



December 20, 2022

Benjamin McPherson, P.E.
Professional Engineer 1 (Environmental)
Division of Environmental Remediation
New York State Department of Environmental Conservation
700 Delaware Avenue
Buffalo, New York 14209

Subject: Preliminary Investigation Work Plan
Above Ground Storage Tank ST21, ST 22, and ST23 Area
Riverview Innovation & Technology Campus
3875 River Road
Town of Tonawanda, New York
Site No. C9153353

Dear McPherson,

The bases of three former tanks in the wastewater treatment area, ST21, ST22 and ST23 (Photograph No. 1 and Figure 4-62 of the RI Report) on the Riverview Innovation & Technology Campus, Inc. (RITC) Brownfield Cleanup Program (BCP) Site (#C9153535) in the Town of Tonawanda, New York were removed in accordance with the Aboveground Storage Tank Management Interim Remedial Measures Work Plan. In accordance with the work plan, the underlying soils were inspected after the base was removed and there was potential impact observed in the area of the ST22 footprint. Snowfall, snow melt and rainfall prevented a complete visual inspection of the three former base areas Photograph No. 2). This investigation work plan is being submitted to collect data needed to determine the scope and approach to evaluate the conditions and formulate any required action(s).



Photograph No. 1
ST24 to ST21 Tanks (Left to Right) Before Demolition
(Note: The small black tank north (below in photograph) was ST20)



Photograph No. 2
Former Location of ST24 to ST21 (Left to Right) After Removal of the Tanks
(Before Dewatering)



At the time of the initial inspection one area within the limits of ST22 was stained to the extent that a release was suspected. Prior to completing a full inspection of the bases of the three tanks, there was a snowfall (~18-inches), snow melt and rain. This work plan is for the completion of the base inspection, supplemented with collection of a sample from each base for comparison to the ST24 analytical data (see ST24 Bioremediation Interim Remedial Measures Work Plan, Draft, dated October 18, 2022, revised November 9, 2022).

The Preliminary scope is intended to provide the opportunity to visually evaluate the tank areas to determine what, if any, action may be required.

For the purposes of the Preliminary Investigation Inventum is proposing:

- Temporary dewatering of the footprints of the three tanks;
- Treatment of the extracted surface water and discharge to the Town of Tonawanda under Permit No. 331;
- Visual inspection of the subbase material exposed by removal of the metal tank floors;
- Advancing shallow test pits/trenches within the limits of the former tanks to allow observation of the base material and underlying clay surface (Figure 1);
- Collection of three samples, one from each tank former footprint, to provide an indication of the suite of constituents that are present in each area;
- Advancing shallow test pits (to the top of clay) outside the limits of the former secondary containment to identify potential releases from pipes and due to lateral migration; and
- Preparation of a memorandum summarizing the observations, limited analyses, and proposed next steps, if any.

Samples will be collected at three locations, one in each tank area, based on visual, olfactory and photoionization detector (PID) measurements. The samples will be collected from the sand or upper clay solely for the purpose of identifying what constituents of concern may be present.

The samples will be collected from the sidewall of shallow test pits advanced with conventional earthmoving equipment within each of the former tank footprints. The test pits outside the limits of the former secondary containment structures are for visual characterization only. All test pits will be advanced to determine the depth to the underlying reddish brown silty clay. Observation of excavated soils and screening with a 10.6eV PID will be made directly in the sidewall of the test pit or from each bucket load. After screening, soil will be temporarily stockpiled adjacent to the excavation and at a minimum of 2-feet from the edge. Soils that are heavily impacted shall be stockpiled within the footprint of the former tank.

Samples that are submitted for analytical characterization will be collected directly from the wall of the test pit with a dedicated disposable stainless-steel spoon. Samples collected from each tank area will, to the greatest extent practicable, be biased to areas exhibiting the greatest degree of potential contamination based on visual observation, odor, and PID screening. The test trenches are assumed to be less than 24-inches deep, but will follow



staining if deeper. Under no circumstances will anyone be allowed to enter a test pit that is greater than 3-feet deep or with flowing groundwater.

