BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

April 2, 2015

Mr. Maurice F. Moore
Engineering Geologist 1
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Ave
Buffalo, New York 14203-2915

Re: Tecumseh Phase III Business Park Sites III-7 & III-8
BCP Site No.s C915199G & C915199H
Lackawanna, New York
Periodic Review Report

Dear Mr. Moore:

Enclosed please find a hard copy of the Periodic Review Report (PRR) for the above-referenced sites, which was electronically transmitted to the Department on April 2, 2015.

The PRR has been prepared for the Sites with IC/EC Certification forms completed. As indicated in the PRR, the institutional controls are in place and the Sites are in compliance with the Site Management Plan for the reporting periods of December 11, 2013 – March 15, 2015 for Site III-7 and August 13, 2014 – March 15, 2015 for Site III-8.

Please contact us if you have any questions or require additional information.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC

Thomas H. Forbes, P.E.
Principal Engineer

cc: Robert Pike – Welded Tube USA
Joel Shapiro – Welded Tube USA

File: 0262-015-001

Periodic Review Report

Tecumseh Phase III Business Park
Sites III-7 and III-8

NYSDEC Site Nos. C915199G & C915199H

April 2015 0262-015-001

Prepared For:

Welded Tube USA

Prepared By:

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

2558 Hamburg Turnpike, Suite 300, Buffalo, New York | P: (716) 856-0599 | F: (716) 856-0583

PERIODIC REVIEW REPORT

TECUMSEH PHASE III BUSINESS PARK
SITES III-7 & III-8
(BCP SITE NO.S C915199G & C915199H)

LACKAWANNA, NEW YORK

April 2015 0262-015-001

Prepared for:

Welded Tube USA

Prepared By:

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716)856-0599

PERIODIC REVIEW REPORT
Tecumseh Phase II Business Park
Sites III-7 & III-8
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PERIODIC REVIEW REPORT
Tecumseh Phase II Business Park
Sites III-7 & III-8
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FIGURES

APPENDICIES

1.0 INTRODUCTION

Benchmark Environmental Engineering and Science, PLLC (Benchmark) has prepared this Periodic Review Report (PRR) to summarize the post-remedial status of New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No.s C915199G and C915199H, located at 2537 and 2539 Hamburg Turnpike, respectively, in the City of Lackawanna, Erie County, New York (see Figure 1).

This PRR has been prepared for the Subject BCP Sites in accordance with NYSDEC DER-10 *Technical Guidance for Site Investigation and Remediation* (May 2010). The NYSDEC's Institutional and Engineering Controls (IC/EC) Certification Forms have been completed for the Sites (see Appendix A).

This PRR and the associated certifications have been completed for the post-remedial activities at the Sites from the time of COC issuance to March 15, 2015. Specifically, the post remedial periods covered by this PRR are:

- Site III-7 (C915199G): December 17, 2013 – March 15, 2015
- Site III-8 (C915199H): August 13, 2014 – March 15, 2015[1]

1.1 Site Background

In March of 2007 Tecumseh Redevelopment Inc. (Tecumseh) entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) to investigate and remediate an approximate 150-acre property located in Lackawanna, New York. The property, deemed the "Phase III Business Park Site" is located in the County of Erie, New York and encompasses tax parcel numbers 141.15-1-1, 141.15-1-2, and part of tax parcel number 141.11-1-50 per Erie County Tax Map records. The Phase III Business Park Site is bounded by Gateway Metroport Ship Canal and property owned by Gateway Trade Center to the north; the South Buffalo Railroad Company to the south; Phase II Business Park Site and the South Return Water Trench (SRWT) to the east; and other Tecumseh property to the west (see Figures 1 and 2). The 150-acre Phase III Business Park was originally deemed Brownfield Cleanup Program (BCP) Site No. C915199, but was subsequently subdivided into ten smaller parcels to

[1] The reporting period end date for Site C915199H was advanced at the request of the property owner to match Site C915199G, which is under the same ownership.

facilitate remediation and redevelopment (see Figure 2). On August 20, 2012, the original BCA for Site C915199 was amended to cover the smaller Site III-1, with separate BCAs issued and executed for the remaining nine BCP Sites (i.e., Sites III-2 through III-10, having BCP Site Nos. C915199B through C915199J).

In October 2012, Welded Tube USA Realty, LLC[2] acquired from Tecumseh the 39.2-acre Site III-7 to construct a new manufacturing facility, and the adjacent 5.9-acre Site III-8 for future expansion (see Figure 3). Welded Tube USA was added to the Brownfield Cleanup Agreements (BCAs) for these Sites concurrent with transfer of the properties.

1.2 Remedial History

1.2.1 Phase III Business Park

The approximate 150-acre Phase III Business Park was formerly part of the Bethlehem Steel Corporation (BSC) Lackawanna Works and housed several facilities used in BSC's) steel manufacturing processes. Specific processes and steel making facilities performed on or proximate to the subject BCP Sites included:

- Open Hearth Furnaces
- Basic Oxygen Furnace
- Mold Warming and Preparation
- Electrical Substations
- Wastewater Treatment

Remedial Investigation (RI) activities on the Phase III Business Park were initiated in August 2008, with additional activities undertaken in late 2009 through early 2010. Some supplemental investigation work was also completed in April 2012.

The RI identified several Constituents of Concern (COCs) that were generally present across widespread areas of the Phase III Business Park site, primarily in site soils and to a

[2] Welded Tube USA Realty, LLC (property owner) and Welded Tube USA, Inc. (manufacturing asset owner) are collectively referred to herein as Welded Tube USA

lesser extent in groundwater. These included polyaromatic hydrocarbons (PAHs), arsenic, lead, and mercury. Isolated areas of petroleum impact were also encountered. The Remedial Investigation/Alternatives Analysis (RI/AA) Report recommended remediation of "hotspot" slag/fill (characterized by more pronounced levels of COCs) and isolated groundwater/saturated soil impacts (affecting only select sites in the Phase III Business Park), with cover placement recommended as the final remedial measure under a Track 4 Cleanup approach. Additional requirements included development and adherence to a Site Management Plan (SMP) and filing of an Environmental Easement to restrict use of the Phase III Business Park property to commercial and industrial applications and to place other limitations on post-redevelopment activities.

1.2.2 Sites III-7 & III-8

Prior to the sale of sites III-7 and III-8 to Welded Tube USA, Tecumseh committed to complete hotspot soil/fill cleanup work on those sites as an Interim Remedial Measure (IRM). The IRM work was substantially completed in late 2012. Decision Documents for Sites III-7 & III-8 were subsequently issued by the NYSDEC in May 2013 after completion of Tecumseh's IRM hotspot soil/fill remedial work. The Decision Documents specified the final/remaining remedial measures including, among other requirements, placement of acceptable cover material in areas not otherwise covered by buildings, pavement, etc.

Cover placement on Site III-7 was completed in 2013. Due to the tight construction schedule and pending winter weather final remedial measures cover placement on Site III-8 was deferred until spring of 2014.

1.3 Compliance

At the time of the Site inspection, the Site was fully compliant with the NYSDEC-approved SMP dated November 2013 (revised November 2014).

1.4 Recommendations

Based on the results of the annual inspection and certification, no modifications are recommended at this time with the exception of a change in the reporting period to avoid

potential incomplete or hindered site inspection due to snow cover. It is requested that the PRR deadline be shifted by one month from April 15th to May 15th.

2.0 SITE OVERVIEW

An overview of the remediation and redevelopment activities undertaken on the Sites covered by this PRR is presented below. All of the remediated properties within the Phase III Business Park are subject to a comprehensive, site-wide SMP which identifies requirements for monitoring and maintenance of engineering and institutional controls and procedures for post-remedial excavation and related activities. Specific requirements affecting individual Sites within Phase III Business Park are included as appendices to the comprehensive plan. The SMP is updated as additional Sites within the Phase III Business Park are remediated.

