
BROWNFIELD CLEANUP PROGRAM

APPENDIX E-1/E-3 SITE MANAGEMENT PLAN

**TECUMSEH PHASE I BUSINESS PARK
NYSDEC SITE NOS. C915197 (I-1) & C915197C (I-3)
LACKAWANNA, NEW YORK**

November 2017

0071-017-327

Prepared for:

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Revisions to Addenda of Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

**PHASE I BUSINESS PARK
SITE MANAGEMENT PLAN: APPENDIX E-1/E-3
NYSDEC SITE NOS. C915197 (I-1) & C915197C (I-3)**

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**PHASE I BUSINESS PARK
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1.0 INTRODUCTION

The Site Management Plan (SMP) is a required element of the remedial program at the Tecumseh Redevelopment Inc. (Tecumseh) Phase I Business Park (herein referred to as the Controlled Property; see Figure 1) under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by New York State Department of Environmental Conservation (NYSDEC). The purpose of an SMP is to manage the contamination on a site remaining after remedial action.

The January 2014 SMP (Ref. 1) for the Controlled Property was prepared by TurnKey Environmental Restoration, LLC (TurnKey), on behalf of Tecumseh, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (Ref. 2) and the guidelines provided by NYSDEC. Since the Controlled Property was divided into 11 BCP Sites designated as Sites I-1 through I-11 (BCP Site Nos. C915197 through C915199K), the main body of the SMP includes the site management components common to all 11 Sites. Site-specific requirements are included as Appendix E to the SMP.

1.1 Site Location and Description

As shown on Figure 2, Sites I-1 (approx. 5.57 acres) and I-3 (approx. 7.63 acres) is bounded by Business Park IA to the west; BCP Site I-5 to the north; BCP Sites I-2/I-4 and Fuhrmann Blvd. to the east; and Business Park II to the south.

The NYSDEC issued the Decision Document for Business Park I in January 2012 (Ref. 3). The Decision Document specifies, among other requirements, placement of acceptable cover material in areas not otherwise covered by rail lines, etc. Engineering controls (ECs) have been incorporated into the remedy to control exposure to remaining contamination during use of the Sites to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC by Tecumseh for the entire Business Park I has been recorded with the Erie County Clerk and requires compliance with this SMP and all ECs and institutional controls (ICs) placed on the Site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring, and reporting measures for all ECs and ICs.

This Appendix addresses the means for implementing the ICs and ECs that are required by the Environmental Easement for Sites I-1 and I-3 of the Controlled Property.

This Appendix is not to be used as stand-alone documents but as a component document of the January 2014 SMP for the Controlled Property.

1.2 Remedial Investigation

The August 2005 Remedial Investigation (RI) Work Plan (Ref. 4) identified Site characterization requirements to be completed pursuant to the BCP and NYSDEC DER-10 guidance across all 11 Sites within the Controlled Property. The RI was designed to provide defensible data to identify areas of the Controlled Property potentially requiring remediation, define chemical constituent migration pathways, and qualitatively assess human health and ecological risks to allow for performance of a remedial alternatives evaluation.

Investigative activities on Business Park I were performed January-February 2006. Specific to Sites I-1 and I-3, test pits were completed (three on Site I-1 and seven on Site I-3) as well as surface soil sampling (two on Site I-1 and one on Site I-3). In April 2008, a supplemental test pit program was performed to further delineate petroleum-impacted soil/fill in support of interim remedial measures. Monitoring well MW-17A and temporary piezometer P-50S were installed on Site I-3 as part of the RI. Attachment A includes the monitoring well construction log. Soil and groundwater samples were collected as detailed in the Work Plan.

Groundwater samples were collected from monitoring well MW-7A during the RI (March 2006) and again in February 2016 during a site-wide groundwater sampling event. No parameters exceeded the groundwater quality standards/guidance values (GWQS/GVs). Site groundwater is not used and is restricted from use for either potable or non-potable purposes without treatment by an Environmental Easement.

The RI Report was submitted to NYSDEC in October 2006, revised, and finalized in June 2007 (Ref. 5). Based on the RI findings, remediation of soil/fill was warranted.

1.3 Interim Remedial Measures

A pre-Interim Remedial Measures (IRM) investigation was proposed (Ref. 6) and performed in April 2008 since the extent of impacts at several test pit locations were not fully defined during the RI. The IRM completed on Business Park I involved petroleum-, tar-, and metals-impacted soil/fill removal in accordance with the NYSDEC-approved August 2008 IRM Work Plan (Ref. 7). A Construction Closeout Report (CCR) was not

prepared for these IRM activities; however, a summary of the IRM was presented in NYSDEC-approved May 2010 Alternatives Analysis (AA) Report for Business Park I (Ref. 8). The AA Report recommended deferred soil cover system placement during redevelopment as well as ECs and ICs to limit future use of the Controlled Property to restricted (commercial or industrial) applications and prevent groundwater use for potable purposes (see Section 2.0).

The following remedial work was performed between April and June 2009 on Sites I-1 and I-3 (see Figure 3):

- Construction of temporary on-site biotreatment pads on paved areas in the northern portion of Business Park I.
- Excavation of petroleum-impacted soil/fill on Site I-3; approximately 668 cubic yards in the vicinity of test pit TP-1-6 and 300 cubic yards in the vicinity of test pit grid composite 7/8. The impacted soil/fill was placed in the bioremediation area for on-site treatment (tilling). The treated soils were stockpiled for use as on-site, subgrade fill during future backfill and site grading work.
- Backfill of excavations with BUD #555-9-15 material; bioremediated slag/fill; and non-impacted crushed asphalt. Backfill material was placed into the excavation and compacted/tracked with the excavator/backhoe bucket in 2-foot lifts.

1.4 Summary of Remedial Actions

The final remedial measures for these Sites involved placement of the cover system in accordance with the NYSDEC-approved June 2017 Remedial Action Work Plan (RAWP) (Ref. 9). Details of cover system placement are provided in the November 2017 Final Engineering Report (Ref. 10).

1.5 Remaining Contamination

1.5.1 Soil

The IRM conducted on Sites I-1 and I-3 has removed all known “source area” (i.e., petroleum-impacted) slag/fill. The remaining soil/fill is generally characterized by widespread exceedance of the Part 375 unrestricted-use SCOs (USCOs) for several ubiquitous constituents. Specifically, nearly all samples collected during the RI exhibited exceedance of the USCOs for carcinogenic polyaromatic hydrocarbons (PAHs), as well as

arsenic, cadmium, chromium, lead, mercury and, at one sample location, cyanide. Tables 1 and 2 summarize the results of all soil samples remaining on Sites I-1 and I-3 that exceed USCOs following completion of the remedial actions. It is not possible to quantify with any certainty areas that do not exceed one or more of the USCO criteria; therefore, it is assumed that the entire 5.57 acres constituting Site I-1 and 7.63 acres constituting I-3 are impacted above the USCOs to the approximate native soil depth of 8 fbgs.

Following grading of these Sites, demarcation was constructed and placed so as to easily identify the existing sub-grade from the cover system material, and prevent the potential for inadvertent removal of sub-grade material during future intrusive work. The demarcation layer is comprised of an orange $\frac{3}{4}$ -inch plastic industrial netting material was rolled across the sub-grade and overlapped by approximately one foot at the seams.

1.5.2 Groundwater

The groundwater quality on Site I-3 has been assessed by sampling monitoring well MW-17A in March 2006 during the RI and again in February 2016 during a site-wide groundwater sampling event. The groundwater was analyzed for VOCs, SVOCs, and inorganic parameters. As indicated on Table 3, groundwater concentrations were non-detect or below NYSDEC Class GA GWQS/GVs. Groundwater monitoring well MW-17A will be retained for future monitoring in the event NYSDEC requests groundwater quality monitoring on the larger Business Park I.

