

Construction Completion Report

*Phase II Business Park
Site II-5, BCP Site No. C915198E
Lackawanna, New York*

April 2019

0071-018-325

Prepared For:

Tecumseh Redevelopment Inc.
Richfield, Ohio

Prepared By:



In Association With:



**CONSTRUCTION COMPLETION REPORT
FOR
PHASE II BUSINESS PARK
SITE II-5 (BCP Site No. C915198E)**

**TECUMSEH REDEVELOPMENT INC.
LACKAWANNA, NEW YORK**

April 2019

0071-018-325

Prepared for:

TECUMSEH REDEVELOPMENT INC.

Prepared By:



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CERTIFICATION

I, Thomas H. Forbes, P.E., certify that I am currently a NYS registered professional engineer and that this Construction Completion Report (CCR) for the Phase II Business Park Site II-5 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).

Date: 4-10-19

SEAL:



**CONSTRUCTION COMPLETION REPORT
FOR
PHASE II BUSINESS PARK SITE II-5
BCP SITE NO. C915198E
LACKAWANNA, NEW YORK**

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1.0 INTRODUCTION

This document presents work completed under the New York State Department of Environmental Conservation (NYSDEC)-approved November 2018 Source Removal Action (SRA) Work Plan (Ref. 1) for the Tecumseh Phase II Business Park Brownfield Cleanup Program (BCP) Site II-5 (C915198E) in Lackawanna, New York (see Figures 1 and 2).

The remedial actions were completed on behalf of Tecumseh Redevelopment Inc. (Tecumseh) in accordance with the NYSDEC September 2016 Decision Document (Ref. 2) and through the NYSDEC BCP to address soil/fill impacts previously identified within the subject Site. Remediation of these impacts satisfies the intended goal of expediting cleanup of the associated impacts while facilitating redevelopment of the Site for commercial and industrial reuse.

1.1 Background

1.1.1 Prior Investigations

The approximate 144-acre Phase II Business Park formerly housed several facilities associated with Bethlehem Steel Corporation's (BSC's) steel manufacturing processes. These included a pure oxygen generating station (known as South Linde Area), various mills, a structural shipping yard, a car repair shop, metal storage and miscellaneous office production support buildings. Five historical solid waste management units (SWMUs) (i.e., P-38 through P-42) are present within the Phase II Business Park. BSC performed assessments for these SWMUs during a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) and subsequent RCRA Facility Investigation (RFI). Based on the findings, USEPA Region II issued "No Further Action" determination for the identified SWMUs within the Business Park II Business Park.

The BCP application for the Phase II Business Park was submitted May 20, 2005 and approved January 9, 2007. The July 2009 Remedial Investigation/Alternatives Analysis Report (RI/AAR) Work Plan (Ref. 3) identified Site characterization requirements to be completed pursuant to the BCP and NYSDEC DER-10 guidance (Ref. 4). Remedial Investigation (RI) field activities were initiated in March 2010 and substantially completed in April 2010.

The RI/AA Report was submitted to NYSDEC in May 2011 and finalized in March 2012 (Ref. 5). The RI/AA Report recommended remediation of hotspot soil/fill with deferred soil cover system placement during redevelopment as the final remedial measure for all areas of the Site.

1.1.2 Phase II Business Park Cleanup Approach

The Phase II Business Park, as well as other Tecumseh Business Parks (i.e., I, IA, and III), were so designated by Tecumseh based on the concept of voluntary remediation and subsequent selling or leasing the “shovel-ready” Business Park parcels to local developers or private businesses interested in redeveloping the land for commercial or industrial uses consistent with City zoning. Recognizing the sheer size of these parcels, the cost and short-term impacts associated with cleanup (particularly for cover placement, which would require clearing and covering each of the large Business Parks), and the limited western NY commercial/industrial real estate market demand, a sub-parcel cleanup approach was conceived by Tecumseh and agreed upon by the NYSDEC. Under this approach, hotspot soil/fill remediation and other remedial measures (except cover placement) would be performed by Tecumseh on a priority bases (i.e., parcels pending potential sale, lease, and/or redevelopment, or where remedial measures are required to address significant threats, will be completed first). Placement of the final cover would also progress on a site-by-site basis by the buyer or lessee concurrent with building construction and/or other site improvements, thereby allowing the cover to be integrated with roads, buildings, parking areas, etc. Certificate of Completion (COC) issuance by the NYSDEC would occur on a site-by-site basis following cover placement by the owner or developer (subject to provisions of a NYSDEC-approved Site Management Plan and Environmental Easement encompassing the entire Business Park).

