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January 8, 2014

Alicia Purzycki, P.E.
NYS Department of Environmental Conservation
Division of Environmental Remediation
232 Golf Course Road
Warrensburg, New York 12885
ajpurzyc@gw.dec.state.ny.us

RE: Supplemental Site Investigation
Old Champlain Mill BCP Site
Village of Whitehall, Washington County, NY
BCP Site No. C558036
CTMA Project No. 06.6448

Dear Ms. Purzycki:

C.T. Male Associates, Engineering, Surveying, Architecture & Landscape Architecture, P.C. (C.T. Male) has completed a supplemental investigation of the above referenced site for the purpose of identifying potential source area(s) of contamination in relation to the chlorinated volatile organic compound impacts found in groundwater within the northern portions of the site. A determination as to whether a source area(s) does or does not presently exist at the site is important in developing appropriate remedial strategies to address the groundwater contamination within the northern portions of the site.

Method of Investigation

Ground Penetrating Radar (GPR) and pipe locating geophysical survey techniques were conducted at the site on Wednesday, October 2, 2013 to identify the potential presence of dry wells, other subsurface disposal features, and buried piping extending out from the northern foundation wall of the former building primarily within the vicinity of monitoring well MW-2A to B-13 (see attached figure). The GPR and geophysical surveys were completed by New York Leak Detection Inc. (NYLD) of Jamesville, NY.

In addition to the above, sediment samples were collected from the existing catch basin located southwest of monitoring well MW-19A for volatile organic compound (VOC) analysis by EPA Method 8260. Sediment samples were collected from each one (1) foot horizon of sediment within the basin on Wednesday, October 2, 2013.

The supplemental site investigative work was conducted in accordance with the NYSDEC-approved Remedial Investigation Work Plan, including the Field Sampling Plan, Quality Assurance Plan and Health and Safety Plan.

Findings

The GPR and geophysical surveys identified five anomalies within the study area as described below:

Anomaly 1: Anomaly 1 was traced from an inlet pipe entering the southern side of the catch basin southwest of monitoring well MW-19A to the south for a distance of approximately 16 feet, toward the building foundation. The pipe at the inlet was comprised of concrete with an approximate diameter of 1.1 feet. NYLD reported that the pipe was either blocked or collapsed at 16 feet, and more likely to have collapsed as the GPR did not detect the pipe beyond this point. It should be noted that there is no information available regarding where the subject pipe originated within the mill and as such could have been connected to roof drains or possibly a floor drain.

Anomaly 2: Anomaly 2 was traced from an inlet entering the west side of the catch basin to the west toward the canal for a distance of approximately 130 feet, to the edge of a wooded area. The anomaly was not present in the wooded area or to the west of the wooded area toward the canal.

Anomaly 3: Anomaly 3 was noted in the northeastern portion of the study area running in an approximate north/south direction. NYLD indicated that the anomaly was consistent with a cable as opposed to a larger diameter structure. The anomaly terminated just south of a utility pole suggesting that the anomaly was related to an electrical conduit.

Anomaly 4: Anomaly 4 was noted in the northwestern portion of the study area running in an approximate north/south direction. NYLD indicated that the anomaly was associated with a communication cable which originated off-site to the north at a utility pole located along Route 4.

Anomaly 5: Anomaly 5 was noted in the northeastern portion of the study area. The anomaly extended outside of the study area to the north, within the site's driveway. NYLD indicated the anomaly was associated with the municipal water line as it connected to a hydrant located within the northeastern portion of the site.

Catch Basin Investigation: The catch basin is located in the central portion of the study area. The catch basin was observed to be partially full of debris including dimensional lumber (possibly a former cover for the catch basin), tree trunks & limbs, brick, concrete

and leaves. The debris was removed from the catch basin in order to access and sample the sediment.

The sediment was comprised of organic dark brown loose sand containing brick, concrete and wood fragments. The sediment thickness was approximately 8 to 12 inches and present directly above the concrete bottom within the basin.

