September 18, 2015

Mr. Christopher Mannes, III, P.E.
NYSDEC, Region 7
615 Erie Boulevard West
Syracuse, New York 13204

Re: Work Plan – Supplemental On-Site Remedial Investigation
60/62 North Fifth Street, Fulton, New York
NYSDEC ERP Site #E738038
GHD Project No. 86-15105

Dear Mr. Mannes:

We are submitting this work plan on behalf of the City of Fulton to outline the completion of proposed supplemental remedial investigation activities at the above-referenced Site, in accordance with requests received from the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH). The objective of these proposed activities is to allow the NYSDEC and NYSDOH to issue a Proposed Remedial Action Plan (PRAP) and a Record of Decision (ROD) for the Site. The specific proposed scope of work is provided below.

1.1 **Ground Penetrating Radar Survey.** A ground penetrating radar (GPR) survey will be completed across the entirety of the Site. The objective of the GPR survey is to identify subsurface features and/or anomalies that may be contributing to on-Site contamination and that may interfere with future remedial activities completed at the Site, if any. Features identified during the GPR survey will be marked in the field with flags and/or paint and will also be shown on a Site map for future reference.

1.2 **Soil Borings.** A total of three (3) soil borings will be installed at the Site. The borings will be located as follows: one (1) near the southeast corner of the Site in the reported vicinity of a former underground storage tank (UST); one (1) near the southwest corner of the Site; and one (1) near the northwest corner of the Site (Figure 1). The soil borings will be completed to a maximum depth of 20 feet below ground surface (bgs) using direct push techniques. Continuous soil samples will be taken during completion of the borings using split-barrel or macrocore soil sampling methods. Soil samples will be visually examined by GHD's field representative for evidence of impacts (i.e., elevated photoionization detector (PID) readings, staining, odors, etc.). Based on observations, one (1) soil sample will be taken from each boring to be submitted to a NYSDOH ELAP-certified laboratory for target compound list (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), and TCL polychlorinated biphenyls (PCBs) analysis. In addition, for quality assurance/quality control (QA/QC) purposes one (1) field duplicate sample and one (1) matrix spike/matrix spike duplicate (MS/MSD) sample will be taken for laboratory analysis. Soil cuttings produced during soil boring completion will be placed in steel 55-gallon drums to await characterization and appropriate disposal off-Site.

1.3 **Temporary Well Installation.** Temporary groundwater monitoring wells will be installed in two (2) of the borings, one (1) near the southeast corner of the Site and one (1) near the southwest corner of the Site. The temporary groundwater monitoring wells will consist of 1-inch diameter

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polyvinyl chloride (PVC) screen and blank casing inserted into the hole to facilitate groundwater sampling. Subsequently, one (1) "grab" groundwater sample will be taken from each temporary groundwater monitoring well utilizing dedicated microbailers. Each of the samples will be sent to a NYSDOH ELAP-certified laboratory for TCL VOCs, TCL SVOCs, and TCL PCBs analysis. Following sampling, the temporary PVC well casing and groundwater sampling materials will be removed from the borings and discarded as solid waste. The borings will be backfilled with bentonite chips and the surface will be restored to pre-existing conditions.

1.4 **Permanent Well Installation and Sampling.** Following collection of soil samples, the soil boring near the northwest corner of the Site will be advanced to a maximum depth of 20 feet bgs using 4.25-inch inside diameter hollow stem augers. A permanent groundwater monitoring well, consisting of 2-inch inside diameter PVC screen and blank casing, will be installed in this soil boring, with the screen set such that it straddles the groundwater table. A sand filter pack will be placed in the annular space around the PVC screen and will extend a minimum of 2 feet above the top of the screen. The remainder of the boring annulus will be filled with bentonite chips that will be hydrated in place. The permanent well will be completed with a locking J-plug and a bolt down flush-mount protective cover set in a concrete pad. Following installation, the permanent well will be developed by alternating surging with a PVC surge block and evacuating water with a peristaltic pump with dedicated tubing until turbidity is less than 50 NTUs or ten (10) well volumes of water have been removed, whichever occurs first. A groundwater sample will be taken from the permanent groundwater monitoring well a minimum of one week after development utilizing low-flow sampling techniques. The groundwater sample will be sent to a NYSDOH ELAP-certified laboratory for TCL VOCs, TCL SVOCs, and TCL PCBs analysis. In addition, for QA/QC purposes one (1) field duplicate sample and one (1) MS/MSD sample will be taken for laboratory analysis. Groundwater monitoring well development and purge water will be containerized in a steel 55-gallon drum to await characterization and proper disposal off-Site.

1.5 **Survey.** Each soil boring, temporary groundwater monitoring well, and permanent groundwater monitoring well location and elevation will be surveyed by a NYS licensed surveyor for inclusion on the Site figure. The horizontal location will be to a minimum accuracy of 0.1 feet, and the vertical location will be to a minimum accuracy of 0.01 feet.

1.6 **Data Usability Summary Report (DUSR).** The laboratory will provide a Category B data deliverable package so that a data usability summary report (DUSR) may be completed for the soil and groundwater samples, by an independent third party.

The DUSR is carried out to evaluate the quality control measures that were implemented during the field and laboratory analytical programs, with the objective of determining whether the reported analytical data are representative. The DUSR will evaluate whether all analytical requirements were met and documented and will review the Site data to determine whether they are adequate to draw conclusions regarding the nature and extent of contamination.

The following items are reviewed as part of the DUSR:

- completeness (number of samples taken and analyzed compared to plans);
- chain of custody determined to be complete and accurate;
- holding times met;
- instrument calibration;

- relative percent difference between field duplicates;
- reasonableness of data (e.g., relationships between total and soluble analytes); and
- blank contamination.

1.7 Reporting. Following receipt of laboratory, survey, and DUSR information, a Supplemental RI Letter Report will be prepared and submitted to NYSDEC and NYSDOH for review and acceptance. The report will contain a description of the methods used and the data acquired, and will include the following:

- discussion of investigation methods and results, as well as any deviations from the approved methods;
- a Site figure showing sample locations and pertinent analyte concentrations;
- analytical summary tables including parameters that were detected and those that exceeded applicable standards, criteria, and guidance (SCGs);
- soil boring logs, permanent groundwater monitoring well construction details, and temporary groundwater well construction and abandonment details;
- laboratory analytical reports; and
- data usability summary reports.

Based on previous sample data and discussions with NYSDEC, it is anticipated that an on-Site Site Management Plan (SMP) and an on-Site Remedial Alternatives Analysis (RAA), which will recommend additional off-Site investigation and on-Site remediation, will be prepared for NYSDEC and NYSDOH review and acceptance.

1.8 Schedule. Site activities will be expedited in an attempt to complete Site work in advance of the expiration of the SAC Agreement on December 31, 2015. With this in mind, field activities have tentatively been scheduled for September 2015, with preliminary reporting by late-September 2015.

Please contact me (315-679-5838) if you have any questions or concerns.

Sincerely,

GHD CONSULTING SERVICES INC.

Damian J. Vanetti, P.E.
Principal Engineer – Environment

DJV/IEM:jfs

Enclosure: Figure 1: Proposed Sample Locations

cc: Richard Jones, NYSDOH (w/enc.)
Mayor Ronald Woodward, City of Fulton (w/enc.)