Based on this approach, Tecumseh prepared sub-parcel delineation maps for each of the three larger Business Park Areas (I, II, and III). Business Park II was subdivided into 12 sub-parcels designated as Sites II-1 through II-12 (BCP Site Nos. C915198 through C915198L) as shown on Figure 2.

1.1.3 Site II-5 Remaining Impact

Within the area designated Hotspot H in the RI/AA Report, a photoionization detector (PID) reading of 105 parts per million (ppm) was measured at 7 feet below ground

surface (fbgs) in supplemental test pit BPA 2-TP-99B and a slight odor was detected. PID readings above background but at lesser concentration were also measured in original test pit BPA2-TP-99 (24.4 ppm at 7 fbgs) and supplemental test pit BPA2-TP-99A (26 ppm at 7 fbgs).

Samples were collected from the apparent impacted soil/fill interval at test pit locations BPA2-TP-99 and BPA2-TP-99B. Both samples were analyzed for an expanded list of volatile organic compounds (VOCs), including USEPA Target Compound List VOCs and NYSDEC CP-51 list VOCs. The samples exhibited no VOC detections other than trace levels of methylene chloride (a common laboratory artifact) well below the commercial soil cleanup objective, suggesting that field evidence of impact is reflective of highly weathered petroleum. The planned remedial approach to address the Hotspot H impacts was in situ injection of a fast-acting chemical oxidant and a slow release product to stimulate aerobic bioremediation in a grid pattern across the smear zone. However, to expedite remediation for sale of the property, the source removal action described in Section 1.1.4 was proposed and approved by NYSDEC.

1.1.4 Source Removal Action Work Plan

The proposed remedial activities were presented in the NYSDEC-approved November 2018 Source Removal Action (SRA) Work Plan for Business Park Site II-5, prepared by TurnKey Environmental Restoration, LLC. In general, the planned scope of remedial activities outlined by the Work Plan included:

- Excavation of non-impacted overburden (estimated upper 5 feet) and weathered organic soil/fill (estimated 5- to 9-foot interval) within the area designated in the RI/AA Report as Hotspot H. Final excavation dimensions will be based on field evidence of impact (i.e., visual, olfactory and elevated PID readings).
- Transportation of the impacted fill to the constructed biopad on Site II-3 for treatment.
- Construction and operation of a temporary groundwater treatment system, if needed, to dewater smear zone soils during excavation and prior to backfilling. The groundwater system will consist of a holding tank, dual-bag filters, and granular activated carbon (GAC).
- Backfilling of the excavation with stockpiled non-impacted overburden supplemented with imported BUD-approved steel slag for safety reasons, as needed.

1.2 Purpose and Scope

This Construction Completion Report (CCR) has been prepared by Turnkey in association with Benchmark Environmental Engineering & Science, PLLC (TurnKey-Benchmark) using guidance from Section 5.8 of DER-10 and includes:

- A description of the excavation, backfilling, and treatment activities performed.
- A description of any problems encountered, deviations from the Work Plan, and associated corrective measures taken; and other pertinent information necessary to document that the Site activities were carried out in accordance with the governing document (SRA Work Plan).
- A Site or area planimetric map showing the extent of excavation.
- The quantity of soil/fill excavated and biotreated on-site.
- Copies of daily field activity notes and, if applicable, problem identification and corrective measure reports.
- A certification by a licensed NYS Professional Engineer in accordance with Section 1.5 of DER-10.

This CCR will be referenced in the Final Engineering Report for Site II-5, which will be prepared by the purchaser to document satisfactory cover placement and other requirements under the BCP as necessary to secure a Certificate of Completion (COC).

2.0 DESCRIPTION OF REMEDIAL ACTIVITIES PERFORMED

2.1 Remedial Objectives

The remedial objective for Site II-5 involved removal of field evidence of impact (elevated PID readings) near test pits BPA2-TP-99, -99A, and -99B, referred to as Hotspot H in the RI/AA Report. Appendix A includes field notes prepared by TurnKey-Benchmark to document remedial activities. Appendix B is a photographic log of remedial work performed.

2.2 Governing Documents

The governing document for Site II-5 remedial activities is:

- Source Removal Action (SRA) Work Plan for Business Park Site II-5, BCP Site No. C915198E, Lackawanna, New York prepared by TurnKey Environmental Restoration, LLC. November 2018.

2.3 General Site and Nuisance Controls

Due to the relatively small areas of disturbance required to complete the Site II-5 remedial work and the permeable nature of the slag (which precludes surface water runoff), no specific nuisance controls were required. TurnKey was prepared to implement dust control; however, it was raining the day of excavation precluding the need for dust suppression.