Two sediment samples were collected for laboratory analysis; from 0-2 inches and 10-12 inches. The sediment samples were collected utilizing a clean decontaminated shovel for each interval. Following the recovery of the soil samples from the catch basin, each sample was placed in a new, clean sealable plastic bag and then screened for the presence of detectable volatile organic compounds (VOCs) with a MiniRAE 3000 PID equipped with a 10.6 eV lamp. The PID meter was calibrated according to manufacturer recommendations prior to use. PID readings of the recovered soil samples were less than 1 part per million (ppm) above background. Petroleum or solvent type odors were not noted in the sediment samples and staining of the sediment was not evident.

A new pair of clean sampling gloves was used to transfer each soil sample to labeled, laboratory-supplied clean containers (glass jars with Teflon-lined lids). The jars were sealed and subsequently placed into a cooler containing bagged ice and a transport blank supplied by the laboratory. The soil samples were submitted for laboratory analysis for VOCs by EPA Method 8260. The samples were transported to Chemtech Consulting Group, Inc., of Mountainside, New Jersey following proper chain of custody protocols.

Quality control/quality assurance (QA/QC) samples were collected including a blind duplicate sample, a MS/MSD sample, and a trip blank.

As other drainage structures were not identified within the area of investigation during the field work additional sampling was not conducted.

Analytical Results

Carbon disulfide at a concentration of 2.2 micrograms per kilogram (ug/kg) and Tetrachloroethene at a concentration of 4.5 ug/kg were detected in sample CB(10-12)RE. Both of these detections were in the sample collected from a depth of 10 to 12 inches, and below their respective Unrestricted Use Soil Cleanup Objective (SCO) per 6 NYCRR Part 375 regulations.

Conclusions

The supplemental investigation has not identified any buried liquid containing conduits or discharge features other than the previously identified storm water basin in the

northern portion of the site and the inlet and outlet pipes connected to that basin. The geophysical survey was able to identify that an inlet pipe to the catch basin originates south of the basin in the direction of the former mill, and the outlet pipe is directed to the west toward the Champlain Canal. Due to poor signal recovery, the actual discharge location of the storm water basin discharge pipe was not identified, but appears to be into the Champlain Canal. Similarly, the lack or loss of signal approximately 16 feet south of the storm water basin suggests a portion of the inlet pipe is broken or has collapsed.

The analytical results for the sediment samples collected from the catch basin identified only low concentrations of carbon disulfide and tetrachloroethene in the sediment sample from the 10 to 12 inch depth, this essentially being the top surface of the concrete bottom of the catch basin. The concentrations of these compounds do not suggest that the sediment in the basin itself is a contaminant source location.

Given that we do not know when the inlet pipe to the catch basin collapsed, if in fact it did, there is a potential that the liquids from the mill may have historically discharged from the pipe into the surrounding soils for some period of time. Due to the suspected collapse of the inlet pipe leading from the former mill to the catch basin, further targeted exploration of the soils beneath and adjacent to the (suspected) collapsed portion of the pipe is warranted to determine if a hot spot of soil contamination by chlorinated solvents is or is not present.

In addition to the proposed soil investigation, it is proposed to collect another round of groundwater samples from those monitoring wells located in the same area to determine current groundwater quality. The wells to be sampled include MW-1A, MW-2A, MW-3A, MW-5A, MW-10A, BMW-14A, BMW-15A, MW-16A, and BMW-18A.

If the supplemental groundwater monitoring event reveals on-going groundwater contaminant degradation, and a source area of chlorinated solvent is not identified in the soils beneath the presumed area of pipe collapse, it will be reasonable to conclude that a defined source area of chlorinated solvent is not present. If this scenario is realized, C.T. Male would likely recommend that the overall remedial alternative which should be selected as the remedy for the site involve continued monitoring and evaluation of the natural degradation processes currently believed to be at work at the site.

Of course, if a source area for the chlorinated solvent impacted soils area is identified in the vicinity of the suspected pipe collapse, other remedial options, including source removal, would be developed in the Alternatives Analysis Report for the Department's consideration when selecting the remedial alternative for implementation.

Prior to initiating the work described above, we would appreciate the Department's comments regarding this approach.

Finally, although it was previously discussed that a meeting with the Department should be held to discuss the findings of this supplemental work, it appears that such a meeting may be premature and is best scheduled after the additional investigations indentified above have been completed.

