temporary monitoring wells were installed in grids G-1 (MW-1), G-5 (MW-3) and G-6 (MW-2). As previously discussed, groundwater samples were collected from MW-1 and MW-3. Prior to groundwater sampling the temporary wells were purged to remove standing water and silt. The groundwater sample was collected using a peristaltic pump.

Soil and groundwater samples were collected in laboratory-supplied sample containers with appropriate preservatives, placed in ice-chilled coolers, and shipped under chain-of-custody protocol to York Analytical Laboratories, Inc. (York), a New York State Department of Health (NYSDOH)-certified laboratory located in Stratford, Connecticut. Grab soil samples were analyzed for total petroleum hydrocarbons (TPHs) - diesel range organics (DRO) via EPA Method 8015.

Composite soil samples were analyzed for full NJDEP SCC in accordance with applicable U.S. Environmental Protection Agency (EPA) Methods. The analysis included Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs); Target Analyte List (TAL) metals; polychlorinated biphenyls (PCBs); pesticides; Toxicity Characteristics Leaching Procedure (TCLP) metals; Resource Conservation and Recovery Act (RCRA) characteristics; and paint filter.

Groundwater samples were analyzed for TCL VOCs; TCL SVOCs; TAL metals; and New York City Department of Environmental Protection (NYCDEP) sewer discharge parameters.

## **RESULTS**

Laboratory analytical results from the soil samples were compared to NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs), NJDEP Residential SCC, and EPA RCRA Maximum Contaminant Concentrations for the Hazardous Characteristics. Groundwater sampling results were compared to NYSDEC Technical and Operations Guidance Series (TOGS) Ambient Water Quality Standards (AWQS) as well as NYCDEP Bureau of Wastewater Treatment Limitations for Effluent to Sanitary or Combined Sewers. Laboratory data results are presented in Tables 1 through 5 and Figures 3, 4, and 5. Laboratory analytical data are included in Attachment C.

Based on the field observations and the analytical results, we present the following summary:

### Soil Samples

Fill material consisting of silt, fine sand, and fine gravel was encountered at depths ranging from 3 to 12 feet bgs. Native soil, consisting of brown silty sand, was observed in several

borings below the historic fill. Depth of native soil ranged from three to eight feet bgs. No native soil was observed in grids G-4 and G-6.

No VOCs were detected at concentrations exceeding applicable standards. Two SVOCs exceed the NJDEP Residential SCCs in grids G-3 and G-4. Pesticides exceed 6 NYCRR Part 375 standards in grids G-3, G-4, G-5 and G-6. PCBs were also noted in G-6 above these standards.

Metals exceedances were detected above NYSDEC Part 375 Unrestricted Use SCOs in 10 of the 12 composite samples. The only soil samples that did not exhibit elevated metals were the composite samples from grid G-1.

Characteristics of RCRA hazardous waste were not detected in the site-wide composite soil sample and all TCLP metal results are below RCRA Hazardous Waste Regulatory Levels for the Toxicity Characteristics. TPH-DRO results ranged from non-detect to 429 milligrams per kilogram (mg/kg) throughout the Site.

#### Groundwater Samples

Groundwater was encountered at depths between approximately 1.5 to 2.5 feet bgs at the Site. Benzene was detected at the NYSDEC TOGS regulatory standard in MW-1 but below NYCDEP Discharge Standards. One PCB, Aroclor-1016 was detected above regulatory standards in MW-3, but below NYCDEP Discharge Standards. SVOCs were not detected in either well. Select metals were detected at concentrations exceeding their respective NYSDEC AWQS.

## **CONCLUSIONS**

Based on the soil analytical results from the Site all soils within this area are considered a non-hazardous regulated solid waste in New York State, and should be handled and disposed of accordingly. Prior to proposed excavation, these analytical results can be utilized in the selection of an acceptable soil disposal facility. The groundwater analytical results can be used to obtain a NYCDEP Sewer Discharge Permit, if dewatering is required.

Should you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,  
**Langan Engineering and Environmental Services, P.C.**



Susan Bianchetti, CPG  
Project Manager

SFB:sfb

Enclosure(s):

Figure 1 to Figure 5  
Table 1 to Table 5  
Attachment A – Daily Field Reports  
Attachment B – Soil Boring Logs  
Attachment C – Laboratory Analytical Data

cc: File

## **ATTACHMENTS**