2.4 Community Air Monitoring Results

Real-time community air monitoring for particulates (i.e., dust) and VOCs was to be performed by TurnKey during all intrusive activities. Air monitoring for particulates was not necessary during the excavation work (November 9) and backfilling (November 13) due to precipitation, which acts as a vapor and dust suppressant. On November 12, the excavation was monitored for VOCs using a PID. No odors or PID readings were detected; therefore, NYSDEC approved the excavation for backfilling with clean overburden.

2.5 Hotspot H Excavation, Treatment and Backfilling

2.5.1 Excavation

On November 9, 2018, TurnKey-Benchmark excavated the top five feet of clean overburden soil/fill and stockpiled it next to the excavation. Minor impacts were only observed in test pit BPA2-TP-99B in the 8.5-9 fbgs interval including slight odor and a PID

reading of 15 ppm. No impacts were noted in test pits BPA2-TP-99 or BPA2-TP-99A; however, soil/fill was removed from the depth of impact established in the RI. Final excavation extents at each test pit location within Hotspot H are described below and shown on Figure 3:

- BPA2-TP-99B: approx. 20' by 25' by 5' deep (4.5 to 9.5 fbgs); estimated 150 tons
- BPA2-TP-99A: approx. 15' by 20' by 3' deep (6 to 9 fbgs); estimated 50 tons
- BPA2-TP-99: approx. 15' by 20' by 3' deep (6 to 9 fbgs); estimated 50 tons

Impacted soil/fill was transported to the biotreatment pad an off-road dump truck.

2.5.2 Impacted Soil/Fill Biotreatment

Per the SRA Work Plan, a biotreatment pad was constructed on nearby Tecumseh Business Park Site II-3 (see Figure 3). The 80' by 230' biopad consists of an approximate 3- to 4-inch thick layer of wood chips as a base for tilling surrounded by a silt containment sock to mitigate surface erosion from the materials. The biopad operates as an uncovered aerobic treatment cell with tilling to promote biological degradation of VOCs and SVOCs. Water is added as necessary to suppress dust generation during tilling and control moisture for degradation.

No debris was encountered during excavation. Visual inspections of loads handled at the biotreatment area were performed and the approximate volume of soil/fill was determined. Soil/fill was placed and graded to a 12- to 18-inch lift thickness. Soil/fill designated as treated will remain within the containment area until analytical results confirm the soil/fill has been adequately treated.

2.5.3 Backfilling

On November 12, 2018, NYSDEC's project manager was on-site to visually inspect the excavations and subsequently approved all areas for backfill. Turnkey placed the stockpiled non-impacted overburden into the excavations and compacted with the excavator bucket in 2-foot lifts. Surrounding soil/fill was used to complete the backfilling. Backfill and grading work was completed on November 13, 2018.

2.6 Issues Encountered and Corrective Actions

No issues or corrective actions were undertaken as part of the implementation of the above-described remedial activities.