If you have any questions, please contact me at your convenience.

Respectfully submitted,

C.T. MALE ASSOCIATES

Kirk Moline
Managing Geologist

Att. GRP Report
Laboratory Report

c: Poultney Street Partners
Gary Bowitch, Esq.
Roy Redmond, Hatch, Mott, McDonald

NYLD Infrastructure

NEW YORK LEAK DETECTION, INC.

Field Report

Date: 10-2-13 Technician: Steven Carney

Customer: CM Male

Site Address: Champlian Mill Whitehall, 16 – 50 Poultney Street, Whitehall, NY

Contact Person: Aimee Gates Phone: 518 223-2413 Phone: _____

Scope of Work: Clear for utilities in hash marked areas on map provided

Type of Service:

☐ *Leak Detection* ☒ *Utility Location/GPR* ☐ *Video Inspection*

☐ *Infrastructure Assessment* ☐ *Utility Mapping/AutoCAD*

Type of Equipment Used

☐ *Profiler EMP 400* ☒ *RD4000* ☐ MetroTech Vivax vLocPro2

☐ *LC2500 Leak Correlator* ☒ *Noggin 250 mHz* ☐ PosiTector UTG G3

☐ *S-30 Surveyor* ☒ Noggin 500 mHz ☐ *Video Inspection Camera*

☐ *Sonde* ☐ Conquest 1000 mHz ☐ *Helium #* *Bottles*

☐ *Leica Robotic Total Station* ☐ *Leica GPS*

Marking Used

☒ *Paint* ☒ *Flags* ☐ *Chalk*

☐ *Updated existing maps onsite* ☐ *Other:* _____

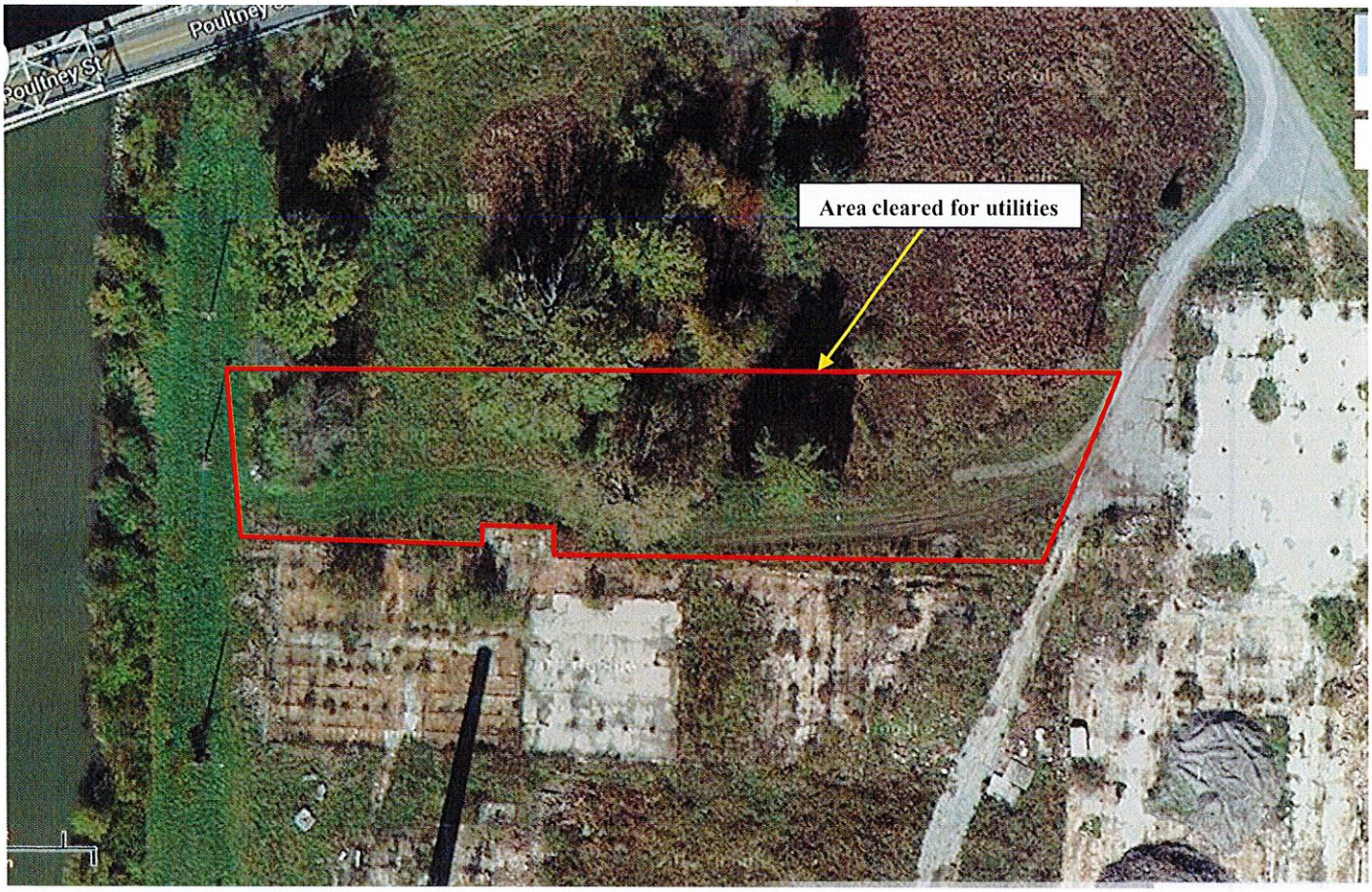
Instructions from Onsite Contact: Clear for utilities in hash marked areas on map provided

