



January 18, 2023

To: Benjamin McPherson, Angela Martin

From: John Black

CC: John Yensan, Dan Flanagan, Matt Reardon, Todd Waldrop, James Edwards, Peter Zaffram, Roxanne Birx

Re: Revised Non-aqueous Phase Liquid Response
East End of Coal Yard Tunnel Conveyor Control and Junction Building
Riverview Innovation & Technology Campus, Inc.
Town of Tonawanda, New York

Introduction

During the excavation to access and demolish the Coal Yard Tunnel Conveyor Control and Junction Building and foundation (Figure 1) a layer of granular material containing Non-aqueous Phase Liquid (NAPL, green and orange oil-like liquid) was encountered (see Attachment A). The Coal Yard Tunnel Conveyor Control and Junction Building foundation removal is targeting foundation walls above elevation 602-feet above mean sea level (ft-msl). Portions of the foundation and inner walls are much deeper and are being removed to allow equipment removal (conveyors and supporting equipment) and access for backfill placement. The building and foundation removal was presumed to be a clean, ie: not a Brownfield Cleanup Program (BCP), activity, consistent with the Coal Yard Tunnel demolition. Following removal of allequipment and inner walls that would prevent proper backfill placement, the walls and floor will be inspected, surveyed using the onsite GPS and backfilled with the tested and clean brick and concrete from the site. The brick and concrete will be used until the elevation of the surrounding fill is reached. The upper 4 feet will be filled with the coke and breeze removed to access the foundation. All coke and breeze will be inspected to ensure there is no evidence of NAPL or tar in the backfill.

At the east end of the excavation, northeast of the Coal Yard Tunnel, approximately 1-gallon of oil-like NAPL was encountered on January 3, 2023 flowing from a granular layer at approximately 4-feet below (the original) ground surface (BGS). The granular layer was immediately above the site-wide silty Clay and below general site-wide coke and coke breeze fill. Impacts were not observed in the coke and coke breeze fill. The zone containing and conveying the NAPL is granular and similar to the rail line ballast encountered on other areas of the BCP Site. Slag like material could be observed along with ash, coal, coke, wood, sand and gravel. The layer varies between approximately 8 to 16 inches thick.

The NAPL material encountered on January 3, 2023 was a thin layer and was collected using absorbent pads and booms. On January 10, 2023 additional NAPL was encountered as the excavation was extended to the east. Again, the NAPL was primarily a thin layer on flowing groundwater. One seep had a higher volume of NAPL that formed a floating layer on the water at the discharge from the granular zone. The

NAPL material encountered January 10, 2023 was contained with clay from the excavation and absorbent booms that remain in place.

Test Pit Exploratory Excavations

In order to prepare this memorandum and in an attempt to determine if there was a ongoing source (such as a tank or pipe) of the NAPL, a series of four exploratory test trenches were advanced from the eastern benched area of the excavation to determine:

- (1) if there was a leaking buried tank or pipeline and
- (2) to estimate the limits of the NAPL.

No buried tank or pipe was found.

As shown on Figures 1 and 2 the NAPL is estimated to cover approximately 700 square feet, lies immediately on top of the silty clay that is typical of the BCP Site, and is contained in an estimated 50 cubic yards of the granular fill. The estimate is provided solely for planning the next phase of excavation.

During excavation¹ of the exploratory trenches the following observations (Figure 2) were made:

- No underground tank or pipes were encountered.
- The NAPL may be from multiple releases or of different ages as some was a green color and other orange.
- The NAPL flowed from a layer of granular material that was placed over the clay. The granular material observed distinct from the overlying coke and breeze fill and the underlying clay.
- In the exploratory trench TP-CD-01 and TP-CD-02, a small amount of viscous tar and several sections (approximately 12-inches long) of mixed tar and coke were identified along with the NAPL (Figure 2).
- No NAPL was identified in the two northern exploratory trenches.