2.1 Site III-7

Site III-7 is presently addressed as 2537 Hamburg Turnpike, Lackawanna, New York 14218. Welded Tube USA redeveloped the Site under the BCP as a tubing manufacturing facility. The remedial activities performed on the Site are listed below:

- Excavation of approximately 210 cubic yards (CY) of arsenic-impacted hotspot slag/fill followed by off-site disposal of these materials at an approved offsite solid waste landfill facility (completed as an IRM by Tecumseh).
- Excavation of approximately 2,640 tons of petroleum-impacted slag/fill followed by onsite bioremediation of the impacted materials (completed as an IRM by Tecumseh).
- Excavation of approximately 795 tons of an odorless, blackish, non-soil material intermingled with slag and partly present within an approximate 10-foot by 10-foot by 10-foot deep sub-grade concrete chamber. Excavated materials were disposed at an approved offsite solid waste landfill facility.
- Installation of a vapor barrier beneath the newly constructed manufacturing building.
- Removal of subgrade coke oven gas piping and residual impacted slag/fill. Impacted materials were disposed at an offsite solid waste landfill facility, with cleaned piping sent offsite for scrap reclamation.
- Placement of a cover system comprised of building, pavement, vegetated soils and imported beneficial use determination (BUD)-approved slag over a demarcation

layer. Imported slag and clean vegetated cover were placed to a minimum thickness of 1 foot.

The remedial program was successful in achieving the remedial objectives for the Site. An Environmental Easement restricting end use of the Site and enforcing adherence to the SMP was filed in November 2013. The Final Engineering Report (FER) was approved in November 2013. A Certificate of Completion (COC) was issued for Site III-7 by the NYSDEC in December 2013.

2.2 Site III-8

Site III-8 is also owned by Welded Tube USA and is similarly addressed as 2537 Hamburg Turnpike, Lackawanna, New York 14218. Welded Tube USA redeveloped the Site under the BCP as an extension of the laydown yard for the tubing manufacturing facility on the adjacent Site III-7 and to facilitate potential future expansion of the manufacturing operation. The remedial activities performed on the Site are listed below:

- Excavation of approximately 30 cubic yards (CY) of arsenic-impacted hotspot slag/fill followed by off-site disposal of these materials at an approved offsite solid waste landfill facility (completed as an IRM by Tecumseh).
- Placement of a cover system comprised of beneficial use determination (BUD)-approved slag over a demarcation layer. Imported slag was placed to a minimum thickness of 1 foot.

The remedial program was successful in achieving the remedial objectives for the Site. An Environmental Easement restricting end use of the Site and enforcing adherence to the SMP was filed in November 2013. The Final Engineering Report (FER) was approved in June 2014. A Certificate of Completion (COC) was issued for Site III-8 by the NYSDEC in August 2014.

3.0 REMEDY PERFORMANCE

A post-remedial site inspection involving a walk-over of the Sites covered by this PRR was performed to visually observe and document the use of the Site for commercial/industrial use, confirm absence of site groundwater use, inspect the cover system integrity, and verify conformance with other requirements under the SMP. The site inspection completed during this reporting period indicates that the controls are in-place and functioning as intended in accordance with the SMP.

The completed IC/EC Certification forms and site photographs are included in Appendices A and B, respectively.

4.0 SITE MANAGEMENT PLAN

A site-wide SMP was prepared for the Phase III Business Park and approved by the Department in November 2013. (An addendum to the SMP was prepared and approved in November 2014 to accommodate other Sites not covered by this PRR). Parcel-specific SMP requirements for Sites III-7 and III-8 are presented in Appendix H7/H8 of that report. Key components of the SMP are described below.

4.1 Engineering and Institutional Control (IC/EC) Plan

Since remaining contaminated soil/fill and groundwater exists beneath the Phase III Business Park, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. The Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs on the Sites within the Phase III Business Park.

4.1.1 Institutional Controls

The following institutional controls apply to all Sites within the Phase III Business Park:

- The use and development of the property is restricted to commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- Groundwater cannot be used as a source of potable or process water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or County DOH;
- All Sites must comply with the Department approved Site Management Plan; and
- The remedial party or site owner must complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3.)

4.1.2 Engineering Controls

Engineering controls covering Sites within the Phase III Business Park include:

- Cover System – The cover system, including building foundations, concrete sidewalks, concrete or asphalt driveways, parking areas, and landscaped vegetated areas must be maintained in compliance with the SMP.
- Vapor Barrier (specific to Sites with buildings) - A poly vapor barrier must be installed and remain in-place beneath building concrete floor slab.

At the time of the site inspection, the Sites covered by this PRR were fully compliant with all engineering and institutional control requirements.

4.2 Excavation Work Plan

An Excavation Work Plan (EWP) was included in the approved-SMP for the Phase III Business Park. The Excavation Work Plan provides guidelines for the management of soil and fill material during any future intrusive actives. Any intrusive work that will penetrate the cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system, must be performed in compliance with the EWP and must also be conducted in accordance with a site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) meeting the minimum requirements of the sample HASP and CAMP included with the SMP.

For the Subject Sites III-7 and III-8 no intrusive activities requiring management of on-Site soil or fill material; placement of backfill materials or disturbance of the cover system occurred during the monitoring period with the exception of perimeter security fencing installation, which was conducted in January 2014. Fence post installation activities were observed by Benchmark to verify conformance with the SMP. Posts were driven through the cover; no spoils were generated.

4.3 Annual Inspection and Certification Program

The Annual Inspection and Certification Program outlines requirements for certifying and attesting that the institutional controls and engineering controls employed on the Sites are unchanged from the original design and/or previous certification. The Annual

Certification includes a Site Inspection and completion of the NYSDEC's IC/EC Certification Form. The Site inspection is intended to verify that the IC/ECs:

- Are in place and effective.
- Are performing as designed.
- That nothing has occurred that would impair the ability of the controls to protect the public health and environment.
- That nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls.
- Access is available to the Site to evaluate continued maintenance of such controls.

Inspection of Sites III-7 and III-8 was conducted by Thomas Forbes, P.E. of Benchmark on March 27, 2015. Mr. Forbes is a licensed and registered NY State Professional Engineer and meets the requirements of a Qualified Environmental Professional (QEP) per 6NYCRR Part 375.12. At the time of the inspection, the Sites were being used as a pipe manufacturing facility (Welded Tube USA), with pipe lay down areas, surface parking, paved walkways and landscaped areas. No observable indication of intrusive activities was noted during the Site inspection. The manufacturing facility utilizes the local municipal water supply, and no observable use of groundwater was noted during the Site inspection.

The completed Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Forms are included in Appendix A. A photolog of the Site inspection is included in Appendix B.

4.4 Operation, Monitoring and Maintenance Plan

The remedy for Sites III-7 and III-8 does not rely on any mechanical systems such as sub-slab depressurization or soil vapor extraction, to protect public health and the environment. Therefore, an Operation and Maintenance Plan is not required.

5.0 GROUNDWATER MONITORING

A supplemental groundwater monitoring event was performed in February 2013 to characterize overburden groundwater at wells MWN-10 and MWN-61A on Sites III-7 and III-8. Groundwater samples from the monitoring wells were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) per USEPA Method 8260 and TCL semi-volatile organics (SVOCs) per Method 8270. A copy of the groundwater monitoring report is included in Appendix C.

Table 1 of the monitoring report summarizes the analytical data from the February 2013 groundwater monitoring event, as well as groundwater monitoring data from events completed during the Remedial Investigation (RI) of Business Park III, with comparison to NYSDEC Class GA groundwater quality standards (GWQS) as listed in NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1.

As indicated, MWN-10 exhibited non-detectable concentrations of VOCs and SVOCs during the supplemental monitoring event. Parameter concentrations at monitoring well MWN-61A showed a significant drop since the well was sampled during the 2010 RI, with only naphthalene and nitrobenzene reported at levels slightly above their respective standards.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions and recommendations are as follows:

- At the time of the Site inspection, Sites III-7 and III-8 were in compliance with the SMP.

The following modifications are recommended for the Site:

- No modifications are recommended at this time with the exception of a change in the reporting period to avoid potential incomplete or hindered inspection due to snow cover. It is requested that the PRR deadline be shifted by one month from April 15th to May 15th.