2.0 ENGINEERING & INSTITUTIONAL CONTROL PLAN

2.1 Introduction

Since contaminated soil/fill remains beneath the Sites, Engineering Controls and Institutional Controls (EC/ICs) are required to protect public health and the environment. The EC/IC Plan in the Phase I BP SMP describes the procedures for the implementation and management of site-wide EC/ICs. The EC/IC Plan is one component of the SMP and subject to revision by NYSDEC. EC/ICs specific to Sites I-1 and I-3 are described below.

2.2 Engineering Control Systems

The cover system for Sites I-1 and I-3 is described in the Final Engineering Report (Ref. 10). Figure 4 shows the approximate locations and types of cover system materials placed on the Sites. In the event this cover system is breached, penetrated, or temporarily removed, the cover system shall be repaired in accordance with Section 2.2 of the SMP and Section 4.0 of the Excavation Work Plan (SMP Appendix B).

2.3 Institutional Controls

The Institutional Controls described in Section 2.3 of the SMP (i.e., Environmental Easement and Excavation Work Plan) must be implemented. There are no site-specific Institutional Control requirements for Sites I-1 and I-3.

2.4 Inspections and Notifications

The Inspections and Notifications described in Section 2.4 of the SMP must be implemented for Sites I-1 and I-3. There are no site-specific inspection and notification requirements.

2.5 Contingency Plan

Emergencies conditions are addressed in the Emergency Response Plan (ERP), which is an attachment to the HASP (SMP Appendix C). The following emergency contact numbers are specific to Sites I-1 and I-3:

Table 4: Emergency Contact Numbers

Name: John Cappellino Title: Executive Vice President, Buffalo and Erie County Industrial Land Development Corporation	Work: (716) 856-6525 Mobile: (716) 472-6667
Name: Thomas Forbes Title: Principal Engineer, Benchmark Environmental	Work: (716) 856-0599 Mobile: (716) 864-1730

Note: Contact numbers subject to change and should be updated as necessary

3.0 SITE MONITORING PLAN

The Site Monitoring Plan describes the measures for evaluating the performance and effectiveness of:

- The remedy to reduce or mitigate contamination at the Site;
- The cover system; and
- All affected Site media.

Monitoring of the cover system is described in the SMP. No site-specific monitoring is required.

4.0 OPERATION & MAINTENANCE PLAN

The remedy for Sites I-1 and I-3 does not rely on any mechanical systems, such as sub-slab depressurization or soil vapor extraction, to protect public health and the environment. Therefore, a site-specific Operation and Maintenance Plan is not required.

5.0 INSPECTIONS, REPORTING & CERTIFICATIONS

All inspection, reporting, and certification requirement are described in Section 3.0 of the SMP. Attachment B includes sample EC/IC Certification Forms to be completed for Sites I-1 and I-3.

6.0 REFERENCES

1. TurnKey Environmental Restoration, LLC. *Site Management Plan for BCP Tecumseh Phase I Business Park, NYSDEC Site No. C915197 through C915197K, Lackawanna, New York*. January 2014.
2. New York State Department of Environmental Conservation. *DER-10/Technical Guidance for Site Investigation and Remediation*. May 3, 2010.
3. New York State Department of Environmental Conservation. *Decision Document, Tecumseh Phase I Business Park, Brownfield Cleanup Program, Lackawanna, Erie County, Site No. C915197*. January 2012.
4. TurnKey Environmental Restoration, LLC. *Remedial Investigation Work Plan, Phase I Business Park Area, Lackawanna, New York*. August 2005.
5. TurnKey Environmental Restoration, LLC. *Remedial Investigation Report, Phase I Business Park, Tecumseh Redevelopment Inc., Lackawanna, New York*. June 2007.
6. TurnKey Environmental Restoration, LLC. *Correspondence to Mr. Maurice Moore of the NYSDEC Re: Phase I Business Park Area, Supplemental Remedial Investigation*. March 27, 2008.
7. TurnKey Environmental Restoration, LLC in association with Benchmark Environmental Engineering & Science, PLLC. *Interim Remedial Measures Work Plan, Phase I Business Park Area, Lackawanna, New York, BCP Site No. C915197*. August 2008.
8. TurnKey Environmental Restoration, LLC in association with Benchmark Environmental Engineering & Science, PLLC. *Alternatives Analysis Report (AAR) Phase I Business Park, ArcelorMittal Tecumseh Redevelopment, Inc., Lackawanna, New York, BCP Site No. C915197*. May 2010.
9. TurnKey Environmental Restoration, LLC in association with Benchmark Environmental Engineering & Science, PLLC. *Remedial Action Work Plan, Tecumseh Business Parks I and II, Lackawanna, New York*. June 2017.
10. TurnKey Environmental Restoration, LLC in association with Benchmark Environmental Engineering & Science, PLLC. *Final Engineering Report, Tecumseh Business Park I, Sub-Parcels I-1 and I-3, Lackawanna, New York*. November 2017.

TABLES

TABLE 1
SUMMARY OF SOIL/FILL CONTAMINATION ABOVE USCOS

SITE MANAGEMENT PLAN

Phase I Business Park, Site I-1
Tecumseh Redevelopment Inc., Lackawanna, New York

Parameter ¹	USCOs (mg/kg) ²	Sample Location, Depth Interval (fbgs), and Type			
		TP-2-(1-3)	TP-2-(1-3)	SS-23	SS-24
		0.0 - 2.0	2.0 - 5.5	0.0 - 1.0	0.0 - 1.0
		composite	composite	grab	grab
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg					
Acenaphthene	20	0.44 J	0.67 J	ND	1.1 J
Acenaphthylene	100	0.59 J	20	ND	0.89 J
Anthracene	100	1 J	17 J	0.4 J	3.9 J
Benzo(a)anthracene	1	6.7 J	50	1.6 J	14
Benzo(b)fluoranthene	1	11 J	86 J	2.6 J	15 J
Benzo(k)fluoranthene	0.8	3.7 J	25 J	0.53 J	6 J
Benzo(g,h,i)perylene	100	3.3 J	34	1.3 J	7 J
Benzo(a)pyrene	1	6.8 J	62	1.5 J	12
Chrysene	1	8	52	1.5 J	11
Dibenz(a,h)anthracene	0.33	1 J	8.6	ND	2.3 J
Dibenzofuran	7	ND	3.8 J	ND	1 J
Fluoranthene	100	14	95 J	3.5 J	28
Fluorene	30	0.38 J	4.2 J	ND	1.5 J
Indeno(1,2,3-cd)pyrene	0.5	3 J	30	1.1 J	6.9 J
2-Methylnaphthalene	--	ND	1.6 J	ND	ND
Naphthalene	12	ND	4.2 J	ND	ND
Phenanthrene	100	6.5 J	52 J	1.4 J	16
Pyrene	100	11	94	3.3 J	20
TOTAL SVOCs (mg/kg)	--	77.41	640.1	18.73	146.6
Inorganic Compounds - mg/kg					
Arsenic, Total	13	10	7.4	7.8	--
Cadmium, Total	2.5	2.8	1.4	2.9	--
Chromium, Total	30	136 J	15.9 J	95.6	--
Lead, Total	63	267 J	103 J	198	--
Mercury, Total	0.18	2.9 J	1.8 J	1.9	--
Cyanide, Total	27	11.5	ND	14.7 J	--

Notes:

- Only those parameters detected at a min. of one sample location presented; all other compounds reported as non-detect.
- USCO = Unrestricted-Use Soil Cleanup Objective per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.

Definitions:

J = estimated value; result is less than the sample quantitation limit but greater than zero.
 ND = parameter not detected above laboratory detection limit.
 "--" = not analyzed for this parameter or no individual SCO.
 "RED TEXT" = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Part 375 Unrestricted Soil Cleanup Objectives.