Proposed Excavation

The excavation was conducted to bench down to allow access to the the base of the foundation and the lower section of the former coal conveyor tunnel. The 3.5 to 4 feet of material removed for the benching showed no signs of NAPL or Tar impacts. The base of the foundation contains the remains of the coal breaker building conveyor and other unidentified debris. The foundation floods form sources of water along the sides of the former structure, but the water in the foundation cavity does not, and has never been observed to have a sheen, or any evidence of NAPL.

The building foundation and associated debris are exposed and the foundation is dewatered. OSC would like to remove the debris and fill the foundation while it is exposed. As shown in Figure 1, the NAPL lies east of the foundation and Coal Yard Tunnel, so the following is proposed to manage the NAPL and Prevent the NAPL from flowing toward the closed structures:

¹ Note: the exploratory trenches were excavated after the overburden fill was excavated.



- A temporary berm of silty clay from the benching excavation will be used to prevent migration from the benching excavation. No material is being imported from another part of the BCP Site;
- the NAPL will be removed with absorbent materials and placed in drums, sampled and a profile will be prepared for disposal approval. The drum(s) will be labeled non-hazardous pending analysis and dated January 3, 2023 (the first date of accumulation);
- the water phase will be treated through the temporary treatment plant in the coal yard, through filters and granulated activated carbon and discharged to the Town of Tonawanda sewer in accordance with Permit No. 331. The NAPL removal at the source, followed by two stages of filtration will prevent any separate phase materials from reaching the sewer;
- the cover fill/soils will be removed and stockpiled. The cover materials are distinct and no materials with evidence of NAPL or Tar will be stockpiled;
- the layer of impacted material will be removed until no evidence of NAPL is observed, or the excavation is more than 50 feet from the foundation excavation. The impacted materials will be stockpiled on polyethylene sheeting in the grossly contaminated staging area in the Thaw Shed;
- the limits of the excavation will be backfilled with clay from the foundation excavation (No clay will be imported to the area) up to the elevation of the top of the granular fill (presumed rail bedding materials) around the perimeter of the eastern excavation. The clay was inspected, no signs of impact, and screened with a PiD, all readings were 0.; and
- the overburden will be replaced. The placement of the overburden will provide a second opportunity to observe the material to ensure no NAPL or Tar impacted material is used as fill.

Sampling

The following samples will be collected:

1. NAPL – If any free phase liquid is present in the drum it will be sampled and analysed prior to solidification. The NAPL will be analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (SVOCs), Target Analyte List (TAL) Metals including mercury, cyanide and Polychlorinated Biphenyls (PCBs), and Hazardous Characteristics (TCLP, Ignitability, Corrosivity and Reactivity).
2. NAPL containing Absorbant - Absent a recoverable sample of the NAPL, a representative sample of the most saturated absorbent material will be submitted for analysis for disposal profiling, including but not limited to the analyses for the NAPL.

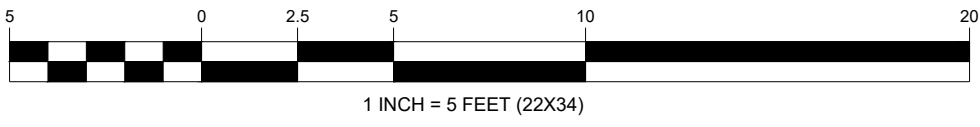


Figures





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NORTH COAL YARD TUNNEL JUNCTION
RIVERVIEW INNOVATION & TECHNOLOGY
CAMPUS, INC.
 3875 RIVER ROAD
 TONAWANDA, NEW YORK 14150
 BCP SITE No. C915353

INVENTUM ENGINEERING
 441 CARLISLE DRIVE
 SUITE C
 HERNDON, VIRGINIA 20170
 (703) 722-6049
 www.InventumEng.com