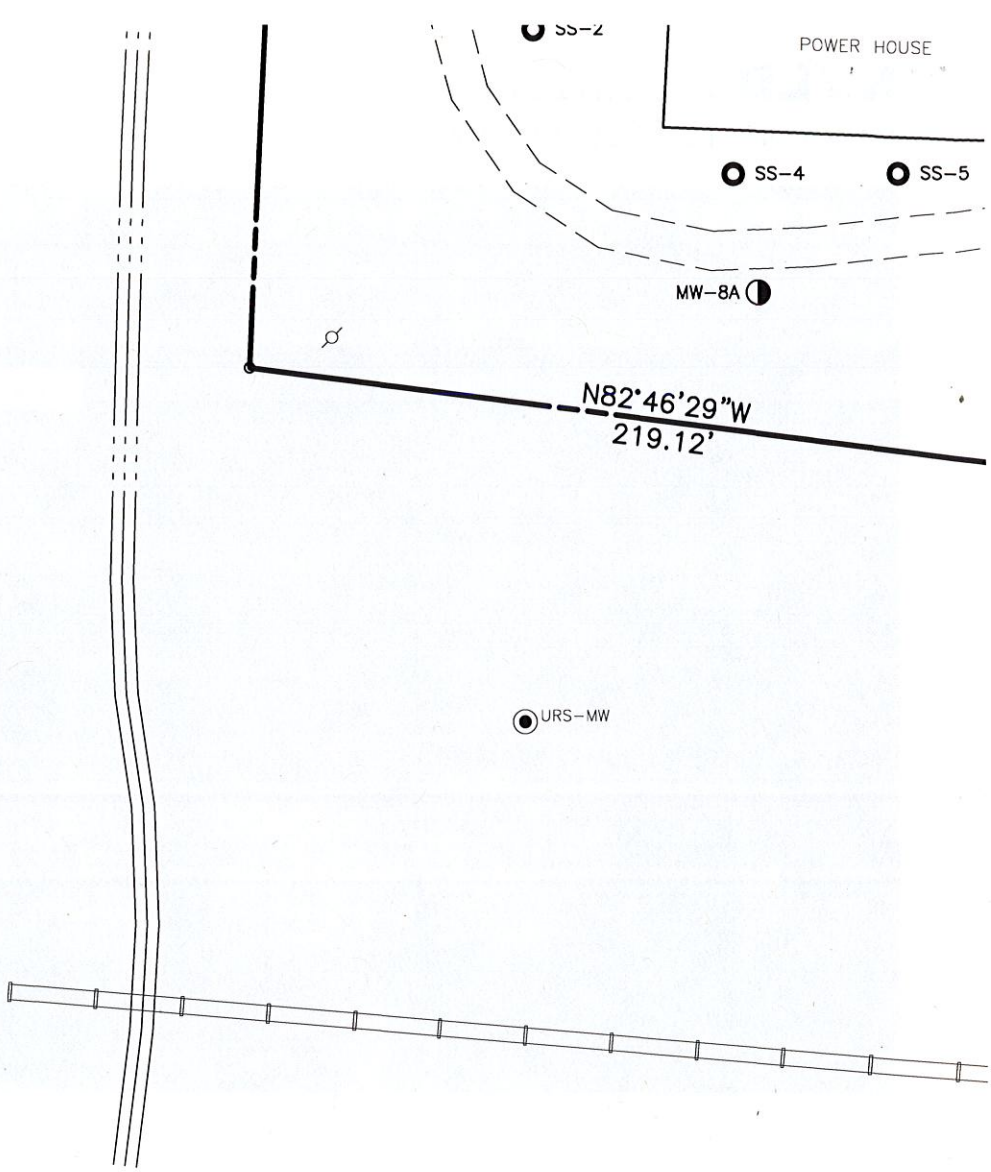
Size of Pipe: n/a

Notes/Testing Results: Cleared area marked out below for all utilities with the use of the RD7000 locator and the noggin GPR. Marked all findings with paint and flags.

Information Transfer

☒ *Information relayed on site to: Aimee Gates* ☐ *Hand drawn map (forward to office for digital remake)* ☐ *All markings picked up by surveyors*

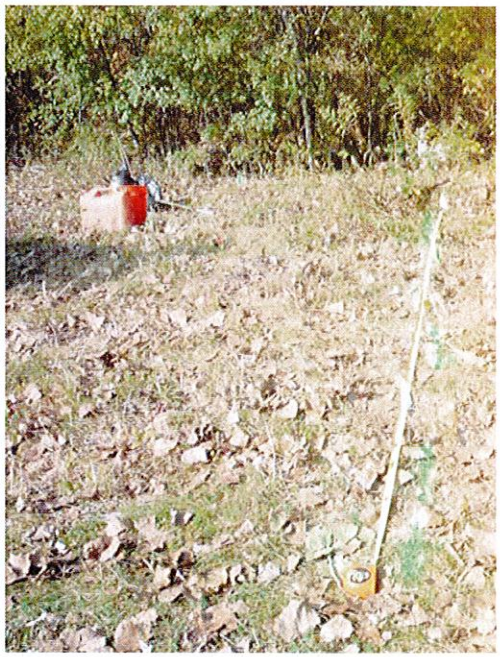

Poultney St