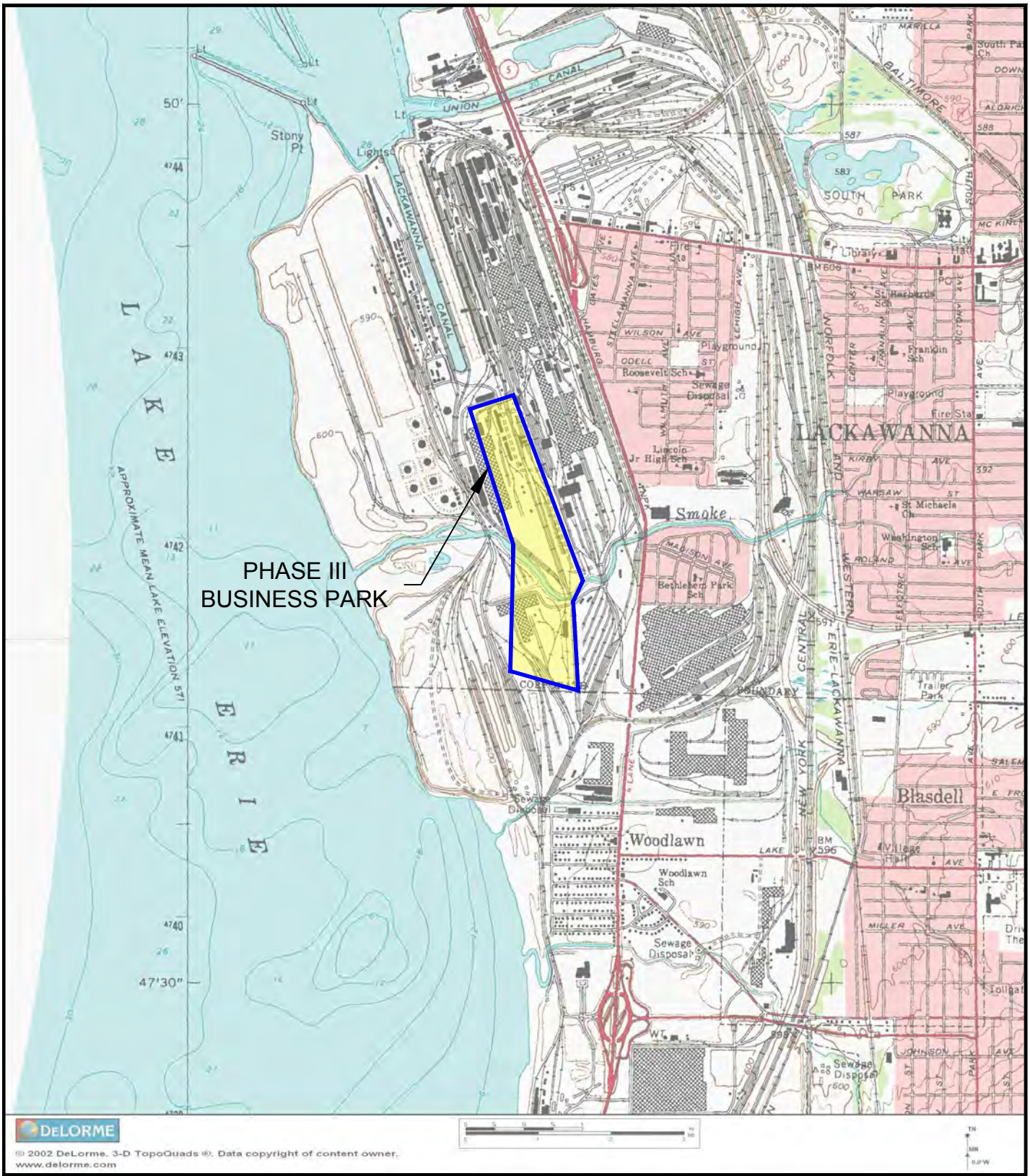
7.0 DECLARATION/LIMITATION

This report has been prepared for the exclusive use of Welded Tube USA. The contents of this report are limited to information available at the time of the site inspection. The findings herein may be relied upon only at the discretion of Welded Tube USA. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Benchmark Environmental Engineering and Science, PLLC.

FIGURES

F:\CAD\Benchmark\Welded Tube of Canada\PRR 2015\Figure 1; Site Location and Vicinity Map.dwg