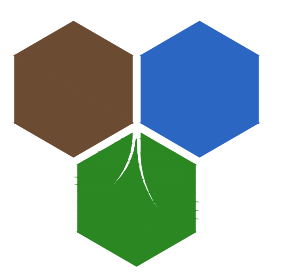
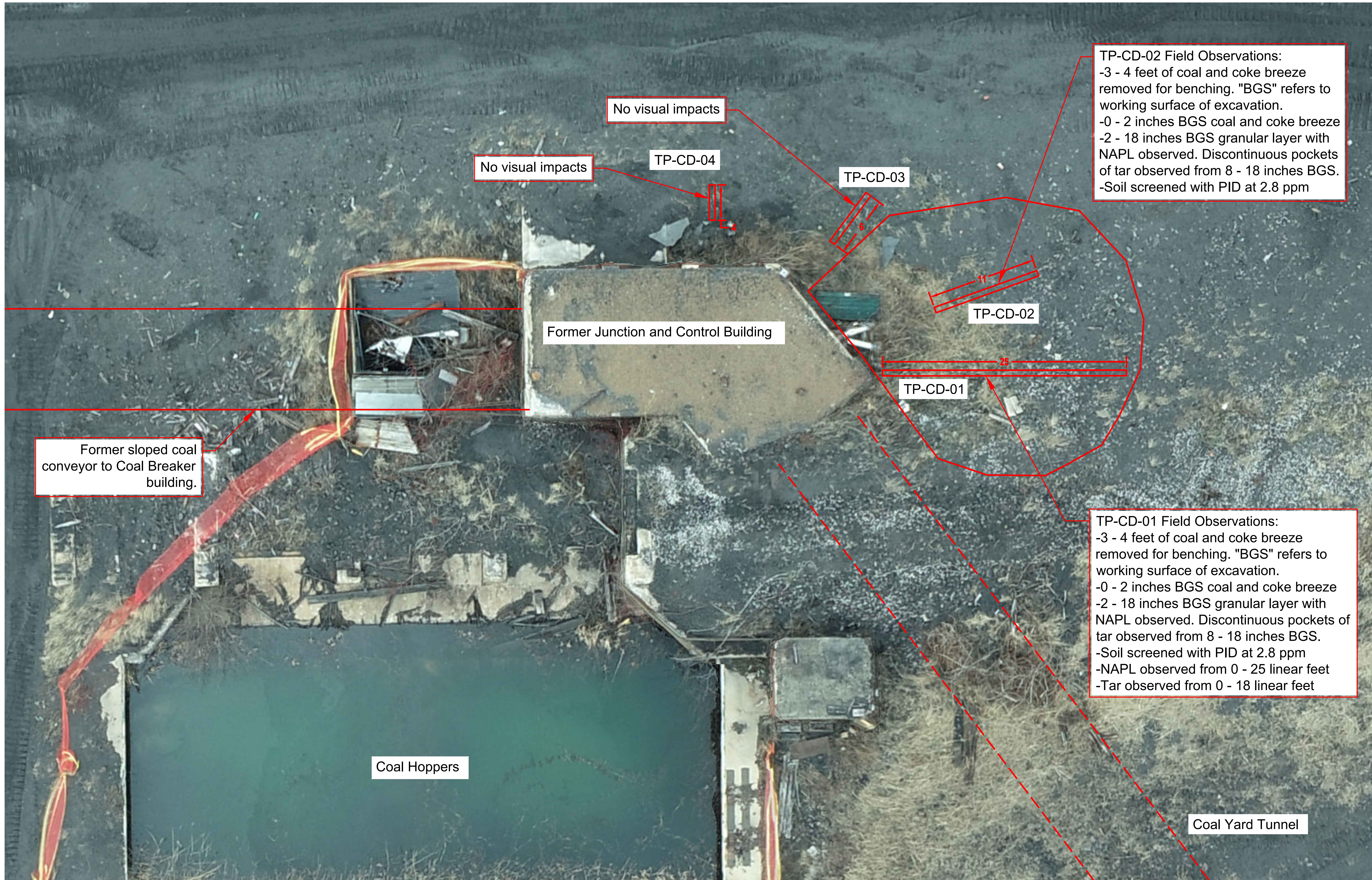