TABLE 2
SUMMARY OF SOIL/FILL CONTAMINATION ABOVE USCOS

SITE MANAGEMENT PLAN

Phase I Business Park, Site I-3
Tecumseh Redevelopment Inc., Lackawanna, New York

Parameter ¹	USCOs (mg/kg) ²	Sample Location, Depth Interval (fbgs), and Type					
		TP-1-(1-5)	TP-1-(1-5)	TP-1-(6-10)	TP-1-(678910)	TP-1-9	SS-25
		0.0 - 2.0	2.0 - 5.0	0.0 - 2.0	2.0 - 5.0	1.0 - 4.8	0.0 - 1.0
		composite	composite	composite	composite	grab	grab
STARS Volatile Organic Compounds (VOCs - Method 8021) - mg/kg							
Benzene	0.06	--	--	--	--	0.0013	--
Naphthalene	12	--	--	--	--	0.076 J	0.065 J
TOTAL VOCs (mg/kg)	--	0	0	0	0	0.077	0.065
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - mg/kg							
Acenaphthene	20	0.98 J	0.31 J	0.28 J	ND	0.22 J	0.16 J
Acenaphthylene	100	2.2	1.5 J	1.4 J	0.17 J	0.44 J	0.27 J
Anthracene	100	2.9	1.7 J	1.2 J	0.096 J	0.41 J	0.78
Benzo(a)anthracene	1	7.8	5.5	2.9	0.45 J	1.2 J	1.6
Benzo(b)fluoranthene	1	16 J	8.4 J	4.5 J	0.73 J	1.9 J	2.2 J
Benzo(k)fluoranthene	0.8	5 J	2.3 J	1.8 J	0.25 J	0.61 J	0.61 J
Benzo(g,h,i)perylene	100	6.5	2.7	2.5	0.28 J	0.42 J	0.81
Benzo(a)pyrene	1	8	5.5	3.1	0.47 J	1.2 J	1.6
Chrysene	1	8.8	6.1	3.2	0.44 J	1 J	1.6
Dibenz(a,h)anthracene	0.33	1.9	0.8 J	0.55 J	ND	0.2 J	0.23 J
Dibenzofuran	7	0.68 J	0.72 J	0.35 J	ND	0.24 J	0.24 J
Fluoranthene	100	19	12	5.9	0.66 J	2.0	4
Fluorene	30	1.1 J	0.84 J	0.53 J	ND	ND	0.42
Indeno(1,2,3-cd)pyrene	0.5	6.3	2.5	1.8	0.28 J	0.49 J	0.78
2-Methylnaphthalene	--	0.34 J	0.43 J	0.18 J	ND	0.23 J	0.068 J
Phenanthrene	100	12	7.7	4.1	0.3 J	1.4 J	3.2
Pyrene	100	13	7.7	3.9	0.47 J	1.4 J	2.8
TOTAL SVOCs (mg/kg)	--	113	66.7	38.2	4.60	13.4	21.4
Inorganic Compounds - mg/kg							
Arsenic, Total	13	121	34.6	13.1	10.2	12.1	7.6
Cadmium, Total	2.5	ND	ND	ND	ND	ND	1.4
Chromium, Total	30	123 J	40.3 J	70.1 J	79.9 J	13.2 J	67.8
Lead, Total	63	257 J	126 J	210 J	108 J	59.2 J	166
Mercury, Total	0.18	12	0.206	0.075	0.051	0.041	0.148
Cyanide, Total	27	123	14.2	ND	9.2	ND	3.5 J

Notes:

- Only those parameters detected at a min. of one sample location presented; all other compounds reported as non-detect.
- USCO = Unrestricted-Use Soil Cleanup Objective per NYSDEC 6NYCRR Part 375-6.8(b), Final December 2006.

Definitions:

J = estimated value; result is less than the sample quantitation limit but greater than zero.
 ND = parameter not detected above laboratory detection limit.
 "--" = not analyzed for this parameter or no individual SCO.
 "RED TEXT" = Data was qualified per the third party Data Usability Summary Report (DUSR).

Color Code:

compound	= Polycyclic Aromatic Hydrocarbon (PAH)
BOLD	= Value exceeds Unrestricted SCO.
	= TP-1-6 Soil Removed through 2009 IRM activities



**TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL DATA**

SITE MANAGEMENT PLAN

**Phase I Business Park, Site I-3
Tecumseh Redevelopment Inc., Lackawanna, New York**

Parameter ¹	Well ID, Location, & Sampling Date				GWQS/GV ³
	MW-17A		MW-17A		
	Site 1-3				
	3/7/06 ²		2/23/16		
Field Measurements (units as indicated)					
pH (units)	7.47	7.72	7.56	7.60	6.5 - 8.5
Temperature (°C)	7.1	6.5	6.9	6.6	NA
Specific Conductance (uS)	851.0	846.3	835.8	836.4	NA
Turbidity	14.9	4.52	4.28	1.32	50**
Dissolved Oxygen (mg/L)	--	--	6.58	8.35	NA
ORP (mV)	-18	14	-2	5	NA
Volatile Organic Compounds (VOCs) - ug/L					
Acetone	--		ND		50*
n-Butylbenzene	ND		ND		5
1,2,4-Trichlorobenzene	--		ND		5* ⁴
Base-Neutral Semi-Volatile Organic Compounds (SVOCs - Method 8270) - ug/L ⁵					
TOTAL SVOCs (ug/L)	ND		ND		NA
Polychlorinated Biphenyls (PCBs) - ug/L					
TOTAL PCBs (ug/L)	ND		--		NA
Total Inorganic Compounds - mg/L ⁶					
Barium, Total	--		0.046 J		1
Cadmium, Total	ND		ND		0.005
Chromium, Total	ND		0.0032 J		0.05
Copper, Total	--		0.0035 J		0.2
Cyanide, Total	0.16 J		0.12 F1		0.2
Manganese, Total	--		0.0063 B		0.3
Nickel, Total	--		ND		0.1
Zinc, Total	0.16 J		0.0016 JB		0.2

Notes:

1. Only those parameters detected at a min. of 1 sample location are presented; all other compounds were reported as N
2. Groundwater collected from March 2006 event were only analyzed for parameters listed in August 2005 RIWP.
3. NYSDEC Class "GA" Groundwater Quality Standards/Guidance Values (GWQS/GV) as per 6 NYCRR Part 703.
4. A Guidance Value limit of 10 ug/L applies to the sum of 1,2,3-, 1,2,4-, and 1,3,5-Trichlorobenzene.
5. Groundwater collected from wells were only analyzed for BN SVOCs.
6. Groundwater collected from wells were only analyzed for arsenic, cadmium, chromium, cyanide, lead, and mercury.