FIGURE 1



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0262-015-001

DATE: APRIL 2015

DRAFTED BY: BLR

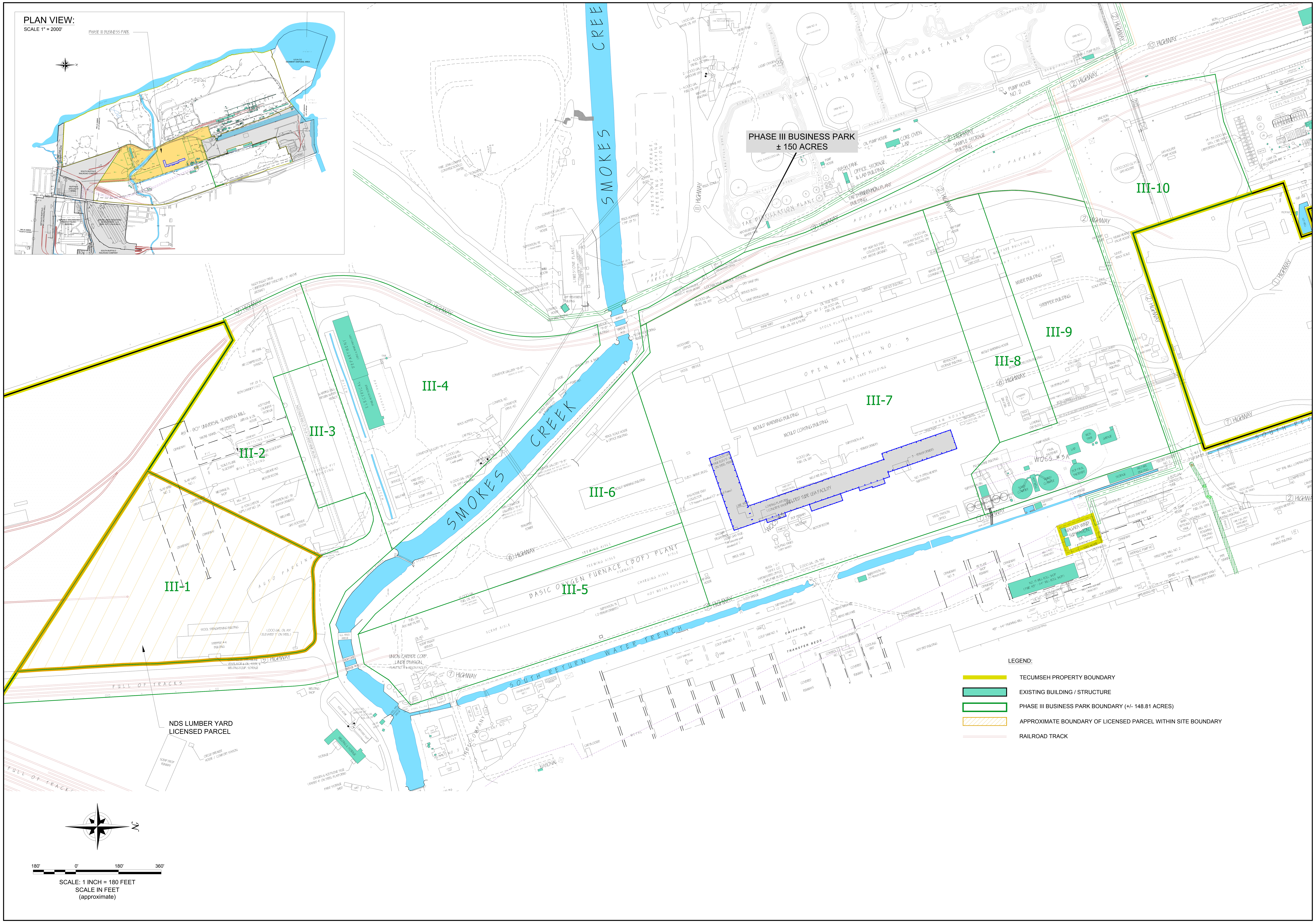
SITE LOCATION & VICINITY MAP

2015 PERIODIC REVIEW REPORT

TECUMSEH PHASE III-8 BUSINESS PARK SITE
BCP SITE NO. C195199H
LACKAWANNA, NEW YORK

PREPARED FOR

WELDED TUBE USA


PLAN VIEW:
SCALE 1" = 2000'
PHASE III BUSINESS PARK
± 150 ACRES
SMOKES CREEK
III-1
III-2
III-3
III-4
III-5
III-6
III-7
III-8
III-9
III-10
NDS LUMBER YARD
LICENSED PARCEL
SOUTH RETURN WATER TRENCH
BASIC OXYGEN FURNACE (BOF) PLANT
STOCK YARD
OPEN HEARTH NO. 5
AUTO PARKING
LEGEND:
TECUMSEH PROPERTY BOUNDARY
EXISTING BUILDING / STRUCTURE
PHASE III BUSINESS PARK BOUNDARY (+/- 148.81 ACRES)
APPROXIMATE BOUNDARY OF LICENSED PARCEL WITHIN SITE BOUNDARY
RAILROAD TRACK
180' 0' 180' 360'
SCALE: 1 INCH = 180 FEET
SCALE IN FEET
(approximate)

BENCHMARK
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SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0262-015-001

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

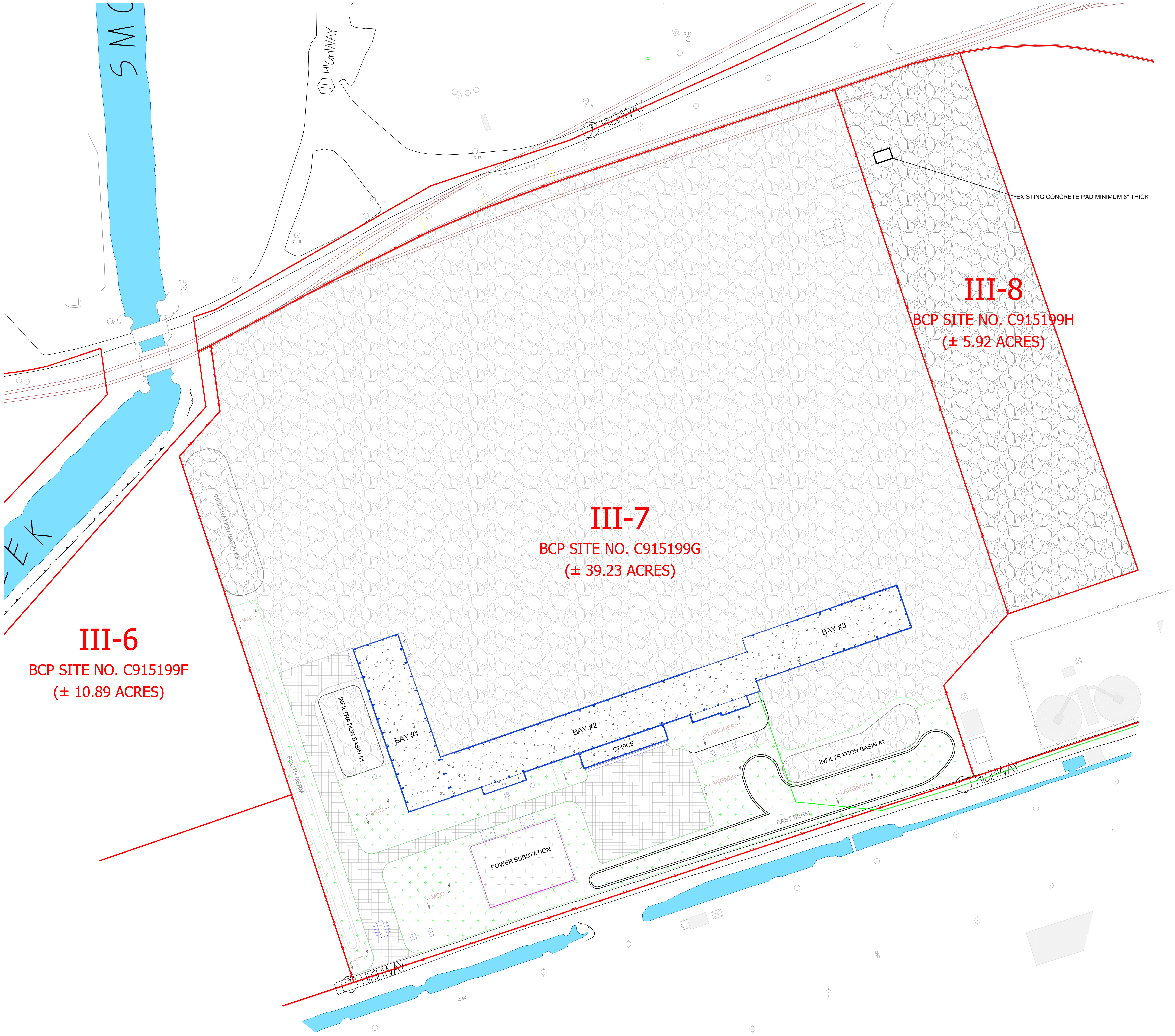
DRAWN BY: BLR
DATE: APRIL 2015
CHECKED BY:
APPROVED BY:

BUSINESS PARK III SITE PLAN

2015 PERIODIC REVIEW REPORT
TECUMSEH PHASE III-8 BUSINESS PARK SITE
BCP SITE NO. C195199H
LACKAWANNA, NEW YORK

PREPARED FOR
WELDED TUBE USA

FIGURE 2



SCALE: 1 INCH = 100 FEET
SCALE IN FEET
(approximate)

LEGEND:

- PARCEL BOUNDARY
- MINIMUM 12" COMPACTED SLAG COVER SOURCE: IRON CITY UNDERLAIN BY DEMARCATION LAYER

NOTES:

1.) BUD-APPROVED SLAG COVER COMPACTED TO A MINIMUM DEPTH OF 12 INCHES.
2.) DEMARCATION LAYER IS PLACED BENEATH BUD-APPROVED SLAG.
3.) SLAG COVER THICKNESS FIELD VERIFIED BY ENGINEER AND CONFIRMED BY PRE AND POST SURVEY.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0262-015-001

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

DRAWN BY: BLR
DATE: APRIL 2015
CHECKED BY:
APPROVED BY:

III-7 & III-8 SITE PLAN (POST-REMEDIATION)

2015 PERIODIC REVIEW REPORT
TECUMSEH PHASE III-8 BUSINESS PARK SITE
BCP SITE NO. C915199H
LACKAWANNA, NEW YORK
PREPARED FOR
WELDED TUBE USA

FIGURE 3

APPENDIX A

INSTITUTIONAL & ENGINEERING CONTROLS CERTIFICATION FORMS

APPENDIX A1

SITE III-7

Enclosure 2

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. C915199G

Site Name Site III-7 Tecumseh Phase III Business Park

Site Address: 2537 Hamburg Turnpike Zip Code: 14218
City/Town: Lackawanna
County: Erie
Site Acreage: 39.2

Reporting Period: December 17, 2013 to March 15, 2015

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☒
If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.		
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☒	☐
If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.		