2.7 Deviations from the Work Plan

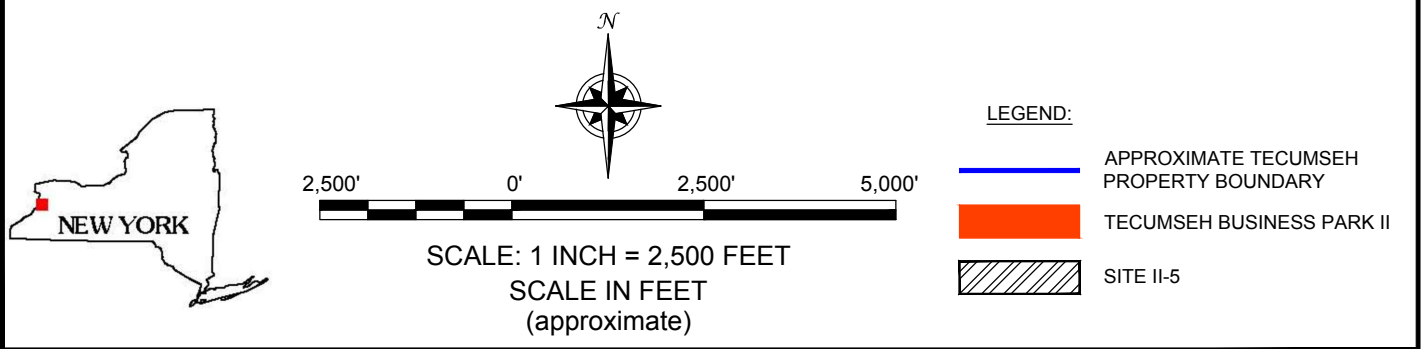
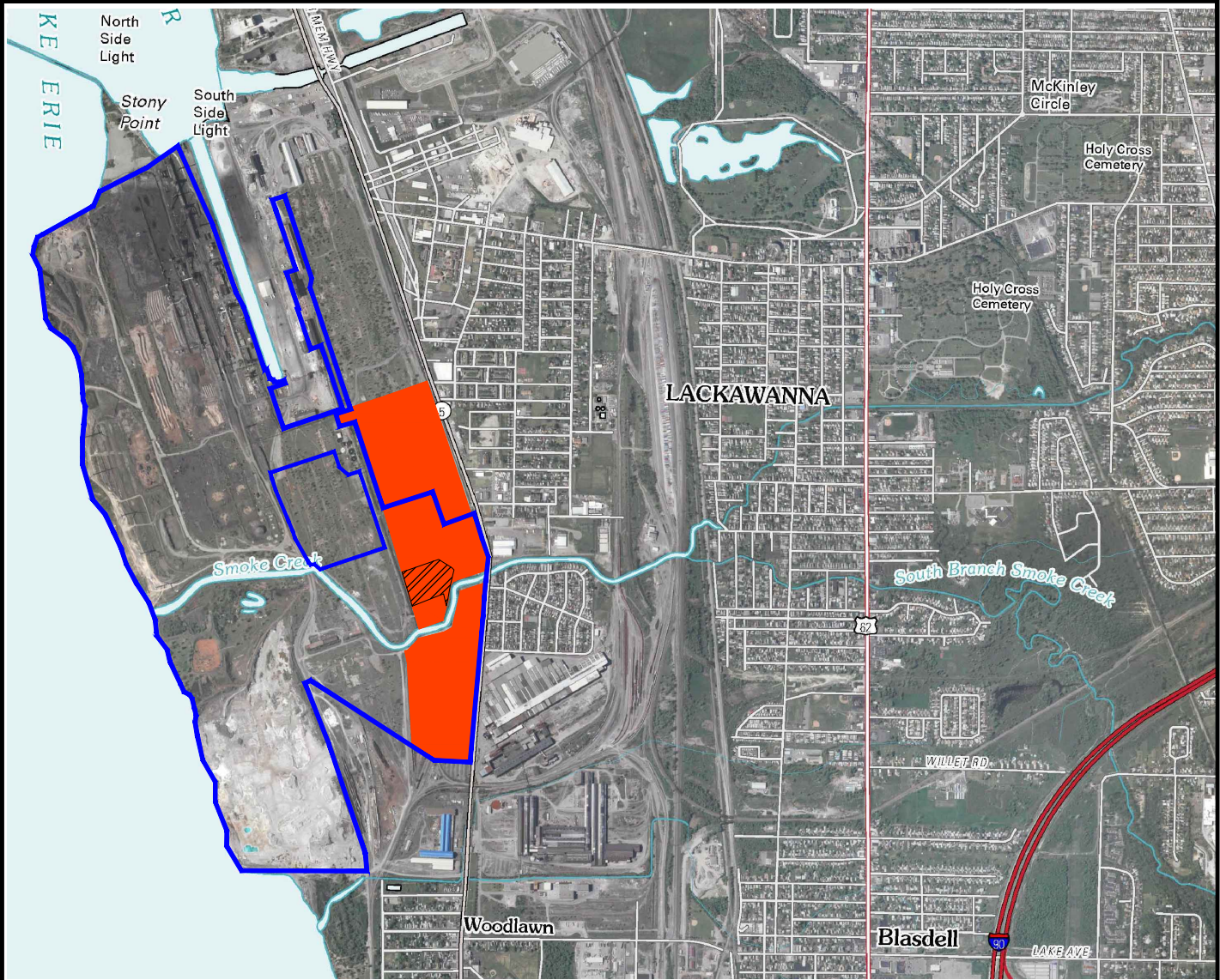
Elevated PID readings were not measured; therefore, soil/fill was removed from the impacted interval observed during the RI. Excavation dewatering was not required. Since less impacted soil/fill was removed, surrounding soil/fill was used to backfill the excavation in lieu of BUD-approved steel slag.

3.0 REFERENCES

1. TurnKey Environmental Restoration, LLC. *Source Removal Action (SRA) Work Plan for Business Park Site II-5, BCP Site No. C915198E, Tecumseh Redevelopment Inc., Lackawanna, New York*. November 2018.
2. New York State Department of Environmental Conservation, Division of Environmental Remediation. *Decision Document, Site II-5 Tecumseh Phase II Business Park, Brownfield Cleanup Program, Lackawanna, Erie County, Site No. C915198E*. September 2016.
3. TurnKey Environmental Restoration, LLC. *Remedial Investigation/Alternatives Analysis Report (RI/AAR) Work Plan for Phase II Business Park Area, Lackawanna, New York, BCP Site No. C915198*. November 2008, revised July 2009.
4. New York State Department of Environmental Conservation. *DER-10/Technical Guidance for Site Investigation and Remediation*. May 3, 2010.
5. TurnKey Environmental Restoration, LLC. *Remedial Investigation/Alternatives Analysis Report (RI/AAR) for Phase II Business Park, Lackawanna, New York, BCP Site No. C915198*. May 2011, revised March 2012.

