

PHASE II ENVIRONMENTAL SITE ASSESSMENT

**135-145 New Main Street
Yonkers, New York 10701**

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ACT#: 5377-YONY

Prepared for:

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1.0 INTRODUCTION AND SCOPE OF THE ASSESSMENT

On April 4, 6, 10, and 11, 2006, Advanced Cleanup Technologies, Inc. (ACT) performed a Phase II Environmental Site Assessment (Phase II ESA) of the property located at 135-145 New Main Street, Yonkers, New York (the "Site"). The purpose of the Assessment was to determine whether certain Recognized Environmental Conditions identified in ACT's Phase I Environmental Site Assessment dated March 10, 2006 have impacted the environmental quality of the subject property. These conditions include suspect inactive underground storage tanks located beneath the sidewalks adjacent to the subject property. In addition, other potential areas of soil and ground water contamination were investigated as part of this Assessment.

The scope of work included the performance of a Ground-Penetrating Radar (GPR) Survey and the installation and sampling of eleven (11) soil borings. The scope of work also included the following:

- In-field screening of soil samples with a photoionization detector;
- Laboratory analysis of eleven (11) soil samples for volatile organic compounds (VOCs) in accordance with United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds (SVOCs) in accordance with EPA Method 8270, and TAL metals in accordance with EPA Method 6010; and
- A comparison of soil quality data to NYSDEC Technical and Administrative Guidance Memorandum (TAGM), HWR-94-4046, revised December 20, 2000.

2.0 SITE BACKGROUND

2.1 Site Location

The Site is located in a commercial area in the southern portion of Westchester County in New York. A Locational Diagram showing the site and its immediate vicinity is provided as Figure 1. The property is located along the east side of New Main Street and the south side of Ann Street.

One-story commercial buildings are located to the north and south of the subject property. A five-story parking garage building is located to the west of the subject property. The Saw Mill River is located to the east of the subject property.

2.2 Site Description

The Site consists of seven commercial buildings which are connected. The building at 135 New Main Street is two-stories. The remaining buildings are one-story. The buildings each contain full basements. The footprint of the combined building is approximately 12,000 square feet in area and the property is approximately 19,000 square feet in area. Pertinent site features are presented in Figure 2.

A total of seven (7) concrete patches were identified in the sidewalk to the west of the buildings during the Phase I site inspection. No pipes leading into the basement of the buildings were identified along the western basement foundation wall. These concrete patches were suspected of being associated with fill pipes for suspect inactive underground storage tanks (USTs) located beneath the sidewalk to the west of the building.

2.3 Geology and Hydrogeology

The topography of the area is generally gently sloped towards the west. The vicinity of the Site is approximately 55 feet above mean sea level.¹ The ground surface in the vicinity of the property is covered with asphalt and concrete pavement. The general direction of ground water flow beneath the Site is anticipated to be toward the Hudson River west of the Site. The bedrock which

¹

U.S.G.S. 7.5 Minute Series Topographic Map, Yonkers, New York

underlies this portion of Westchester County is generally metamorphic in character and Ordovician and Precambrian in age. It lies close to the surface and is exposed in many locations.

3.0 FINDINGS AND RESULTS OF THE ASSESSMENT

3.1 Ground-Penetrating Radar

On April 4, 2006, ACT performed a Ground-Penetrating Radar (GPR) survey of the sidewalks to the west and north of the Site to determine the presence and precise location of any suspect inactive USTs. The survey was performed utilizing an SIR-2000 GPR Unit and a 500 megahertz antenna. In a GPR survey, the radar signal generated by the GPR antenna reflects off geologic materials and foreign objects in the subsurface and back to the antenna based upon differences in the conductivity and dielectric constant of subsurface features. The radar signal is then converted into an electrical signal which is visually displayed on a video monitor.

The radar antenna was pulled along transects spaced 5 feet apart in north-south and east-west directions, forming a rectangular grid over the ground surface. The survey was performed at a range to allow for the identification of anomalies to a depth of approximately 10 feet below ground surface.

No reflections indicative of USTs were observed throughout the surveyed area. The surveyed areas produced horizontal reflections of low to moderate conductivity representative of native soil or fill material.

GPR is primarily used as a preliminary survey of a property for the development of subsurface information prior to a formal site assessment. Surface cover, subsurface soil types or buried debris can mask or conceal the presence and precise locations of underground structures or even suggest their presence when none exist. The presence, absence or precise locations of underground structures indicated during a GPR survey should be confirmed by excavation or other invasive procedures.

3.2 Soil Quality

Soil quality was investigated during the Phase II Assessment by advancing eleven (11) soil borings at the Site, as indicated in Figure 2. These soil borings are designated SB-01 through SB-11. Soil borings SB-01 through SB-04 were installed in the rear exterior yard, and soil borings SB-05 through SB-11 were installed in the basement of each Site building.

Soil borings SB-01 through SB-04 were installed utilizing a Geoprobe style truck-mounted drill rig. Due to limited access, the soil borings in the basements were advanced utilizing a portable hydraulic percussion hammer. Continuous soil samples were collected utilizing five foot macro core soil samplers containing acetate liners. All sampling equipment was decontaminated between sampling events. Soil samples were observed for lithology as well as visual and olfactory evidence of contamination. The soil samples were screened in-field using a Photovac Microtip Photo-ionization detector (PID). The PID is capable of detecting organic vapors at concentrations as low as 0.1 parts per million (ppm).