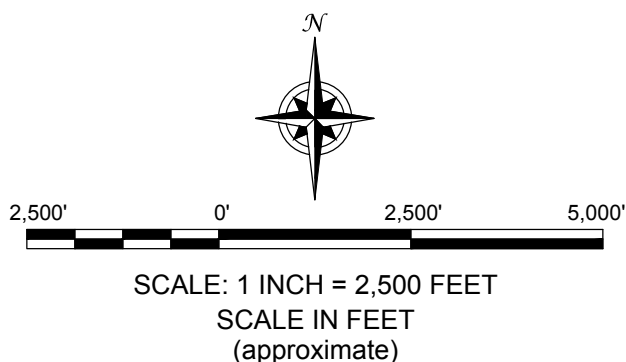
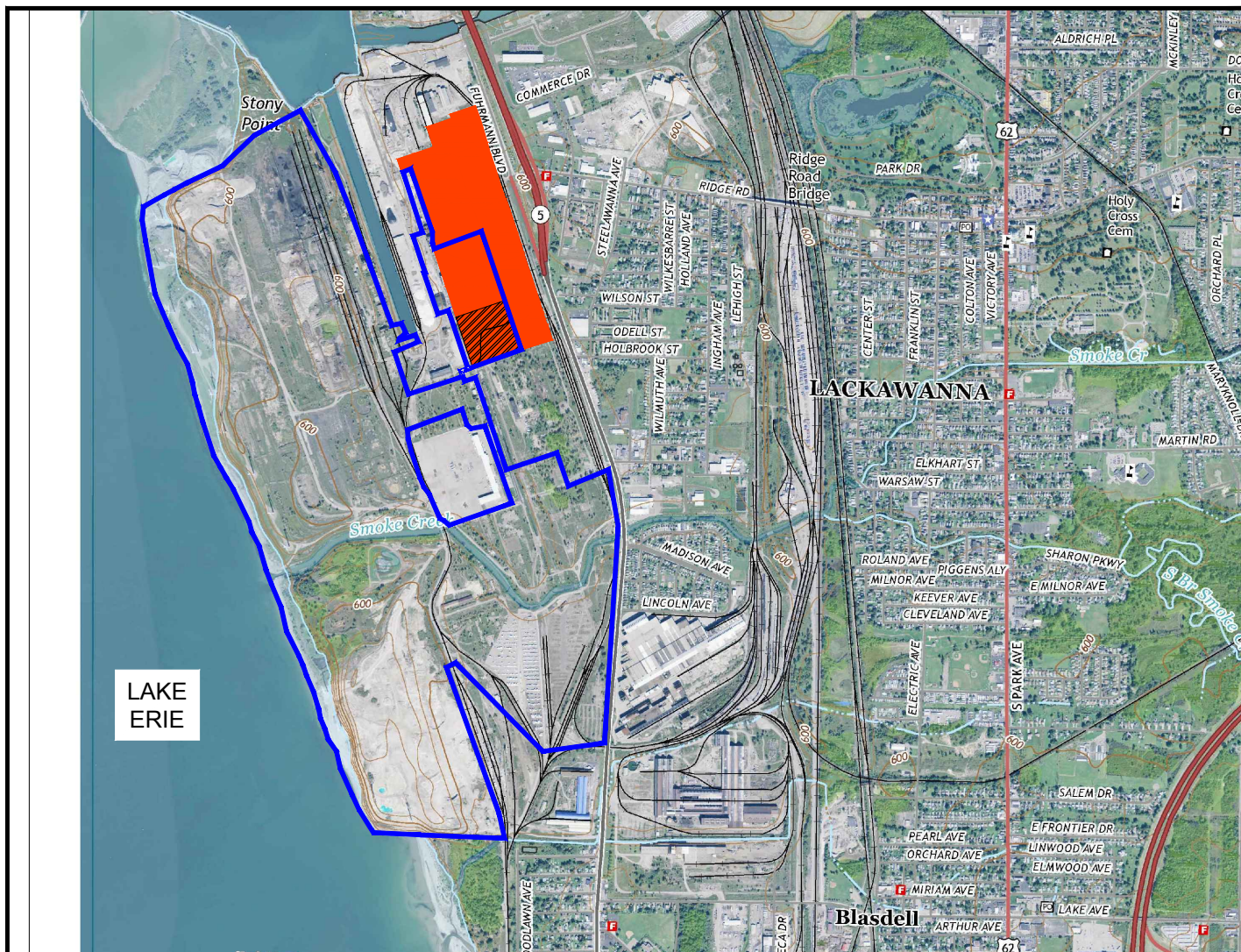
Definitions:

- J = Estimated value; result is less than the sample quantitation limit but greater than zero.
 ND = parameter not detected above laboratory detection limit.
 "--" = not analyzed for this parameter
 "*" = Groundwater Quality Guidance Value
 "**" = field threshold value; when exceeded, field filtered metals sample is collected (i.e., dissolved metals).
 NA = No groundwater quality standard or guidance value is available at this time.
 "RED TEXT" = Data was qualified per the third party Data Usability Summary Report (DUSR).

BOLD = Result is above the GWQS/GV.

FIGURES

FIGURE 1



LEGEND:

- APPROXIMATE TECUMSEH PROPERTY BOUNDARY
- TECUMSEH BUSINESS PARK I
- SITES I-1 & I-3

SITE LOCATION AND VICINITY MAP

SITE MANAGEMENT PLAN

TECUMSEH PHASE I BUSINESS PARK
BCP SITE NOS. C915197 (I-1) & C91519C (I-3)
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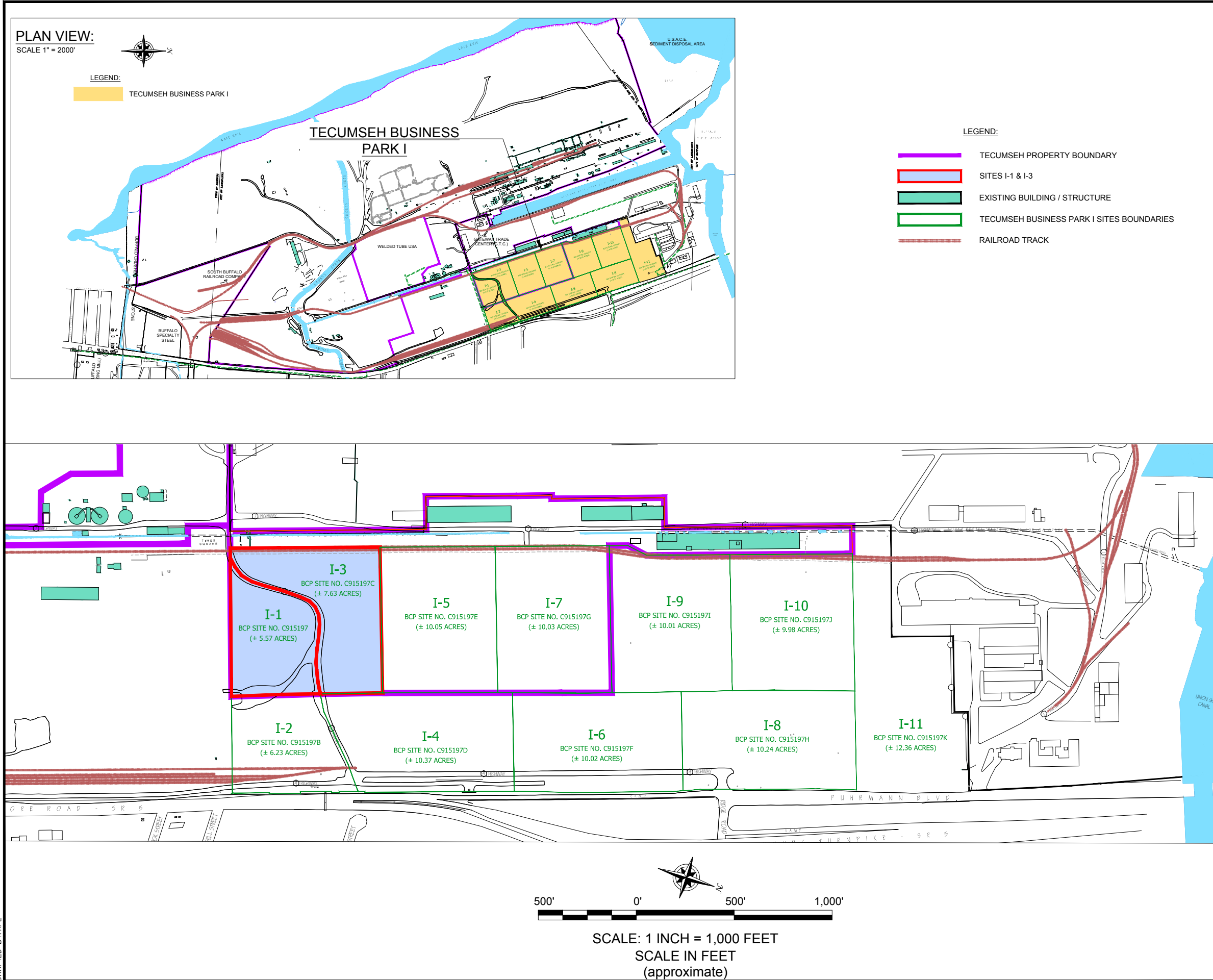
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SITE DELINEATION MAP

