APPENDIX A

Geophysical Survey Report
October 26, 2015

Dave Steiner
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5167 South Park Avenue
Hamburg, NY 14075

Transmitted via email to: Dave Steiner [dsteiner@sjbegs.com]

Dear Mr. Steiner:

Subject: Geophysical Survey Results, 109 Canal Street, Rome, NY

1.0 INTRODUCTION

This letter report presents the results of the geophysical investigation performed for SJB Empire in support of their environmental investigation of a property located at 109 Canal Street in Rome, NY (the Site). The Site is currently a vacant industrial complex of buildings.

The geophysical investigation was designed to geophysically characterize the subsurface and focus a follow-up intrusive investigation, if warranted. The information provided herein is intended to assist SJB Empire with their assessment of potential environmental concerns at the Site. AMEC Foster Wheeler Environment and Infrastructure, Inc. (Amec) performed EM61 data acquisition on October 16, 2015. There were no vehicles present within the survey area at the time of the investigation however several surface metal objects and brush were presented which precluded acquisition of meaningful data in the vicinity of those objects.

2.0 METHODOLOGY

Reference grids were installed at the site to facilitate data acquisition along lines spaced three feet apart. Two grids were installed; the main grid encompassed the majority of the survey area accessible from Canal St. The second grid was installed to serve as a reference grid for the portion of the property surveyed north of the building complex adjacent to Route 26.

The grids were marked with orange and white spray paint with select coordinates labeled to allow subsequent work if necessary. For the main grid, grid coordinate 100N, 100E was established at the southwest corner of the site building immediately north of the portion of the building that was recently demolished. “Grid North” was taken as the direction parallel to the west wall of that building. For the second grid, coordinate 200N,200E was established at the
The site was geophysically surveyed using the Geonics EM61. The EM61 unit is a high sensitivity, high resolution time domain electromagnetic (TDEM) metal detector that can detect both ferrous and nonferrous metallic objects. It has an approximate investigation depth of 10 feet. The processing console is contained in a backpack worn by the operator which is interfaced to a digital data logger. The transmitter and two receiver coils are located on a two-wheeled cart that is pulled by the operator.

The device’s transmitter coil generates a pulsed primary EM field at a rate of 150 pulses per second, inducing eddy currents into the subsurface. The decay rates of these eddy currents are measured by two, 3.28 foot by 1.64 foot (1 meter by ½ meter) rectangular receiver coils. By taking the measurements at a relatively long time frame after termination of the primary pulse, the response is practically independent of the survey area's terrain conductivity. Specifically, the decay rates of the eddy currents are much longer for metals than for normal soils allowing the discrimination of the two.

Data are collected from the EM61’s two receiver coils. One of the receiver coils is located coincident to the transmitter coil. The other receiver coil is located 1.31 feet (0.4 meters) above the transmitter coil. Data from the top receiver coil are stored on Channel 1 of a digital data logger. Data from the bottom receiver coil are stored on Channel 2 of the data logger. Channel 1 and Channel 2 data are simultaneously recorded at each station location. The instrument responses are recorded in units of milliVolts (mV). Data were recorded digitally by a data logger at a rate of approximately 2 measurements per foot along the survey lines which were spaced 3 feet apart.
3.0 RESULTS

The EM61 data for the site are shown in Figures 1 and 2. The color bar to the right of the map indicates the colors associated with the respective measured values. Areas suspected to be free of buried metals are shown as color shades of blue. All areas exhibiting a response greater than background (0 to 30 mVolts) likely contain buried metals. These areas are depicted in shades of dark blue through yellow on the figures.

There were no anomalies observed that are interpreted to represent UST’s. The following anomalies are noted for discussion purposes and may serve to focus an intrusive investigation should one be subsequently performed.

Anomaly A is a rectangular buried metal anomaly located on the south side of the main survey area. Anomaly A likely represents a buried metal reinforced concrete pad beneath the asphalt surface.

Anomalies B and C are zones of buried metals located in the central portion of the main survey area. The size and low amplitude response of these anomalous zones are not typical of USTs. Nevertheless, these anomalous zones are suggestive of concentrations of miscellaneous buried metals and may be of interest if subsequent intrusive work is planned in the area.

The most prominent anomaly observed in the northeastern portion of the survey (Figure 2 - north of the site buildings) is an anomaly adjacent to a utility pole. This anomaly may be associated with a subsurface conduit and extra caution should be exercised if intrusive work is planned in this area.

Any of the additional above background responses may be significant from an environmental perspective however they are more likely associated with miscellaneous surface and/or buried metals.

4.0 LIMITATIONS

The geophysical methods used during this survey are established, indirect techniques for non-destructive subsurface reconnaissance exploration. As these instruments utilize indirect methods, they are subject to inherent limitations and ambiguities. Metallic surface features (electrical wires, scrap metal, etc.) preclude reliable non-invasive data/results beneath, and in the immediate vicinity of, the surface features. Targets such as buried drums, buried tanks, conduits, etc. are detectable only if they produce recognizable anomalies or patterns against the background geophysical data collected. As with any remote sensing technique, the
anomalies identified during a geophysical survey should be further investigated by other
techniques such as historical aerial photography, test pit excavation and/or test boring, if
warranted.

Please do not hesitate to contact us if you have any questions or require additional
information.

Sincerely yours,
AMEC Foster Wheeler Environment and Infrastructure, Inc.

John Luttinger
Senior Geophysicist
Figure 1
Geophysical Survey Results
Color Contours of EM61 Data (mVolts)

109 Canal St
Rome, NY
SJB Empire

A
Geophysical anomaly discussed in report

Interpreted linear anomaly

Note: 100N, 100E established at building corner here
Note: 200N, 200E established at NE corner of building

See Figure 1 for color bar

Figure 2
Geophysical Survey Results
Color Contours of EM61 Data (mVolts)
109 Canal St - NE Portion
Rome, NY
SJB Empire
Amec (716) 998 6973