Area cleared for utilities



CAD DWG. FILE NAME: FIGURE-2.DWG

"ONLY COPIES OF THIS MAP SIGNED IN RED INK AND EMBOSSED WITH THE SEAL OF AN OFFICER OF C.T. MALE ASSOCIATES, P.C. OR A DESIGNATED REPRESENTATIVE SHALL BE CONSIDERED TO BE A VALID TRUE COPY".

01 Interior of catch basin.jpg



02 Anomaly 1 from CB

03 Anomaly 2 at woods.jpg

04 Anomaly 2 from catch ba

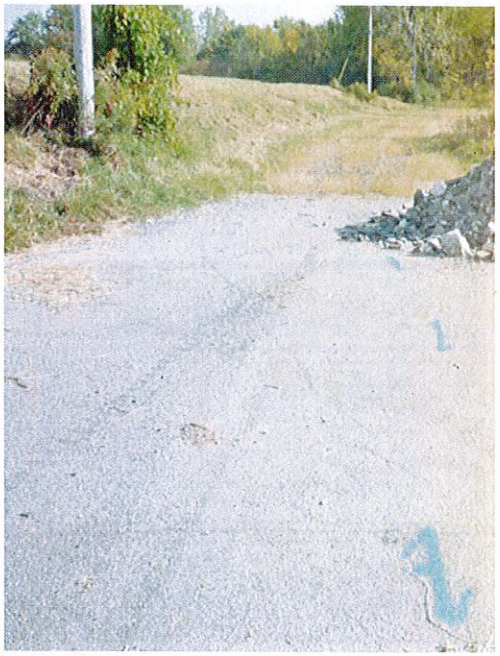
05 Anomaly 2 looking east back at catch basin.jpg