FIGURES

FIGURE 1




**2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635**

PROJECT NO.: 0071-018-325

DATE: DECEMBER 2018

DRAFTED BY: RFL

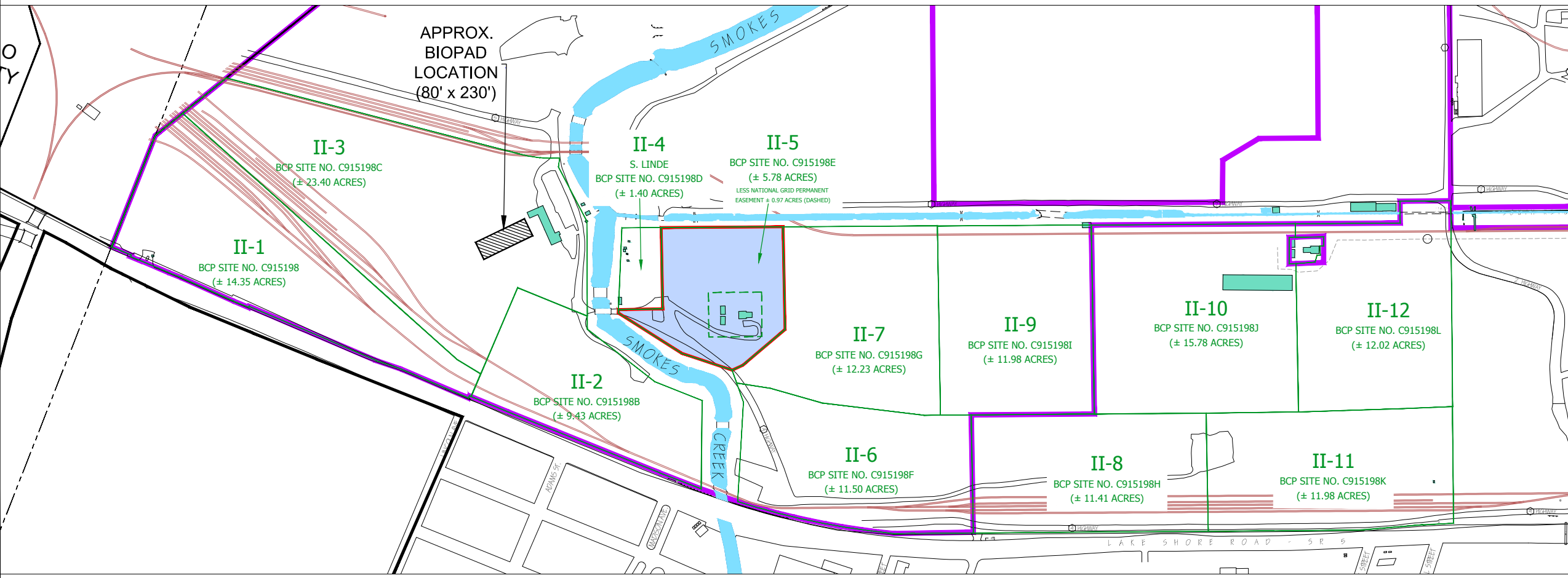
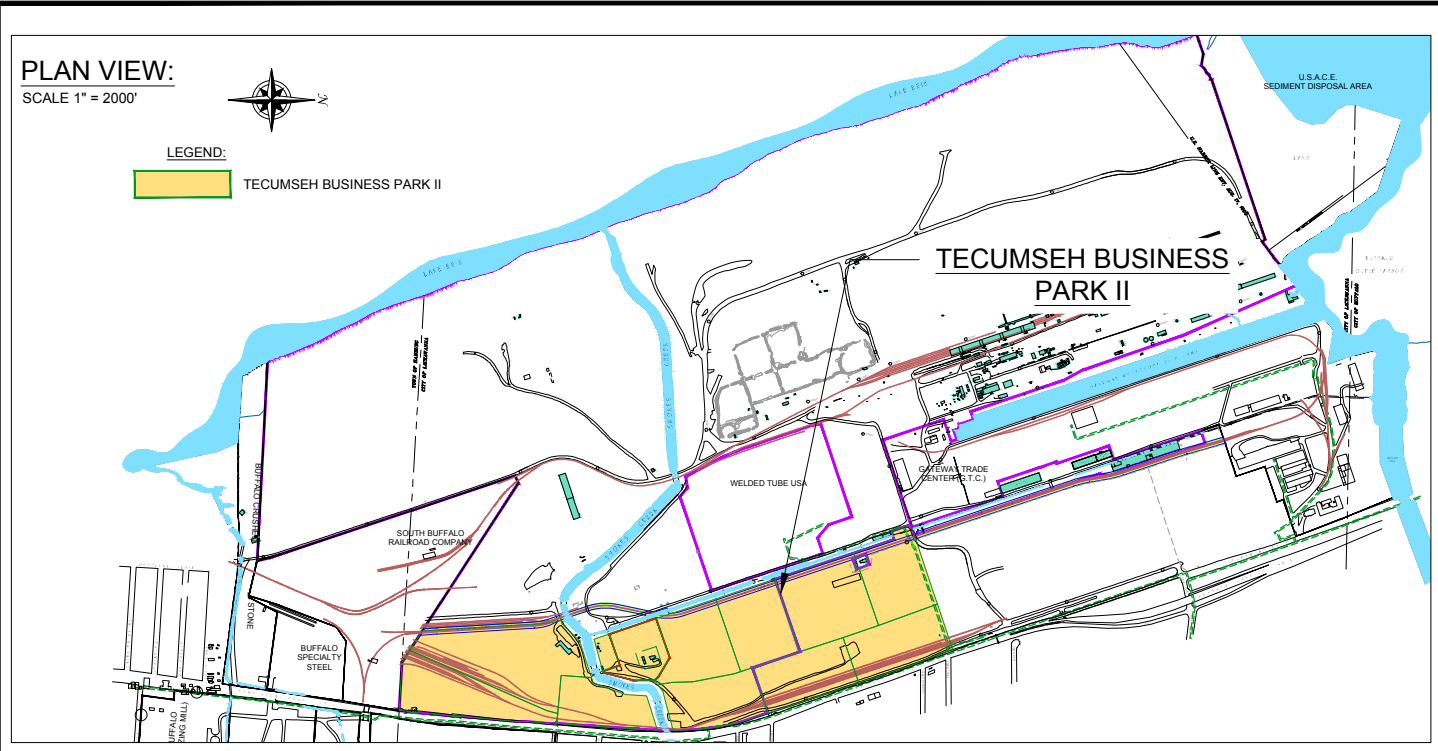
SITE LOCATION AND VICINITY MAP