SITE NO. C915199G

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
141.15-1-1	Welded Tube USA Realty, LLC.	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan IC/EC Plan

Institutional Control Description:

Adherence to Site Management Plan (SMP)
Restriction to commercial re-use
Prohibition of groundwater use
Allowance for Departmental access
Requires a Periodic Review and Report

Box 4

Description of Engineering Controls

Parcel	Engineering Control
141.15-1-1	Cover System

Engineering Control Description:

Soil cover over 5 acres

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) 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) 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;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (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.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C915199G

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 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 Robert Pike (print name) at 2537 Hamburg Turnpike (print business address),

am certifying as Owner (Owner or Remedial Party)

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

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

April 2 / 2015
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 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 Thomas H. Forbes, P.E. at 2558 Hamburg Turnpike, Buffalo, Ny 14218,
print name print business address

am certifying as a Professional Engineer for the Owner
(Owner or Remedial Party)

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

Stamp (Required for PE)

3-30-15
Date

APPENDIX A2

SITE III-8

Enclosure 2

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. **C915199H**

Site Name Site III-8 Tecumseh Phase III Business Park

Site Address: 2539 Hamburg Turnpike Zip Code: 14218
City/Town: Lackawanna
County: Erie
Site Acreage: 5.9

Reporting Period: August 13, 2014 to March 15, 2015

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☒

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☒	☐

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C915199H

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
141.15-1-2	Welded Tube USA, Inc.	IC/EC Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan

Institutional Control Description:

Adherence to Site Management Plan (SMP)
Restriction to commercial re-use
Prohibition of groundwater use
Allowance for Departmental access
Requires a Periodic Review and Report

Box 4

Description of Engineering Controls

Parcel	Engineering Control
141.15-1-2	Cover System

Engineering Control Description:

Soil cover over 5 acres

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) 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) 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;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (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.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C915199H

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 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 Robert Pike at 2537 Hamburg Turnpike,
print name print business address

am certifying as Owner (Owner or Remedial Party)

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

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

April 2, 2015
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 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 Thomas Forbes P.E. at 2558 Hamburg Turnpike Buffalo, Ny 14218
print name print business address

am certifying as a Professional Engineer for the Owner
(Owner or Remedial Party)

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

Stamp (Required for PE)

3-30-2015
Date

APPENDIX B

SITE PHOTO LOG

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Welded Tube USA	Welded Tube - Lackawanna NY Phase III-7/8 Bus Park	

Photo No.	Date
1	03/27/15

Direction Photo Taken:
Northeast

Description:
Infiltration Basin on south side of building.

Photo No.	Date
2	03/27/15

Direction Photo Taken:
Northwest

Description:
Infiltration Basin on south side of building.

Prepared By: *RLD*

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Welded Tube USA	Welded Tube - Lackawanna NY Phase III-7/8 Bus Park	

Photo No.	Date
3	03/27/15

Direction Photo Taken:
North

Description:
Laydown yard behind building

Photo No.	Date
4	03/27/15

Direction Photo Taken:
West

Description:
Laydown yard behind building

Prepared By: *RLD*

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Welded Tube USA	Welded Tube - Lackawanna NY Phase III-7/8 Bus Park	

Photo No.	Date
5	03/27/15

Direction Photo Taken:
East

Description:
Back of Building

Prepared By: RLD

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Welded Tube USA	Welded Tube - Lackawanna NY Phase III-7/8 Bus Park	

Photo No.	Date
6	03/27/15

Direction Photo Taken:
North

Description:
Expansion parcel

Photo No.	Date
7	03/27/15

Direction Photo Taken:
West

Description:
Exspansion parcel

Prepared By: *RLD*

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Welded Tube USA	Welded Tube - Lackawanna NY Phase III-7/8 Bus Park	

Photo No.	Date
8	03/27/15

Direction Photo Taken:
Southeast

Description:
Building

Photo No.	Date
9	03/27/15

Direction Photo Taken:
South

Description:
Building

Prepared By: *RLD*

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Welded Tube USA	Welded Tube - Lackawanna NY Phase III-7/8 Bus Park	

Photo No.	Date
10	03/27/15

Direction Photo Taken:
South

Description:
Front of building

Photo No.	Date
11	03/27/15

Direction Photo Taken:
Southeast

Description:
Infiltration Basin east of building.

Prepared By: *RLD*

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Welded Tube USA	Welded Tube - Lackawanna NY Phase III-7/8 Bus Park	

Photo No.	Date
12	03/27/15

Direction Photo Taken:
South

Description:
Berm east of building.

Photo No.	Date
13	03/27/15

Direction Photo Taken:
Southeast

Description:
Parking lot east of building.

Prepared By: *RLD*

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Welded Tube USA	Welded Tube - Lackawanna NY Phase III-7/8 Bus Park	

Photo No.	Date
14	03/27/15

Direction Photo Taken:
South

Description:
Transformer pad area.

Photo No.	Date
15	03/27/15

Direction Photo Taken:
West/Northwest

Description:
Office

Prepared By: *RLD*

APPENDIX C

GROUNDWATER MONITORING DATA

April 17, 2013

Mr. Maurice F. Moore
Engineering Geologist I
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Ave
Buffalo, New York 14203

Re: Business Parks III-7 and III-8
BCP Sites C915199G & C915199H
Lackawanna, New York
Supplemental Groundwater Monitoring

Dear Mr. Moore:

Per our recent discussions, Turnkey Environmental Restoration (Turnkey) has prepared this letter report to convey the findings of a round of supplemental groundwater monitoring at wells MWN-10 and MWN-61A, which serve to characterize overburden groundwater on the Tecumseh Business Parks III-7 and III-8 (Figure 1).

BACKGROUND

During the RI groundwater samples were collected from monitoring wells MWN-61A (installed by Turnkey) and MWN-10 (existing on site monitoring well). Groundwater samples collected from these wells were analyzed for NYSDEC Spills Technology and Remediation Series (STARS) VOCs; Target Compound List (TCL) SVOCs (base-neutral fraction) and constituent of potential concern COPC metals (arsenic, cadmium, chromium, lead, mercury, and cyanide). Of the parameters sampled VOCs (toluene) and SVOCs exceeded NYSDEC groundwater quality standards (GWQS) at MWN-61A.

GROUNDWATER SAMPLING

On February 26th, 2013 Turnkey personnel collected groundwater samples from monitoring wells MWN-10 and MWN-61A. Samples were collected using low flow sampling protocol and submitted under chain of custody command to Test America Laboratories, Inc. located in Amherst, NY. Samples were analyzed for TCL VOCs via United States Environmental Protection Agency (USEPA) Method 8260 and TCL SVOCs via Method 8270. Field data sheets are included in Attachment 1.

ANALYTICAL RESULTS

Analytical results are summarized on Table 1 along with NYSDEC Class GA Groundwater Quality Standards and Guidance Values (GWQSGVs); the complete laboratory analytical data package for this event is presented as Attachment 2. For comparison purposes the RI groundwater sample data have been included as well. As indicated on Table 1, MWN-10 continues to exhibit non-detectable concentrations of VOCs and SVOCs. In addition, parameter concentrations have significantly dropped in MWN-61A since the 2010 RI, with only naphthalene and nitrobenzene reported at levels slightly above their respective standards.

CONCLUSIONS

Based on these analytical results, Turnkey does not believe that post-remedial groundwater monitoring on the subject subparcels is warranted. With the Department's permission we will request that the property owner properly decommission the wells to prevent interference with yard operations that will service the pending manufacturing facility.

Please contact us if you have any questions.