SITE MANAGEMENT PLAN

TECUMSEH PHASE I BUSINESS PARK
BCP SITE NOS. C915197 (I-1) & C915197C (I-3)
LACKAWANNA, NEW YORK

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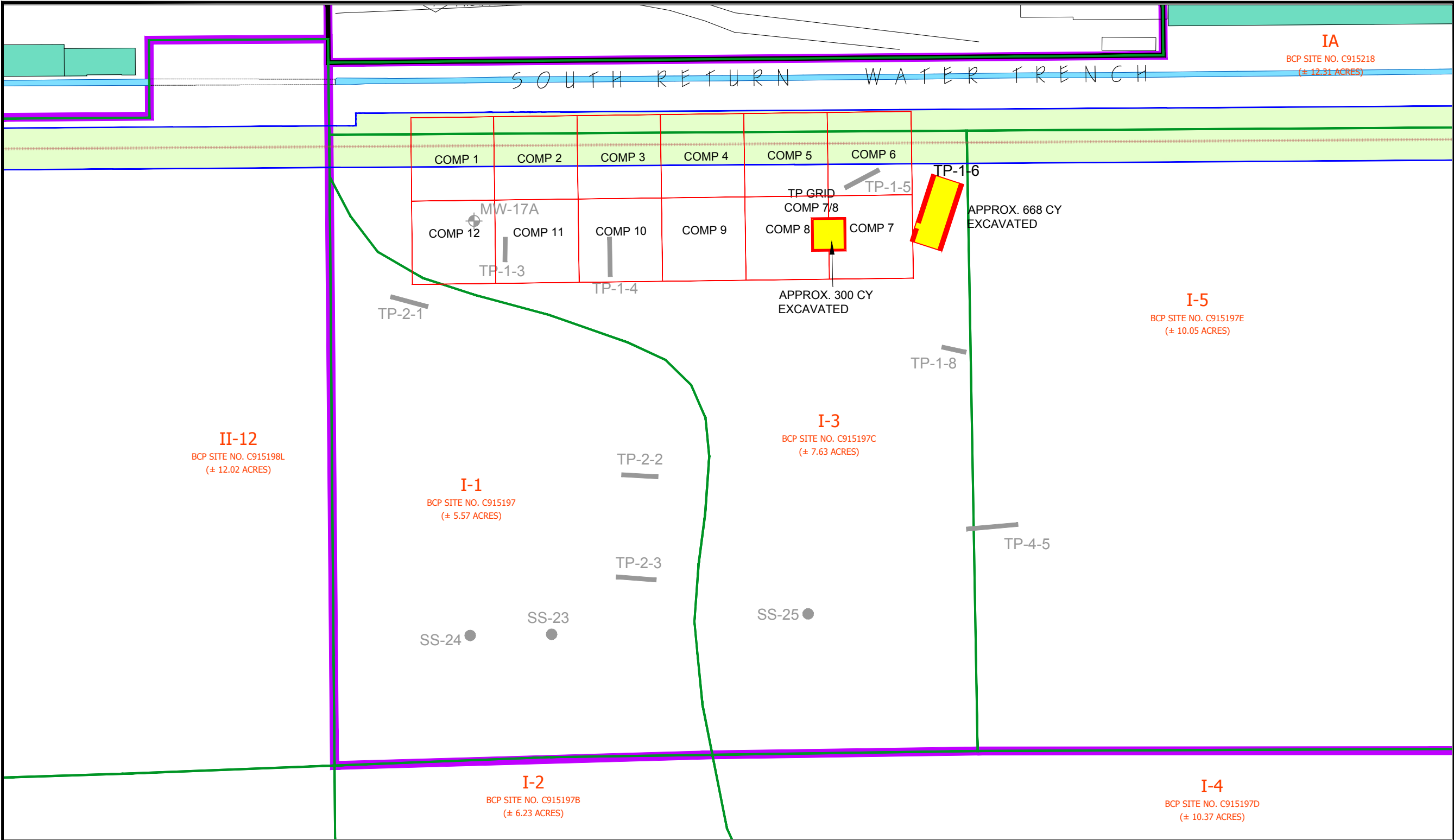
JOB NO.: 0071-017-327

FIGURE 2

DISCLAIMER: PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC. IMPORTANT: THIS DRAWING PRINT IS LOANED FOR MUTUAL ASSISTANCE AND AS SUCH IS SUBJECT TO RECALL AT ANY TIME. INFORMATION CONTAINED HEREON IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY FORM FOR THE BENEFIT OF PARTIES OTHER THAN NECESSARY SUBCONTRACTORS & SUPPLIERS WITHOUT THE WRITTEN CONSENT OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC & TURNKEY ENVIRONMENTAL RESTORATION, LLC.

F:\CAD\Turnkey\Tecumseh Redevelopment\Brownfield Cleanup Program (BCP)\Phase I Parcel\Site Management Plan\Site I-1, I-3\Figure 3: Completed Remedial Measures.dwg, DWG To PDF.pc3

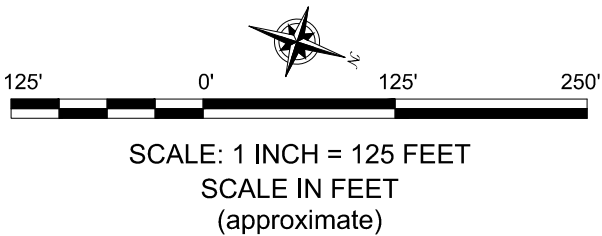
DATE: NOVEMBER 2017
DRAFTED BY: REL



LEGEND:

- TECUMSEH PROPERTY BOUNDARY
- TECUMSEH BUSINESS PARK I SITE BOUNDARIES
- IMPACTED SOIL/FILL EXCAVATED
- MONITORING WELL

- TEST PIT
- PIEZOMETER
- SURFACE SOIL



COMPLETED REMEDIAL MEASURES

SITE MANAGEMENT PLAN
TECUMSEH PHASE I BUSINESS PARK
BCP SITE NOS. C915197 (I-1) & C915197C (I-3)
LACKAWANNA, NEW YORK
PREPARED FOR
TECUMSEH REDEVELOPMENT INC.