CONSTRUCTION COMPLETION REPORT

TECUMSEH PHASE II BUSINESS PARK
BCP SITE NO. C915198E (SITE II-5)
LACKAWANNA, NEW YORK

PREPARED FOR
TECUMSEH REDEVELOPMENT INC.

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SCALE: 1 INCH = 500 FEET
SCALE IN FEET
(approximate)

SITE DELINEATION MAP

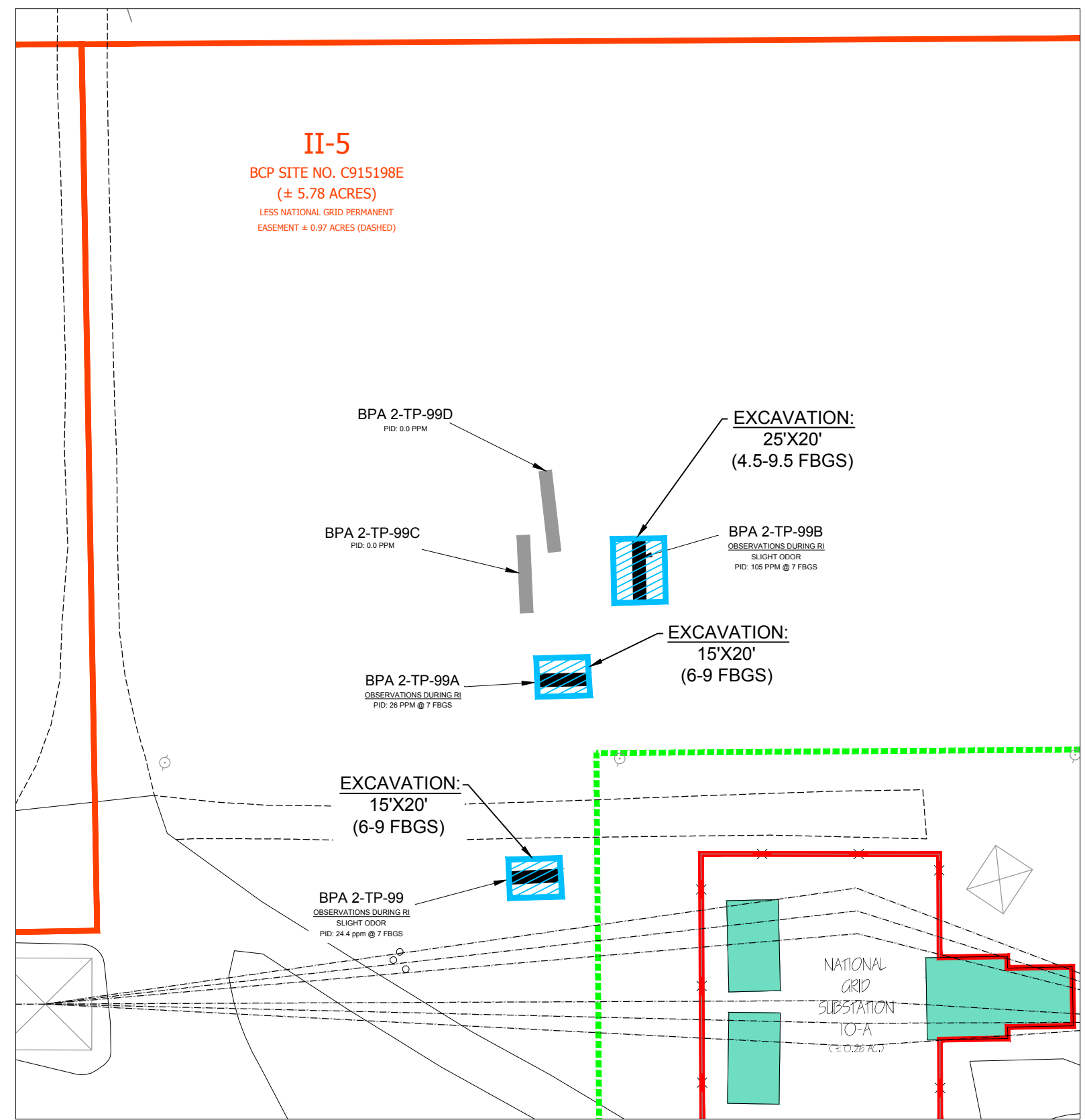
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TECUMSEH PHASE II BUSINESS PARK
BCP SITE NO. C915198E (SITE II-5)
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2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 858-0635



JOB NO.: 0071-018-325

FIGURE 2



II-5
BCP SITE NO. C915198E
(± 5.78 ACRES)
LESS NATIONAL GRID PERMANENT
EASEMENT ± 0.97 ACRES (DASHED)

BPA 2-TP-99D
PID: 0.0 PPM

EXCAVATION:
25'X20'
(4.5-9.5 FBGS)

BPA 2-TP-99C
PID: 0.0 PPM

BPA 2-TP-99B
OBSERVATIONS DURING RI
SLIGHT ODOR
PID: 105 PPM @ 7 FBGS

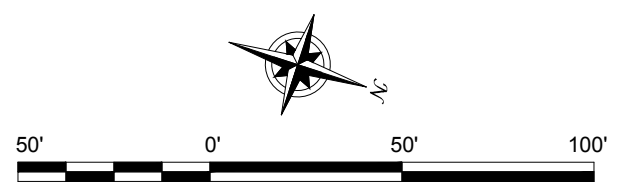