Sincerely,
TurnKey Environmental Restoration, LLC

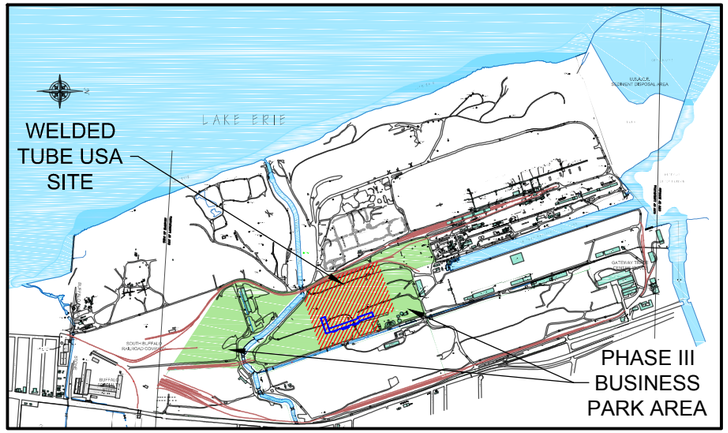
Thomas H. Forbes, P.E.
Principal Engineer

Enc.

ec: M. Forcucci (NYSDOH)

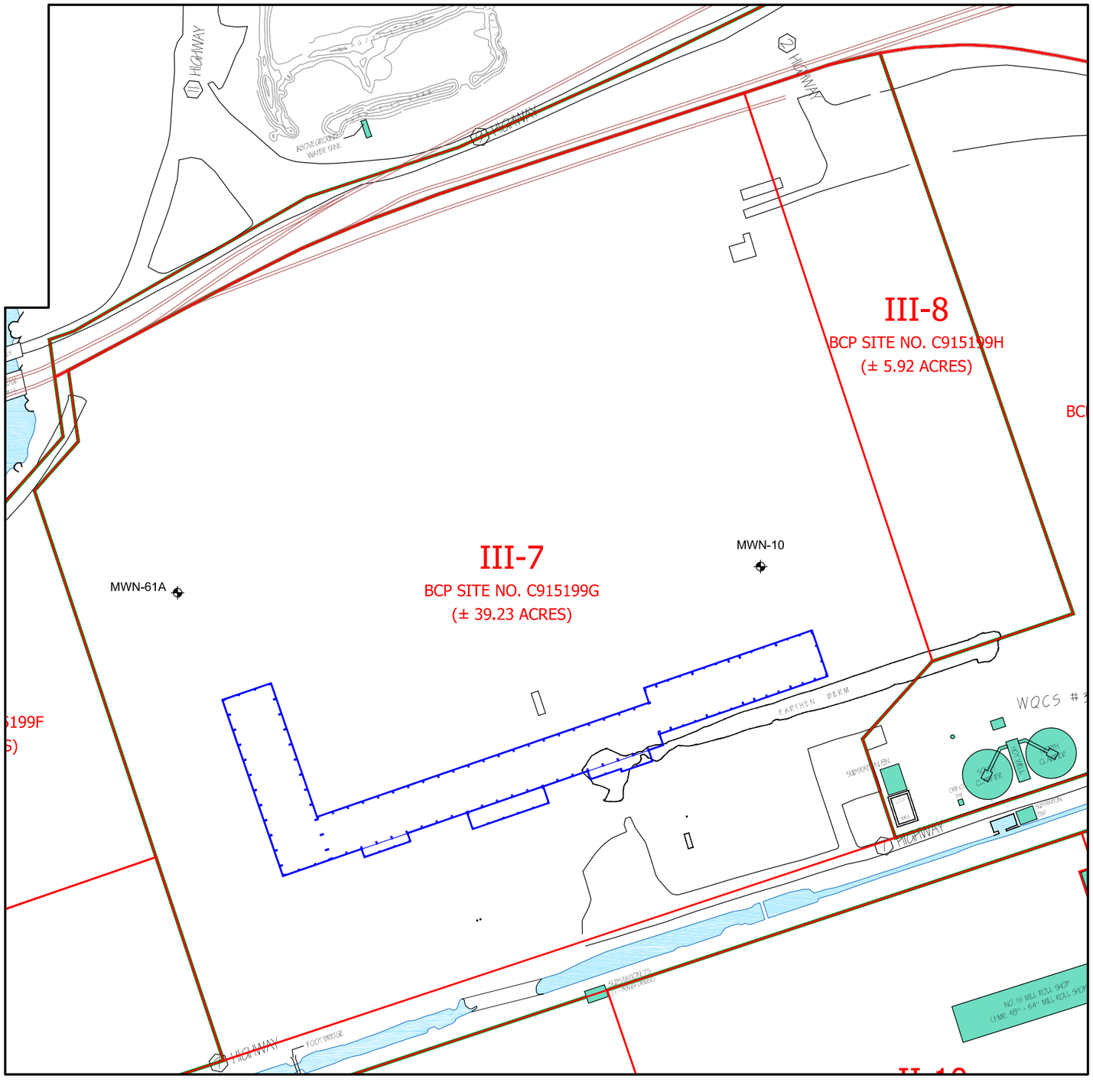
FIGURES

F:\CAD\Benchmark\Krog\Welded Tube\Brownfields\Figure 1; Groundwater Monitoring.dwg



LEGEND:

- BCP PARCEL BOUNDARY
- EXISTING BUILDING / STRUCTURE
- RAILROAD TRACK
- MWN-61A — EXISTING MONITORING WELL



N

200' 0' 200' 400'

SCALE: 1 INCH = 200 FEET
SCALE IN FEET
(approximate)

DATE: APRIL 2013
DRAFTED BY: JCT

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

TURNKEY ENVIRONMENTAL RESTORATION, LLC

JOB NO.: 0092-012-201

SUPPLEMENTAL GROUNDWATER MONITORING

WELDED TUBE USA

BCP SITES C915199G & C915199H
TECUMSEH REDEVELOPMENT INC.
LACKAWANNA, NEW YORK

PREPARED FOR
THE KROG CORPORATION

FIGURE 1

TABLES

TURNKEY ENVIRONMENTAL RESTORATION, LLC

TABLE 1

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS [1,2,3]

Supplemental groundwater monitoring Event
Phase III Business Park Area-Welded Tube Parcel
Tecumseh Redevelopment Inc.
Lackawanna, New York

Parameter	SAMPLE LOCATION								GWQS [4]
	MWN-10 1/14/09		MWN-61A 1/21/10		MWN-10 2/26/13		MWN-61A 2/26/13		
Field Measurements [5]:									
Sample No.	Initial	Final	Initial	Final	Initial	Final	Initial	Final	--
pH (units)	**10.00**	**10.00**	7.67	7.65	**10.28**	**10.29**	7.59	7.60	6.5 - 8.5
Temperature (^{o}C)	10.4	10.6	9.5	9.4	10.4	9.9	9.90	9.70	NA
Sp. Conductance (mS)	1873	1869	625.9	623.8	1917	1927	679.9	682.7	NA
Turbidity (NTU)	3.44	2.88	21	11.2	4.57	5.39	4.54	2.33	NA
DO (ppm)	1.35	1.42	--	--	2.21	2.26	1.80	1.81	NA
Eh (mV)	-191	-195	-145	-136	-56	-73	6	28	NA
Volatile Organic Compounds (ug/L):									
Benzene	ND		ND		ND		0.9 J		1
Toluene	ND		**6 D,J,NJ**		ND		ND		5
Semi-Volatile Organic Compounds (ug/L):									
2,4-Dimethylphenol	NA		NA		ND		0.67 J		50
Acenaphthene	ND		18 D,J		ND		11		20*
Acenaphthylene	ND		18 D,J		ND		3.8 J		--
Anthracene	ND		7.2 D,J		ND		1.9 J		50*
Benzo(a)anthracene	ND		**2 D,J**		ND		ND		0.002*
Biphenyl	ND		**13 D,J**		ND		3.8 J		5
Carbazole	ND		37 D		ND		0.5 J		--
Dibenzofuran	ND		39 D,J		ND		13		--
Di-n-butyl phthalate	0.42 BJ		ND		ND		ND		50
Fluoranthene	ND		12 D,J		ND		3.3 J		50*
Fluorene	ND		12 D,J		ND		12		50*
2-Methylnaphthalene	ND		37 D		ND		4.9		--
Naphthalene	ND		**290 D**		ND		**25**		10*
Nitrobenzene	NA		NA		ND		**0.49 J**		0.4
Phenanthrene	ND		**62 D**		ND		17		50*
Pyrene	ND		7.4 D,J		ND		2.2 J		50*

Notes:

1. Only those compounds detected above the method detection limit at a minimum of one sample location are reported in this table.
2. Shaded and bolded values represent exceedances of the GWQS/GV. **BOLD**
3. For summary purposes only detected parameters are shown on this table.
4. NYSDEC Class "GA" Groundwater Quality Standards (GWQS) as per 6 NYCRR Part 703.
5. Field measurements were collected immediately before and after groundwater sample collection.
6. " J " = Estimated Value
7. " ND " indicates parameter was not detected above laboratory reporting limit and is reported herein as not detected (ND).
8. " NA " = monitoring well not sampled for this analyte.
9. " * " = The Guidance Value was used where a Standard has not been established.