06 Anomaly 3 e

07 Anomaly 3 looking north.jpg

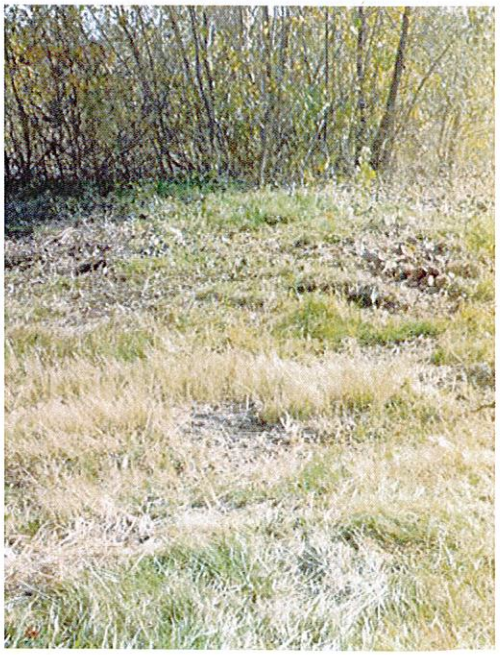
08 Anomaly 3 loc

13 Anomaly 5 looking north.jpg



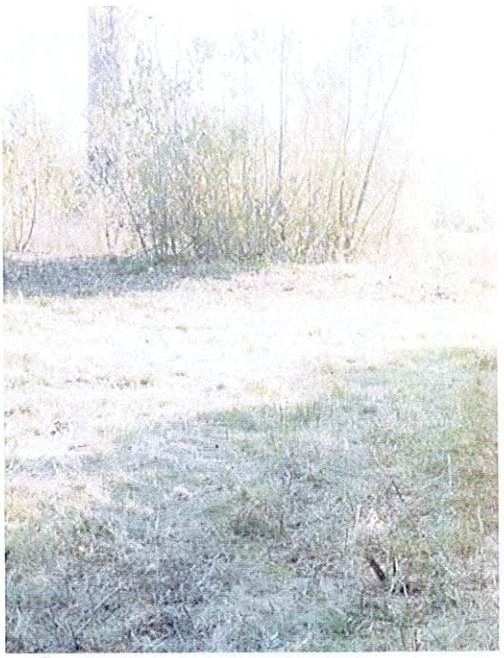
14 Anomaly 5 looking

15 Anomaly 5 looking southwest.jpg



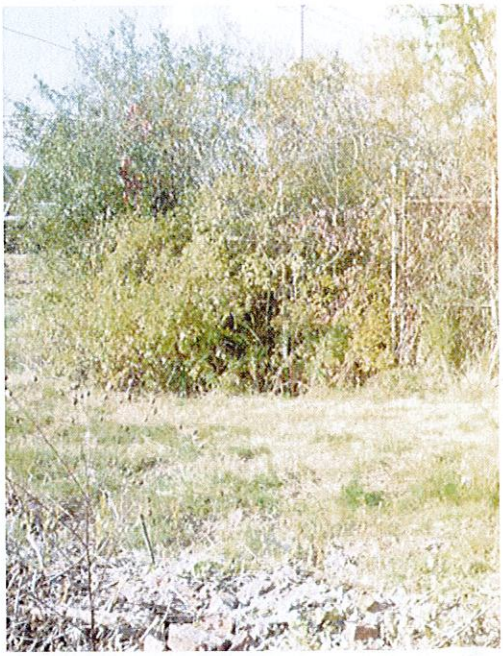
16 From edge of canal looking

09 Anomaly 4 communication cable looking north.jpg



10 Anomaly 4 loc

11 Anomaly 4 looking toward the road.jpg



12 Anomaly 4 near fer