2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0071-017-327

FIGURE 3

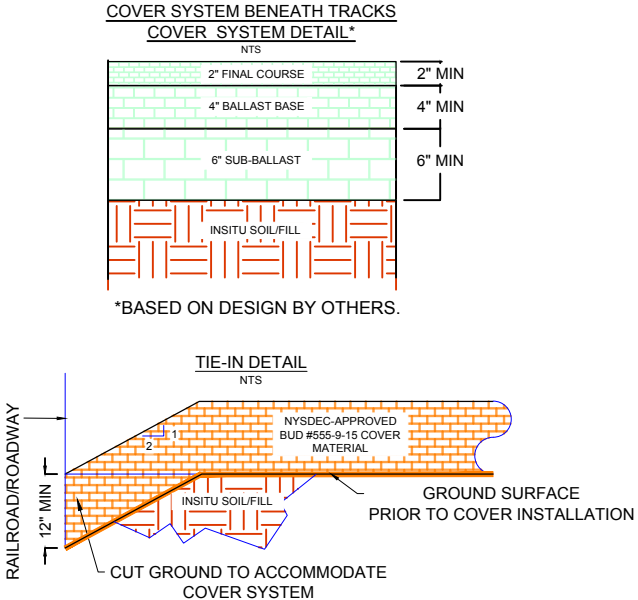
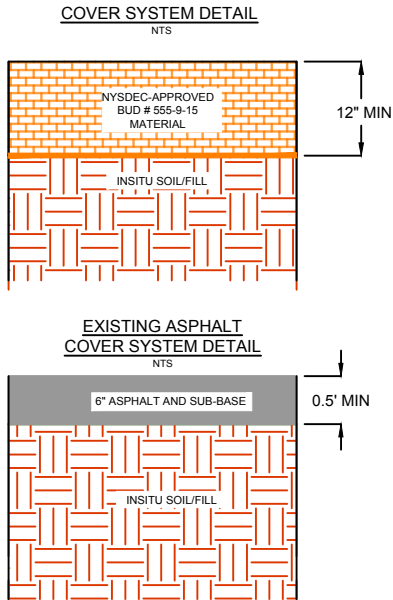
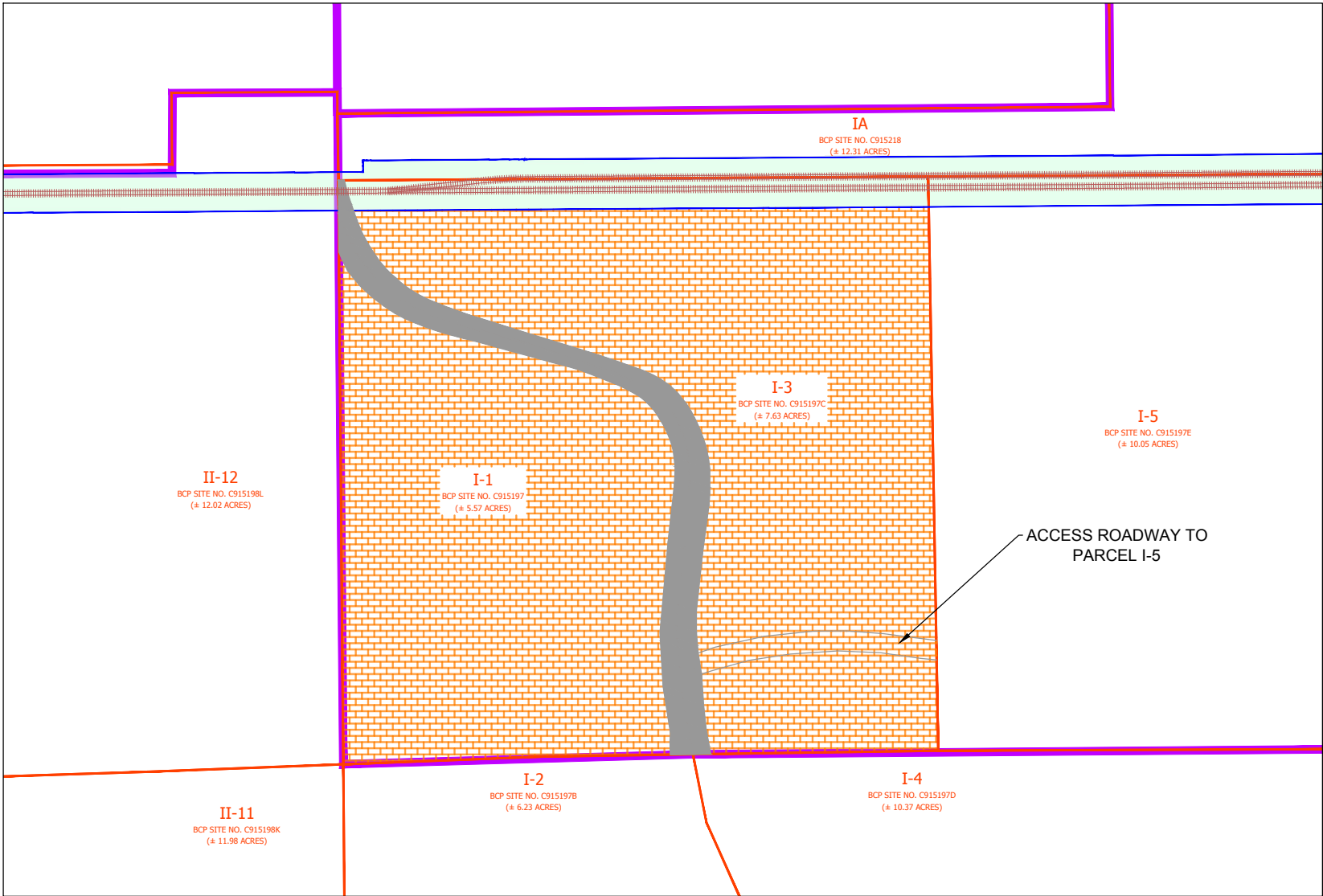
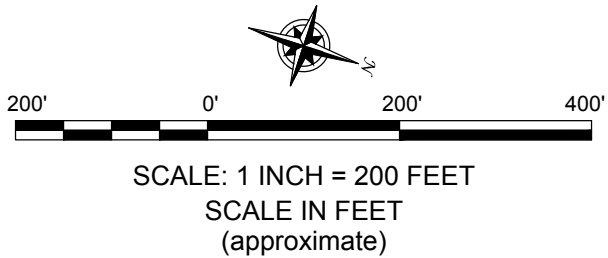
DISCLAIMER: PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC IMPORTANT: THIS DRAWING PRINT IS LOANED FOR MUTUAL ASSISTANCE AND AS SUCH IS SUBJECT TO RECALL AT ANY TIME. INFORMATION CONTAINED HEREON IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY FORM FOR THE BENEFIT OF PARTIES OTHER THAN NECESSARY SUBCONTRACTORS & SUPPLIERS WITHOUT THE WRITTEN CONSENT OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC & TURNKEY ENVIRONMENTAL RESTORATION, LLC.

F:\CAD\TurnKey\Tecumseh Redevelopment\Brownfield Cleanup Program (BCP)\Phase I\Site Management Plan\Site I-1, I-3\Figure 4; Cover System 1-1, I-3.dwg, DWG To PDF.pc3

DATE: NOVEMBER 2017
DRAFTED BY: REL

- LEGEND:
- TECUMSEH PROPERTY BOUNDARY
 - SITE BOUNDARIES
 - BUD #555-9-15 COVER MATERIAL
 - EXISTING ASPHALT ROADWAY COVER SYSTEM
 - EXISTING EAST HARBOR LEAD RAILROAD TRACK AND ROW

- NOTES:
- HORIZONTAL DATUM NAD 83; VERTICAL DATUM NAVD 88.
 - ALL MEASUREMENTS IN FEET.



APPROXIMATE LOCATION AND TYPES OF COVER SYSTEM MATERIALS

SITE MANAGEMENT PLAN
TECUMSEH PHASE I BUSINESS PARK
BCP SITE NOS. C915197 (I-1) & C915197C (I-3)
LACKAWANNA, NEW YORK
PREPARED FOR
TECUMSEH REDEVELOPMENT INC.



2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: B0071-017-327

FIGURE 4

DISCLAIMER: PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC IMPORTANT: THIS DRAWING PRINT IS LOANED FOR MUTUAL ASSISTANCE AND AS SUCH IS SUBJECT TO RECALL AT ANY TIME. INFORMATION CONTAINED HEREON IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY FORM FOR THE BENEFIT OF PARTIES OTHER THAN NECESSARY SUBCONTRACTORS & SUPPLIERS WITHOUT THE WRITTEN CONSENT OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC & TURNKEY ENVIRONMENTAL RESTORATION, LLC.