FIGURE 1

DRAWING NUMBER



TP-CD-02 Field Observations:
 -3 - 4 feet of coal and coke breeze removed for benching. "BGS" refers to working surface of excavation.
 -0 - 2 inches BGS coal and coke breeze
 -2 - 18 inches BGS granular layer with NAPL observed. Discontinuous pockets of tar observed from 8 - 18 inches BGS.
 -Soil screened with PID at 2.8 ppm

TP-CD-01 Field Observations:
 -3 - 4 feet of coal and coke breeze removed for benching. "BGS" refers to working surface of excavation.
 -0 - 2 inches BGS coal and coke breeze
 -2 - 18 inches BGS granular layer with NAPL observed. Discontinuous pockets of tar observed from 8 - 18 inches BGS.
 -Soil screened with PID at 2.8 ppm
 -NAPL observed from 0 - 25 linear feet
 -Tar observed from 0 - 18 linear feet

No visual impacts

No visual impacts

TP-CD-04

TP-CD-03

TP-CD-02

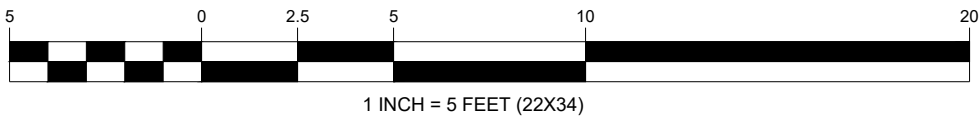
TP-CD-01

Former Junction and Control Building

Former sloped coal conveyor to Coal Breaker building.

Coal Hoppers

Coal Yard Tunnel



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 RIVERVIEW INNOVATION & TECHNOLOGY CAMPUS, INC.
 3875 RIVER ROAD
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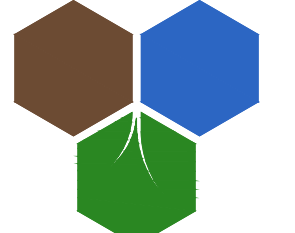



FIGURE 2



DRAWING NUMBER

Attachment A – Photographic Log





<p>Client Name: Riverview</p>	<p>Date of Site Visit: January 10, 2023</p>	<p>Project: Riverview</p>
<p>Photo No. 1 Direction Photo Taken: looking southeast</p>		
<p>Description: Test Pit – Coal Dumper – 01 TP-CD-01</p>		
<p>Client Name: Riverview</p>	<p>Date of Site Visit: January 10, 2023</p>	<p>Project: Riverview</p>
<p>Photo No. 2 Direction Photo Taken: looking southwest</p>		
<p>Description: TP-CD-01</p>		





Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No. 3		
Direction Photo Taken: Looking west		
Description: TP-CD-01		
Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No. 4		
Direction Photo Taken: Looking southwest		
Description: TP-CD-01		





Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No. 5		
Direction Photo Taken: Looking south		
Description: TP-CD-02		
Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No. 6		
Direction Photo Taken: Looking south		
Description: TP-CD-02		





Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No.		
Direction Photo Taken: View looking south		
Description: TP-CD-02		
Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No.		
Direction Photo Taken: View looking southeast		
Description: TP-CD-03		



Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No. 15		
Direction Photo Taken: View looking southeast		
Description: TP-CD-03		
Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No. 16		
Direction Photo Taken: View looking northeast		
Description: TP-CD-04		



Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No. 15		
Direction Photo Taken: View looking southeast		
Description: Tar impacted fill removed from TP-CD-01		
Client Name: Riverview	Date of Site Visit: January 10, 2023	Project: Riverview
Photo No. 16		
Direction Photo Taken: View looking south		
Description: Area reference, before test pits were performed.		