EXCAVATION:
15'X20'
(6-9 FBGS)

BPA 2-TP-99A
OBSERVATIONS DURING RI
PID: 26 PPM @ 7 FBGS

EXCAVATION:
15'X20'
(6-9 FBGS)





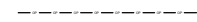




BPA 2-TP-99
OBSERVATIONS DURING RI
SLIGHT ODOR
PID: 24.4 ppm @ 7 FBGS

NATIONAL
GRID
SUBSTATION
IO-A
(± 0.26 AC)



SCALE: 1 INCH = 50 FEET
SCALE IN FEET
(approximate)

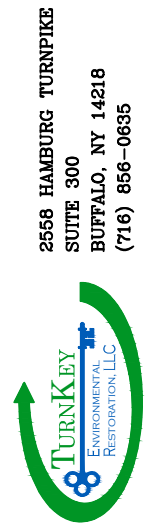
LEGEND:

-  EXISTING BUILDING / STRUCTURE
-  PAVED ROAD
-  UNPAVED ROAD
-  BCP PARCEL BOUNDARY
-  OVERHEAD POWERLINE
-  BPA 2-TP-99A
IMPACTED TEST PIT
-  BPA 2-TP-99C
DELINEATION TEST PIT: NO IMPACTS
-  EXCAVATION AREA FOR IMPACTED
SLAG/FILL
-  NATIONAL GRID PERMANENT EASEMENT

NOTE: FBGS = FEET BELOW GROUND SURFACE

HOTSPOT H EXCAVATION AREAS

CONSTRUCTION COMPLETION REPORT
TECUMSEH PHASE II BUSINESS PARK
BCP SITE NO. C915198E (SITE II-5)
LACKAWANNA, NEW YORK
PREPARED FOR
TECUMSEH REDEVELOPMENT INC.