The soil borings were advanced until refusal was encountered. Refusal was encountered at 7 to 9 feet below grade in the exterior soil borings and 2 to 3 feet below grade in the interior soil borings. Soil sample lithology generally consisted of fill material identified as light to dark brown silty fine sand with rock fragments and concrete, brick, and coal pieces. Layers of coal and ash were encountered at soil boring SB-02 at 0.5 to 3 feet below grade and 7 feet below grade (3 inches), and at soil boring SB-03 at 0.5 to 2 feet below grade. Ground water was not encountered in any of the soil borings. No detectable PID readings were measured in the soil borings, and there was no visual or olfactory evidence of contamination in the soil borings.

In the absence of detectable PID readings and lack of visual or olfactory evidence of contamination, soil samples from the entire boring depths were composited and placed into laboratory-issued containers (with the exception of SB-02, where a discrete sample of the coal and ash layer at 0.5 feet below grade was containerized). A total of eleven (11) soil samples were transmitted to Environmental Testing Laboratories, Inc. (ETL, ELAP No. 10969) for analysis of VOCs utilizing EPA Method 8260, SVOCs utilizing EPA Method 8270, and TAL metals utilizing SW846 Method 6010. The laboratory results were compared to NYSDEC TAGM, HWR-94-

4046, revised December, 2000 (NYSDEC TAGM). Summaries of the laboratory analyses of soil samples are presented in Tables 1, 2, and 3. Copies of the laboratory reports are presented in Appendix B.

As indicated in Table 1, a total of five (5) VOCs were detected at trace or low concentrations below the regulatory standards in eight (8) of the eleven (11) soil samples. No VOCs were detected in the soil samples from SB-02, SB-06, and SB-07. There is no particular pattern to the presence of the VOCs that would be indicative of a specific release; therefore, these VOCs are likely associated with background concentrations in urban fill material.

As indicated in Table 2, several SVOCs were detected in all of the soil samples. The SVOCs present are indicative of urban fill material. This is best indicated by the soil sample from soil boring SB-02, which was collected directly from a coal and ash layer. The heavier polycyclic aromatic hydrocarbons (PAHs) were prevalent in SB-02. Many of these SVOCs in SB-02 were detected significantly in exceedance of the regulatory standards by one order of magnitude.

The PAHs detected in the sample from SB-02 were also prevalent in the other soil samples. The highest concentrations of SVOCs were detected in the soil samples from SB-02, SB-03, and SB-04. The more elevated concentrations are likely due to the significant amount of coal and ash observed in these soil borings in comparison with the remaining soil boring locations, where less significant coal and ash material was observed. Total SVOCs ranged from 175 parts per billion (ppb) in the soil sample from SB-06 to 660,396 ppb in the soil sample from SB-04. It should be noted that TAGM also presents cleanup objectives based on an assessment of the concentration of total SVOCs equal to or greater than 500,000 ppb. Only the soil sample from SB-04 exceeded the standard of 500,000 ppb.

As indicated in Table 3, TAL metals in soil are compared with the regulatory standards which are represented by the NY State Recommended Soil Cleanup Objective or an established range of concentrations associated with the Eastern USA region. TAL metals in urban areas generally tend to be at the high end of the Eastern USA background range of values. Several metals were

detected slightly (within one order of magnitude) above the maximum Eastern USA background values. Of all the metals, only mercury was found slightly (within one order of magnitude) to moderately (one order of magnitude) above its Eastern USA background value in all of the soil samples. The elevated metals can be attributable to urban fill material throughout the vicinity and thus can be considered representative of site background values.

4.0 CONCLUSIONS

The results of the Phase II Environmental Site Assessment are contained in this report. Based upon this investigation, ACT makes the following conclusions concerning the environmental quality of the property.

- The Ground Penetrating Radar survey conducted at exterior portions of the Site did not reveal any anomalies suggestive of underground storage tanks at the Site.
- There is evidence of fill material beneath the Site containing significant amounts of coal and ash which is likely the source of the elevated semi-volatile organic compounds and metals in the subsurface soil and not a specific release.
- The sporadic presence and trace levels of volatile organic compounds in the soil are not indicative of any specific releases; rather, it is likely that these compounds are prevalent at low concentrations throughout the surrounding area.

5.0 RECOMMENDATIONS

ACT makes the following recommendations with respect to the above conclusions.

- In order to direct the proper handling of contaminated material, a Material Management Plan should be prepared for future construction activities including waste characterization, transportation and off-site disposal.
- A Construction Health and Safety Plan should be prepared to insure the proper handling of all excavated soil and safety of construction workers or other people occupying the site during its development.

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6.0 EXCLUSIONS AND DISCLAIMER

The purpose of this assessment was to assess the potential environmental liabilities at the subject site with respect to data which Advanced Cleanup Technologies, Inc. has accumulated during the Phase II Environmental Site Assessment. The conclusions presented in this report are based solely on the observations of the site at the time of the investigation. Data provided, including information provided by others, was utilized in assessing the site conditions. The accuracy of this report is subject to the accuracy of the information provided. Advanced Cleanup Technologies, Inc. is not responsible for areas not surveyed or information not collected. This report is given without a warranty or guarantee of any kind, expressed or implied. Advanced Cleanup Technologies, Inc. assumes no responsibility for losses associated with the use of this report.

FIGURES

TABLES

APPENDIX A

FIELD NOTES

APPENDIX B

LABORATORY RESULTS