Photographs of each test pit will be taken. Photographs of any significant features exposed by the test pit (ex. buried debris, mobile tar seeps, etc.) will be collected after the final depth is reached. All pertinent information will be recorded in the field notebook or on test pit logs. The location of the samples will each be marked with a pin flag and the location measured with site GPS equipment.

Samples will be submitted to a NYSDOH ELAP certified laboratory under strict chain of custody in accordance with the following request:

Deliverable Requirements:		NYSDEC Cat. B; NYSDEC EQUIS EDD;	
Analysis [Method]	Matrix	No. of Samples	
8260 TCLP	Soil	3	
8270 TCLP	Soil	3	
TAL Metals [6010C]	Soil	3	
TCL VOCs [8260]	Soil	3	
TCL SVOCs (8270]	Soil	3	
Total Ammonia [350.1]	Soil	3	
Total Mercury [7471]	Soil	3	
Total Cyanide [9012B]	Soil	3	

Sample numbers shall be:

TP- ST2# - ## - depth range in inches - date

The samples will be submitted for standard turnaround which is currently 8- to 10- business days but will also be affected by the holidays. The sample data will be tabulated and submitted in an IRM work plan with a drawing showing the corresponding sample numbers.

In the event an underground utility is encountered, the following procedure shall be followed:

- The size, condition, material and type (electrical, water, oil, tar) of utility shall be documented;
- The conditions surrounding the utility shall be documents (clean, staining, separate phase);
- If non-electrical, the utility shall be opened and the contents, if any, shall be documented;
- If leaking or surrounded by separate phase liquid, the utility shall be excavated and properly containerized or staged in tar management. If separate phase liquid is encountered, it shall be sampled for the RSI disposal parameters.



Deliverable Requirements: RSI Disposal Parameters		NYSDEC Cat. B; NYSDEC EQUIS EDD;
Analysis [Method]	Matrix	No. of Samples
Total Sulfur [6010C]	NAPL	As needed
Reactive Cyanide [SW7.3.3.2]	NAPL	As needed
% Moisture [2540]	NAPL	As needed
Calorific Value [BTU]	NAPL	As needed
Ignitability [1010MOD]	NAPL	As needed
PAHs [8270D]	NAPL	As needed
TAL Metals + Mo, Sn, Zn [6010C]	NAPL	As needed

- Grossly impacted soils/fill (material with separate phase liquids) shall be containerized or staged in the Thaw Shed; and
- If no liquid content or evidence of leaking, the utility shall be sealed with hydraulic cement and the location documented by GPS.

Please let us know if you have any comments or questions.

Sincerely yours,



John P. Black
 Partner

Attachment

- Ecc: John Yensan, OSC
 Dan Flanagan, OSC
 Roxanne Birx, Inventum
 Peter Zaffram, Inventum
 Angela Martin, NYSDOH
 Andrea Caprio, NYSDEC

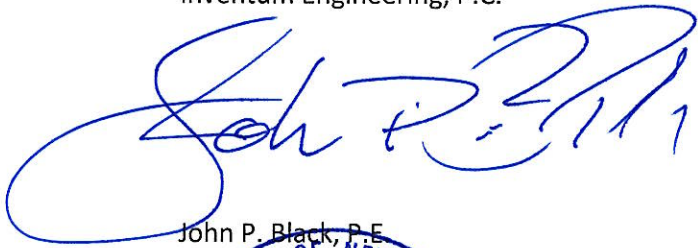


Engineering Certification

I, John. P. Black certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Preliminary Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Respectfully Submitted,

Inventum Engineering, P.C.



Date: 12/20/2022

John P. Black, P.E.