JOB NO.: 0071-018-325

FIGURE 3

APPENDIX A

PROJECT FIELD NOTES



DAILY LOG	DATE	11	12	18
	NO.	0	0	2
	SHEET	1 OF 1		

FIELD ACTIVITY DAILY LOG

PROJECT NAME: <u>Hotspot H (II-5)</u>	PROJECT NO. <u>T0071-017-326</u>
PROJECT LOCATION: <u>Tecumseh Parcel II-5</u>	CLIENT: <u>Tecumseh</u>
FIELD ACTIVITY: <u>Backfill</u>	
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:	
TIME	DESCRIPTION
	<p>Maurice on site and noted → No odors, visual impacts or PIDs and gave approval for backfill</p> <p>EB placed clean overburden back into excavation and compacted</p> <p>No CAMP → No Intrusive work</p>
VISITORS ON SITE: <u>Maurice</u>	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
WEATHER CONDITIONS: A.M.: <u>Overcast 40's</u> P.M.: <u>SAME</u>	IMPORTANT TELEPHONE CALLS:
PERSONNEL ON SITE: <u>Paw, EB, MS</u>	
SIGNATURE: <u>[Signature]</u>	DATE: <u>11/12/18</u>



DAILY LOG	DATE	11	13	18
	NO.	0	0	3
	SHEET	1 OF 1		

FIELD ACTIVITY DAILY LOG

PROJECT NAME: <u>Hotspot H (II-S)</u>	PROJECT NO. <u>T0071-017-326</u>
PROJECT LOCATION: <u>Tecumseh Parcel II-S</u>	CLIENT: <u>Tecumseh</u>
FIELD ACTIVITY: <u>Backfill</u>	
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:	
TIME	DESCRIPTION
	<p><u>EB on site</u></p> <p><u>Scraped material from surrounding TPs to complete backfill of II-S Hotspot</u></p> <p><u>No CAMP → Due to light rain</u></p>
VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
WEATHER CONDITIONS: A.M.: <u>AM rain/snow</u> P.M.: <u>overcast</u>	IMPORTANT TELEPHONE CALLS:
PERSONNEL ON SITE: <u>Paw, EB</u>	
SIGNATURE: <u>[Signature]</u>	DATE: <u>11/13/18</u>

APPENDIX B

PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG

Client Name: Tecumseh Redevelopment Inc.		Site Location: Phase II Business Park Site II-5	Project No.: 0071-018-325
Photo No. 1	Date 11/09/18		
Direction Photo Taken: South			
Description: Hotspot H Excavation: Test Pit BPA2-TP-99			

Photo No. 2	Date 11/09/18		
Direction Photo Taken:			
Description: Hotspot H Excavation: Test Pit BPA2-TP-99			



PHOTOGRAPHIC LOG



Client Name: Tecumseh Redevelopment Inc.		Site Location: Phase II Business Park Site II-5	Project No.: 0071-018-325
Photo No. 3	Date 11/09/18		
Direction Photo Taken:			
Description: Hotspot H Excavation: Test Pit BPA2-TP-99A			

Photo No. 4	Date 11/09/18		
Direction Photo Taken:			
Description: Hotspot H Excavation: Test Pit BPA2-TP-99A			



PHOTOGRAPHIC LOG

Client Name: Tecumseh Redevelopment Inc.		Site Location: Phase II Business Park Site II-5	Project No.: 0071-018-325
Photo No. 5	Date 11/09/18		
Direction Photo Taken:			
Description: Hotspot H Excavation: Test Pit BPA2-TP-99B			

Photo No. 6	Date 11/09/18		
Direction Photo Taken:			
Description: Hotspot H Excavation: Test Pit BPA2-TP-99B			



PHOTOGRAPHIC LOG

Client Name: Tecumseh Redevelopment Inc.		Site Location: Phase II Business Park Site II-5	Project No.: 0071-018-325
Photo No. 7	Date 11/13/18		
Direction Photo Taken: West			
Description: Hotspot H Excavation: Completed backfilling and grading.			

Photo No. 8	Date 11/13/18	
Direction Photo Taken: West		
Description: Hotspot H Excavation: Completed backfilling and grading.		

Prepared By: LER