ATTACHMENT 1

FIELD DATA SHEETS

TURNKEY

TurnKey Environmental Restoration, LLC

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: Supple Monitor/ GWM

Project No.:

Client: Welded Tube/Tecumseh

Date: 2/27/13

Instrument Source: ☒ BM ☐ Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	POST CAL. READING	SETTINGS
☒ pH meter	units	0930	Myron L Company Ultra Meter 6P	6213516 ☒ 6212375 ☐	TAB	4.00	4.00	4.0
						7.00	7.05	7.0
						10.01	10.04	10.0
☒ Turbidity meter	NTU	0930	Hach 2100P Turbidimeter	06120C020523 ☐ 07110C026405 ☒	DAB	< 0.4	0.35	0.4
						20	20.9	20
						100	99.1	100
						800	792	~~800~~
☒ Sp. Cond. meter	uS mS	093	Myron L Company Ultra Meter 6P	6213516 ☒ 6212375 ☐	TAB	1413 mS @ 25 °C	1413	1413
☐ PID	ppm		MinRAE 2000			open air zero		MIBK response factor = 1.0
						____ ppm Iso. Gas		
☒ Dissolved Oxygen	ppm	0930	HACH Model HQ30d	0807000023281 ☒ 10050041867 ☐	TAB	100% Satuartion	Slope 88.7	PASS
☐ Particulate meter	mg/m³					zero air		
☐ Oxygen	%					open air		
☐ Hydrogen sulfide	ppm					open air		
☐ Carbon monoxide	ppm					open air		
☐ LEL	%					open air		
☐ Radiation Meter	uR/H					background area		
☐								

ADDITIONAL REMARKS:

PREPARED BY: DAB

Equipment Calibration Log

DATE: 2/27/13

TurnKey Environmental Restoration, LLC

GROUNDWATER FIELD FORM

Project Name:

Location: Welded Tube Project No.:

Date: 2/26/13

Field Team: TAB

Well No. MWN-10A			Diameter (inches): 4"			Sample Date / Time: 2/26/13 1115			
Product Depth (fbTOR): —			Water Column (ft): 9.94			DTW when sampled: 8.67 8.67			
DTW (static) (fbTOR): 8.36			One Well Volume (gal): 6.49			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 18.30			Total Volume Purged (gal): 5.0			Purge Method: Low Flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1102	0 Initial	20.25	9.91	10.4	1934	47.7	2.75	-12	SL Turbid musty odor
1105	1 8.67	1.0	9.59	10.6	19115	27.1	2.94	-35	" sulfur odor
1107	2 8.67	1.5	10.31	10.6	1912	17.4	2.31	-37	"
1109	3 8.67	2.0	10.28	10.6	1911	8.54	2.53	-78	" clear
1112	4 8.67	3.0	10.28	10.5	1911	6.27	2.11	-63	" clear
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1115	S1 8.67	4.0	10.28	10.4	1917	4.57	2.21	-56	"
1120	S2 8.60	5.0	10.29	9.9	1927	5.39	2.26	-73	"

Well No. MWN-6A			Diameter (inches): 2"			Sample Date / Time: 2/26/13 1208			
Product Depth (fbTOR): —			Water Column (ft): 8.91			DTW when sampled: 9.79			
DTW (static) (fbTOR): 9.72			One Well Volume (gal): 1.45			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 16.63			Total Volume Purged (gal): 6.5			Purge Method: Low Flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1151	0 Initial	20.25	7.69	10.6	1646	21000	1.21	16	Grey wd No Odor
1154	1 9.76	0.50	7.47	9.9	762.8	129	1.38	-21	SL Turbis SL moth Ball
1159	2 9.76	3.0	7.54	9.9	720.4	35.3	1.59	5	"
1201	3 9.78	4.0	7.61	9.9	698.7	11.6	1.58	-3	clear " No Odor
1204	4 9.77	5.0	7.62	9.7	690.3	5.22	1.68	-2	" No Odor
1206	9.77	5.5	2.59	9.9	689.4	8.35	1.80	6	" No Odor
1811	—								
	7								
	8								
	9								
	10								
Sample Information:									
1208	S1 9.79	6.0	7.59	9.9	679.4	4.54	1.80	6	"
1216	S2 9.76	6.5	7.60	9.7	682.7	2.33	1.81	28	"

REMARKS:

Note: All measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY: TAB

ATTACHMENT 2

TEST AMERICA
LABORATORY DATA
PACKAGE

TURNKEY

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-33634-1
Client Project/Site: Tecumseh

For:
Turnkey Environmental Restoration, LLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Tom Forbes

Authorized for release by:
3/14/2013 9:53:01 AM

Brian Fischer
Project Manager II
brian.fischer@testamericainc.com

Table of Contents

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-33634-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-33634-1

Receipt
The samples were received on 2/28/2013 12:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8º C.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Client Sample ID: MWN-10A
Date Collected: 02/26/13 11:15
Date Received: 02/27/13 12:25

Lab Sample ID: 480-33634-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/13 18:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/13 18:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/13 18:28	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/13 18:28	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/13 18:28	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/13 18:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/13 18:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/13 18:28	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/13 18:28	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/13 18:28	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/13 18:28	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/13 18:28	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/13 18:28	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/13 18:28	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/04/13 18:28	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/13 18:28	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/13 18:28	1
Acetone	ND		10	3.0	ug/L			03/04/13 18:28	1
Benzene	ND		1.0	0.41	ug/L			03/04/13 18:28	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/13 18:28	1
Bromoform	ND		1.0	0.26	ug/L			03/04/13 18:28	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/13 18:28	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/13 18:28	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/13 18:28	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/13 18:28	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/13 18:28	1
Chloroform	ND		1.0	0.34	ug/L			03/04/13 18:28	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/13 18:28	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/13 18:28	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/13 18:28	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/13 18:28	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/13 18:28	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/13 18:28	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/13 18:28	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/13 18:28	1
Methyl acetate	ND		1.0	0.50	ug/L			03/04/13 18:28	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/13 18:28	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/13 18:28	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/13 18:28	1
Styrene	ND		1.0	0.73	ug/L			03/04/13 18:28	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/13 18:28	1
Toluene	ND		1.0	0.51	ug/L			03/04/13 18:28	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/13 18:28	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/13 18:28	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/13 18:28	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/13 18:28	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/13 18:28	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/13 18:28	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Client Sample ID: MWN-10A
Date Collected: 02/26/13 11:15
Date Received: 02/27/13 12:25