License No: 062818-1

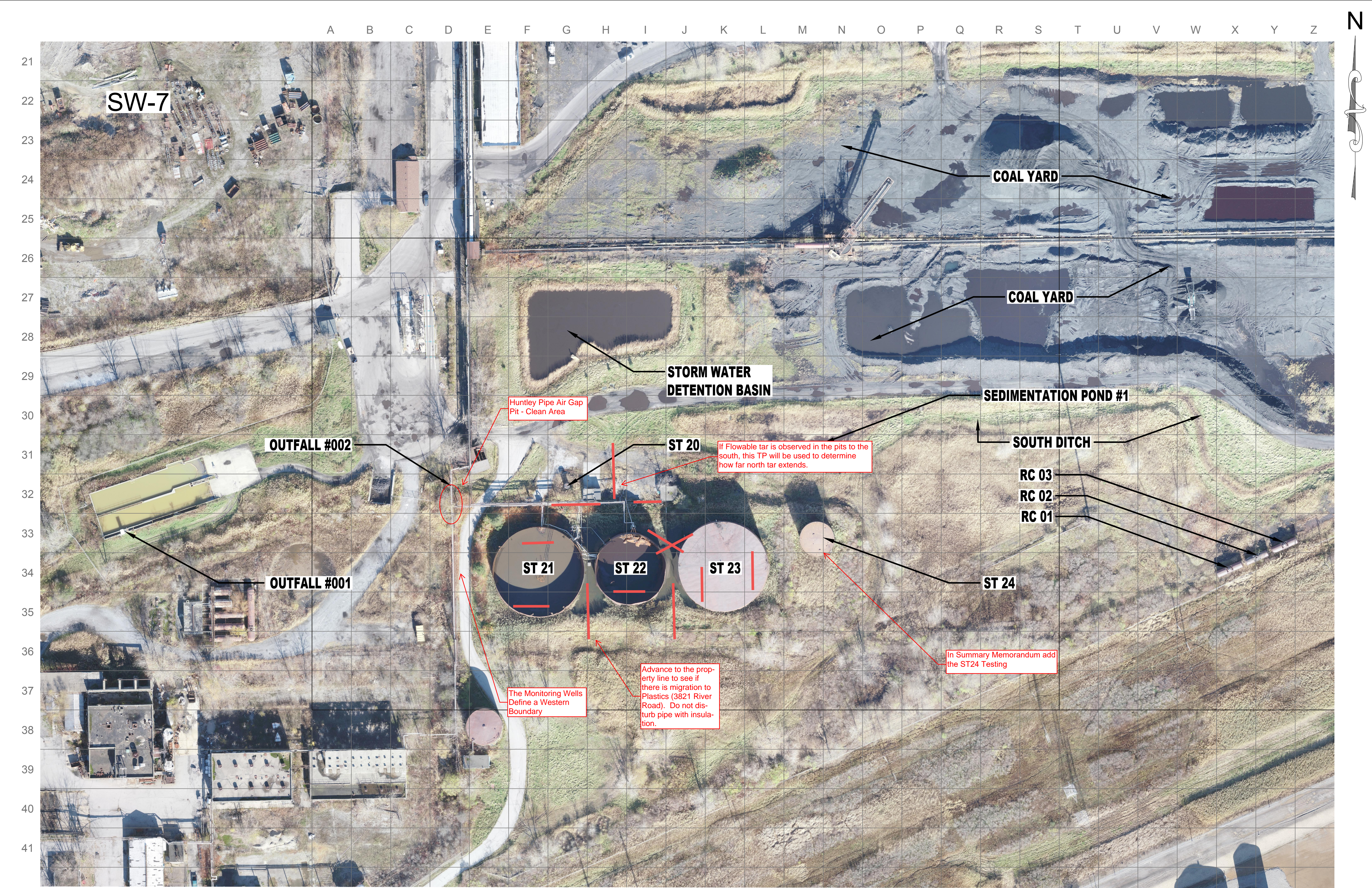


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Figure





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FIGURE 8
DRAWING NUMBER
107A