ATTACHMENT A

MONITORING WELL BORING AND CONSTRUCTION LOG



FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name:	Phase 1 BPA	BORING NUMBER:	MW-17A
Project Number:	0071-006-102	Location:	Phase I BPA
Client:	Tecumseh Redevelopment, Inc.	Start Date/Time:	01/29/06 08:00 AM
Drilling Company:	Earth Dimensions, Inc.	End Date/Time:	01/29/06 10:20 AM
Driller:	Brian Bartran	Logged By:	TAB
Helper:	Harold	Drilling Method:	4.25 HSA
Rig Type:	CME 85	Weather:	overcast, cool, sl. breeze, Low 40's F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery	SAMPLE DESCRIPTION USCS Classification: Color, Moisture Condition, Percentage of Soil Type, Texture, Plasticity, Fabric, Bedding, Weathering/Fracturing, Odor, Other	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Soil Unit	Well Construction Details
582.48	0	S1	17 28 29 12	57	1.0	<u>SOIL/FILL:</u> Black/Dark Brown, moist, 80% NPF, 20% slag, 20% FS, medium dense, LWD	FILL	0.0	-	FILL	<div>concrete</div> <div>Benetone Clips</div> <div>2" Sch. 40 PVC riser</div>
580.48	2	S2	100-5 -- --	0	1.5	Same as S1 above, wet	FILL	0.0	-	FILL	
578.48	4	S3	100-2 -- --	0	0.4	<u>FILL:</u> Medium grey, wet, 90% Concrete, 10% FS, SA, LWD	FILL	0.0	-	FILL	
576.48	6	S4	2 2 4 4	6	1.2	(0.0 - 0.7) <u>SANDY LEAN CLAY:</u> Medium grey, stiff, wet, 60% MPF, 40% Fine Sand, slow dilatancy (0.7 - 1.2) <u>ORGANIC SOIL:</u> Dark brown, wet, 60% LPF, 40% FS, LWD, slow dilatancy, w/ rootlets and wood chips	CL OL/OH	0.0	-	CLAY PEAT	
574.48	8	S5	4 5 5 7	10	1.3	Same as S4 (0.0 - 0.7) w/ lenses of Peat	CL	0.0	-	CLAY	
572.48	10	S6	4 7 8 8	15	1.5	Same as S4 (0.0 - 0.7); clay is softer from 0.0 - 0.8 w/ rapid dilatancy. Clay stiffens from 0.5 - 1.5	Cl	0.0	-	CLAY	
570.48	12	S7	3 3 3 7	6	2.0	<u>SANDY ORGANIC SOIL:</u> Dark brown to brownish grey, wet, firm, 60% LPF, 40% FS w/ rootlets and wood fibers, LWD	OL/OH	0.0	-	PEAT	
568.48	14	S8				EOB @ 14.0 fbgs					
566.48	16	S9									<div>sand pack - #00N (14.0 - 3.0 fbgs)</div> <div>2" Sch. 40 PVC screen, 0.010" slot</div>
564.48	18										

ABBREVIATIONS:			MS = medium sand			
C = coarse	fbgs = feet below ground surface	HSA = hollow stem auger	NA = not applicable			
CG = coarse gravel	FG = fine gravel	LP = low plasticity	NPF = not plastic fines			
CS = coarse sand	fmsl = feet above mean sea level	LWD = loose when disturbed	SA = sub-angular			
EOB = end of boring	FS = fine sand	M = medium	SR = sub-rounded			
F = fines or fine	HP = high plasticity	MP = medium plasticity	SS = split spoon			

ATTACHMENT B

SAMPLE EC/IC CERTIFICATION FORMS



Enclosure 1
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details	Box 1	
Site No.C915197		
Site Name: Site I-1 Tecumseh Phase I Business Park		
Site Address: 2303 Hamburg Turnpike	Zip Code: 14218	
City/Town: Lackawanna		
County: Erie		
Current Use: Commercial		
Intended Use: Commercial		

Verification of Site Details	Box 2	
	YES	NO
1. Are the Site Details above, correct?	<input type="checkbox"/>	<input type="checkbox"/>
If NO, are changes handwritten above or included on a separate sheet?	<input type="checkbox"/>	<input type="checkbox"/>
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	<input type="checkbox"/>	<input type="checkbox"/>
3. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	<input type="checkbox"/>	<input type="checkbox"/>
4. Has a change-of-use occurred since the initial/last certification?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	<input type="checkbox"/>	<input type="checkbox"/>
5. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment for offsite contamination are no longer valid?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, is the new information or evidence that new information has been previously submitted included with this Certification?	<input type="checkbox"/>	<input type="checkbox"/>
6. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years) ?	<input type="checkbox"/>	<input type="checkbox"/>

SITE NO. C915197

Box 3

Description of Institutional Control Certification

	<u>YES</u>	<u>NO</u>
1. Compliance with the Site Management Plan (SMP) for the implemented remedy:	<input type="checkbox"/>	<input type="checkbox"/>
2. The groundwater beneath the Site is not used as a potable water source or for any other use without prior written permission of the Department:	<input type="checkbox"/>	<input type="checkbox"/>
3. Groundwater monitoring as specified in the SMP:	<input type="checkbox"/>	<input type="checkbox"/>
4. Operation and maintenance of the ASD system as specified in the SMP:	<input type="checkbox"/>	<input type="checkbox"/>

Description of Engineering Control Certification

Box 4

	<u>YES</u>	<u>NO</u>
1. Maintenance of the cover systems over the Site:	<input type="checkbox"/>	<input type="checkbox"/>

Control Certification Statement

For each Institutional or Engineering control listed above, I certify by checking "Yes" that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (d) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control.
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

**IC/EC CERTIFICATIONS
SITE NO. C915197**

Box 5

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 & 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____ (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner or Remedial Party Rendering Certification

Date

Box 6

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information and statements in Box 4 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Qualified Environmental Professional for the _____

(Owner or Remedial Party) for the Site named in the Site Details Section of this form.

Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering
Certification

Stamp (if Required)

Date



Enclosure 1
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details	Box 1	
Site No. C915197C		
Site Name: Site I-3 Tecumseh Phase I Business Park		
Site Address: 2303 Hamburg Turnpike	Zip Code: 14218	
City/Town: Lackawanna		
County: Erie		
Current Use: Commercial		
Intended Use: Commercial		

Verification of Site Details	Box 2	
	YES	NO
1. Are the Site Details above, correct?	<input type="checkbox"/>	<input type="checkbox"/>
If NO, are changes handwritten above or included on a separate sheet?	<input type="checkbox"/>	<input type="checkbox"/>
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	<input type="checkbox"/>	<input type="checkbox"/>
3. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	<input type="checkbox"/>	<input type="checkbox"/>
4. Has a change-of-use occurred since the initial/last certification?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	<input type="checkbox"/>	<input type="checkbox"/>
5. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment for offsite contamination are no longer valid?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, is the new information or evidence that new information has been previously submitted included with this Certification?	<input type="checkbox"/>	<input type="checkbox"/>
6. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years) ?	<input type="checkbox"/>	<input type="checkbox"/>

SITE NO. C915197C

Box 3

Description of Institutional Control Certification

	<u>YES</u>	<u>NO</u>
1. Compliance with the Site Management Plan (SMP) for the implemented remedy:	<input type="checkbox"/>	<input type="checkbox"/>
2. The groundwater beneath the Site is not used as a potable water source or for any other use without prior written permission of the Department:	<input type="checkbox"/>	<input type="checkbox"/>
3. Groundwater monitoring as specified in the SMP:	<input type="checkbox"/>	<input type="checkbox"/>
4. Operation and maintenance of the ASD system as specified in the SMP:	<input type="checkbox"/>	<input type="checkbox"/>

Description of Engineering Control Certification

Box 4

	<u>YES</u>	<u>NO</u>
1. Maintenance of the cover systems over the Site:	<input type="checkbox"/>	<input type="checkbox"/>

Control Certification Statement

For each Institutional or Engineering control listed above, I certify by checking "Yes" that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (d) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control.
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

**IC/EC CERTIFICATIONS
SITE NO. C915197C**

Box 5

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 & 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____ (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner or Remedial Party Rendering Certification

Date

Box 6

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information and statements in Box 4 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Qualified Environmental Professional for the _____

(Owner or Remedial Party) for the Site named in the Site Details Section of this form.

Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering
Certification

Stamp (if Required)

Date

Enclosure 2

Certification of Institutional Controls/ Engineering Controls (ICs/ECs) Step-by-Step Instructions, Certification Requirements and Definitions

The Owner, or Remedial Party, and when necessary, a Professional Engineer (P.E.), or the Qualified Environmental Professional (QEP), must review and complete the IC/EC Certification Form, sign the IC/EC Certifications Signature Page, and return it, along with the Periodic Review Report (PRR), within 45 days of the date of this notice.

Please use the following instructions to complete the IC/EC Certification.

I. Verification of Site Details (Box 1 and Box 2):

Answer the six questions in the Verification of Site Details Section. Questions 5 and 6 refer to only sites in the Brownfield Cleanup Program. ECL Section 27-1415-7(c) is included in

IV. IC/EC Certification Requirements. The Owner and/or your P.E. or QEP may include handwritten changes and/or other supporting documentation, as necessary.

II. Verification of Institutional / Engineering Controls (Box 3 and Box 4)

Review the listed Institutional / Engineering Controls, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party is to petition the Department requesting approval to remove the control.

2. Select "YES" or "NO" for **Control Certification** for each IC/EC, based on Sections (a)-(e) of the **Control Certification Statement**.

If the Department concurs with the explanation, the corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Project Manager. If the Department has any questions or concerns regarding the completion of the certification, the Project Manager will contact you.

3. If you cannot certify "Yes" for each Control, please continue to complete the remainder of this **Control Certification** form. Attach supporting documentation that explains why the **Control Certification** cannot be rendered, as well as a statement of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Control Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is conducted.

If the Department concurs with the explanation, the corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Project Manager. Once the corrective measures are complete a new Periodic Review Report (with IC/EC Certification) is to be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 5 and Box 6):

1. If you certified "Yes" for each Control, please complete and sign the IC/EC Certifications page. To determine WHO signs the **IC/EC Certification**, please use Table 1. Signature Requirements for the IC/EC Certification, which follows.

Table 1. Signature Requirements for Control Certification Page		
Type of Control	Example of IC/EC	Required Signatures
IC only	Environmental Easement Deed Restriction.	A site or property owner or remedial party.
IC with an EC which does not include a treatment system or engineered caps.	Fence, Clean Soil Cover, Individual House Water Treatment System, Vapor Mitigation System	A site or property owner or remedial party, and a QEP. (P.E. license not required)
IC with an EC that includes treatment system or an engineered cap.	Pump & Treat System providing hydraulic control of a plume, Part 360 Cap.	A site or property owner or remedial party, and a QEP with a P.E. license.

IV. IC/EC Certification Requirements:

Division of Environmental Remediation Program Policy requires periodic certification of IC(s) and EC(s) as follows:

For Environmental Restoration Projects: N.Y. Env'tl Conserv.Law Section 56-0503
(Environmental restoration projects; state assistance)

For State Superfund Projects: Env'tl Conserv.Law Section 27-1318.
(Institutional and engineering controls)

For Brownfields Cleanup Program Projects: Env'tl Conserv.Law Section 27-1415. (Remedial
program requirements)

Env'tl Conserv.Law Section 27-1415-7(c) states:

- (c) At non-significant threat sites where contaminants in groundwater at the site boundary contravene drinking water standards, such certification shall also certify that no new information has come to the owner's attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of offsite contamination are no longer valid. Every five years the owner at such sites shall certify that the assumptions made in the qualitative exposure assessment remain valid. The requirement to provide such certifications may be terminated by a written determination by the Commissioner in consultation with the Commissioner of Health, after notice to the parties on the brownfield site contact list and a public comment period of thirty days.

Voluntary Cleanup Program: Applicable program guidance.

Petroleum Remediation Program: Applicable program guidance.

Federal Brownfields: Applicable program guidance.

Manufactured Gas Plant Projects: Applicable program guidance (including non-registry listed MGPs).

WHERE to mail the signed Certification Form by March 1st of each year (or within 45 days of the date of the Department notice letter):

New York State Department of Environmental Conservation
Division of Environmental Remediation

Attn: Division of Environmental Remediation – North Section
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2999

Please note that extra postage may be required.

V. Definitions

“Engineering Control” (EC), means any physical barrier or method employed to actively or passively contain, stabilize, or monitor contamination, restrict the movement of contamination to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to contamination. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

“Institutional Control” (IC), means any non-physical means of enforcing a restriction on the use of real property that limits human and environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a remedial site.

“Professional Engineer” (P.E.) means an individual or firm licensed or otherwise authorized under article 145 of the Education Law of the State of New York to practice engineering.

“Property Owner” means, for purposes of an IC/EC certification, the actual owner of a property. If the site has multiple properties with different owners, the Department requires that the owners be represented by a single representative to sign the certification.

“Oversight Document” means any document the Department issues pursuant to each Remedial Program (see below) to define the role of a person participating in the investigation and/or remediation of a site or area(s) of concern. Examples for the various programs are as follows:

BCP (after approval of the BCP application by DEC) - Brownfield Site Cleanup Agreement.

ERP (after approval of the ERP application by DEC) - State Assistance Contract.

Federal Superfund Sites - Federal Consent Decrees, Administrative Orders on Consent or Unilateral Orders issued pursuant to CERCLA.

Oil Spill Program - Order on Consent, or Stipulation pursuant to Article 12 of the Navigation Law (and the New York Environmental Conservation Law).

State Superfund Program - Administrative Consent Order, Record of Decision.

VCP (after approval of the VCP application by DEC) - Voluntary Cleanup Agreement.

RCRA Corrective Action Sites- Federal Consent Decrees, Administrative Orders on Consent or permit conditions issued pursuant to RCRA.

“Qualified Environmental Professional” (QEP), means a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the presence of releases or threatened releases to the surface or subsurface of a property or off-site areas, sufficient to meet the objectives and performance factors for the areas of practice identified by this Part. Such a person must:

(1) hold a current professional engineer’s or a professional geologist’s license or registration issued by the State or another state, and have the equivalent of three years of full-time relevant experience in site investigation and remediation of the type detailed in this Part; or

(2) be a site remediation professional licensed or certified by the federal government, a state or a recognized accrediting agency, to perform investigation or remediation tasks consistent with Department guidance, and have the equivalent of three years of full-time relevant experience.

“Qualitative Exposure Assessment” means a qualitative assessment to determine the route, intensity, frequency, and duration of actual or potential exposures of humans and/or fish and wildlife to contaminants.

“Remedial Party” means a person implementing a remedial program at a remedial site pursuant to an order, agreement or State assistance contract with the Department.

“Site Management” (SM) means the activities undertaken as the last phase of the remedial program at a site, which continue after a Certificate of Completion is issued. Site management is conducted in accordance with a site management plan, which identifies and implements the institutional and engineering controls required for a site, as well as any necessary monitoring and/or operation and maintenance of the remedy.

“Site Management Plan” (SMP) means a document which details the steps necessary to assure that the institutional and engineering controls required for a site are in-place, and any physical components of the remedy are operated, maintained and monitored to assure their continued effectiveness, developed pursuant to Section 6 (DER10 Technical Guide).

“Site Owner” means the actual owner of a site. If the site has multiple owners of multiple properties with ICs and/or ECs, the Department requires that the owners designate a single representative for IC/EC Certification activities.