Lab Sample ID: 480-33634-1
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*03/04/13 18:28*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*03/04/13 18:28*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*03/04/13 18:28*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.7	0.45	ug/L		03/02/13 07:34	03/08/13 16:50	1
2,4,6-Trichlorophenol	ND		4.7	0.58	ug/L		03/02/13 07:34	03/08/13 16:50	1
2,4-Dichlorophenol	ND		4.7	0.48	ug/L		03/02/13 07:34	03/08/13 16:50	1
2,4-Dimethylphenol	ND		4.7	0.47	ug/L		03/02/13 07:34	03/08/13 16:50	1
2,4-Dinitrophenol	ND		9.4	2.1	ug/L		03/02/13 07:34	03/08/13 16:50	1
2,4-Dinitrotoluene	ND		4.7	0.42	ug/L		03/02/13 07:34	03/08/13 16:50	1
2,6-Dinitrotoluene	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 16:50	1
2-Chloronaphthalene	ND		4.7	0.43	ug/L		03/02/13 07:34	03/08/13 16:50	1
2-Chlorophenol	ND		4.7	0.50	ug/L		03/02/13 07:34	03/08/13 16:50	1
2-Methylnaphthalene	ND		4.7	0.57	ug/L		03/02/13 07:34	03/08/13 16:50	1
2-Methylphenol	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 16:50	1
2-Nitroaniline	ND		9.4	0.40	ug/L		03/02/13 07:34	03/08/13 16:50	1
2-Nitrophenol	ND		4.7	0.45	ug/L		03/02/13 07:34	03/08/13 16:50	1
3,3'-Dichlorobenzidine	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 16:50	1
3-Nitroaniline	ND		9.4	0.45	ug/L		03/02/13 07:34	03/08/13 16:50	1
4,6-Dinitro-2-methylphenol	ND		9.4	2.1	ug/L		03/02/13 07:34	03/08/13 16:50	1
4-Bromophenyl phenyl ether	ND		4.7	0.42	ug/L		03/02/13 07:34	03/08/13 16:50	1
4-Chloro-3-methylphenol	ND		4.7	0.42	ug/L		03/02/13 07:34	03/08/13 16:50	1
4-Chloroaniline	ND		4.7	0.56	ug/L		03/02/13 07:34	03/08/13 16:50	1
4-Chlorophenyl phenyl ether	ND		4.7	0.33	ug/L		03/02/13 07:34	03/08/13 16:50	1
4-Methylphenol	ND		9.4	0.34	ug/L		03/02/13 07:34	03/08/13 16:50	1
4-Nitroaniline	ND		9.4	0.24	ug/L		03/02/13 07:34	03/08/13 16:50	1
4-Nitrophenol	ND		9.4	1.4	ug/L		03/02/13 07:34	03/08/13 16:50	1
Acenaphthene	ND		4.7	0.39	ug/L		03/02/13 07:34	03/08/13 16:50	1
Acenaphthylene	ND		4.7	0.36	ug/L		03/02/13 07:34	03/08/13 16:50	1
Acetophenone	ND		4.7	0.51	ug/L		03/02/13 07:34	03/08/13 16:50	1
Anthracene	ND		4.7	0.26	ug/L		03/02/13 07:34	03/08/13 16:50	1
Atrazine	ND		4.7	0.43	ug/L		03/02/13 07:34	03/08/13 16:50	1
Benzaldehyde	ND		4.7	0.25	ug/L		03/02/13 07:34	03/08/13 16:50	1
Benzo(a)anthracene	ND		4.7	0.34	ug/L		03/02/13 07:34	03/08/13 16:50	1
Benzo(a)pyrene	ND		4.7	0.44	ug/L		03/02/13 07:34	03/08/13 16:50	1
Benzo(b)fluoranthene	ND		4.7	0.32	ug/L		03/02/13 07:34	03/08/13 16:50	1
Benzo(g,h,i)perylene	ND		4.7	0.33	ug/L		03/02/13 07:34	03/08/13 16:50	1
Benzo(k)fluoranthene	ND		4.7	0.69	ug/L		03/02/13 07:34	03/08/13 16:50	1
Biphenyl	ND		4.7	0.62	ug/L		03/02/13 07:34	03/08/13 16:50	1
bis (2-chloroisopropyl) ether	ND		4.7	0.49	ug/L		03/02/13 07:34	03/08/13 16:50	1
Bis(2-chloroethoxy)methane	ND		4.7	0.33	ug/L		03/02/13 07:34	03/08/13 16:50	1
Bis(2-chloroethyl)ether	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 16:50	1
Bis(2-ethylhexyl) phthalate	ND		4.7	1.7	ug/L		03/02/13 07:34	03/08/13 16:50	1
Butyl benzyl phthalate	ND		4.7	0.40	ug/L		03/02/13 07:34	03/08/13 16:50	1
Caprolactam	ND		4.7	2.1	ug/L		03/02/13 07:34	03/08/13 16:50	1
Carbazole	ND		4.7	0.28	ug/L		03/02/13 07:34	03/08/13 16:50	1
Chrysene	ND		4.7	0.31	ug/L		03/02/13 07:34	03/08/13 16:50	1
Dibenz(a,h)anthracene	ND		4.7	0.40	ug/L		03/02/13 07:34	03/08/13 16:50	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Client Sample ID: MWN-10A
Date Collected: 02/26/13 11:15
Date Received: 02/27/13 12:25

Lab Sample ID: 480-33634-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	ND		9.4	0.48	ug/L		03/02/13 07:34	03/08/13 16:50	1
Diethyl phthalate	ND		4.7	0.21	ug/L		03/02/13 07:34	03/08/13 16:50	1
Dimethyl phthalate	ND		4.7	0.34	ug/L		03/02/13 07:34	03/08/13 16:50	1
Di-n-butyl phthalate	ND		4.7	0.29	ug/L		03/02/13 07:34	03/08/13 16:50	1
Di-n-octyl phthalate	ND		4.7	0.44	ug/L		03/02/13 07:34	03/08/13 16:50	1
Fluoranthene	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 16:50	1
Fluorene	ND		4.7	0.34	ug/L		03/02/13 07:34	03/08/13 16:50	1
Hexachlorobenzene	ND		4.7	0.48	ug/L		03/02/13 07:34	03/08/13 16:50	1
Hexachlorobutadiene	ND		4.7	0.64	ug/L		03/02/13 07:34	03/08/13 16:50	1
Hexachlorocyclopentadiene	ND		4.7	0.56	ug/L		03/02/13 07:34	03/08/13 16:50	1
Hexachloroethane	ND		4.7	0.56	ug/L		03/02/13 07:34	03/08/13 16:50	1
Indeno(1,2,3-cd)pyrene	ND		4.7	0.44	ug/L		03/02/13 07:34	03/08/13 16:50	1
Isophorone	ND		4.7	0.41	ug/L		03/02/13 07:34	03/08/13 16:50	1
Naphthalene	ND		4.7	0.72	ug/L		03/02/13 07:34	03/08/13 16:50	1
Nitrobenzene	ND		4.7	0.27	ug/L		03/02/13 07:34	03/08/13 16:50	1
N-Nitrosodi-n-propylamine	ND		4.7	0.51	ug/L		03/02/13 07:34	03/08/13 16:50	1
N-Nitrosodiphenylamine	ND		4.7	0.48	ug/L		03/02/13 07:34	03/08/13 16:50	1
Pentachlorophenol	ND		9.4	2.1	ug/L		03/02/13 07:34	03/08/13 16:50	1
Phenanthrene	ND		4.7	0.42	ug/L		03/02/13 07:34	03/08/13 16:50	1
Phenol	ND		4.7	0.37	ug/L		03/02/13 07:34	03/08/13 16:50	1
Pyrene	ND		4.7	0.32	ug/L		03/02/13 07:34	03/08/13 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*99*		*52 - 132*	*03/02/13 07:34*	*03/08/13 16:50*	*1*
2-Fluorobiphenyl	*86*		*48 - 120*	*03/02/13 07:34*	*03/08/13 16:50*	*1*
2-Fluorophenol	*37*		*20 - 120*	*03/02/13 07:34*	*03/08/13 16:50*	*1*
Nitrobenzene-d5	*66*		*46 - 120*	*03/02/13 07:34*	*03/08/13 16:50*	*1*
Phenol-d5	*25*		*16 - 120*	*03/02/13 07:34*	*03/08/13 16:50*	*1*
p-Terphenyl-d14	*96*		*67 - 150*	*03/02/13 07:34*	*03/08/13 16:50*	*1*

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Client Sample ID: MWN-61A
Date Collected: 02/26/13 12:08
Date Received: 02/27/13 12:25

Lab Sample ID: 480-33634-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/13 18:51	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/13 18:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/13 18:51	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/13 18:51	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/13 18:51	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/13 18:51	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/13 18:51	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/13 18:51	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/13 18:51	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/13 18:51	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/13 18:51	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/13 18:51	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/13 18:51	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/13 18:51	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/04/13 18:51	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/13 18:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/13 18:51	1
Acetone	ND		10	3.0	ug/L			03/04/13 18:51	1
Benzene	**0.90**	**J**	1.0	0.41	ug/L			03/04/13 18:51	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/13 18:51	1
Bromoform	ND		1.0	0.26	ug/L			03/04/13 18:51	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/13 18:51	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/13 18:51	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/13 18:51	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/13 18:51	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/13 18:51	1
Chloroform	ND		1.0	0.34	ug/L			03/04/13 18:51	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/13 18:51	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/13 18:51	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/13 18:51	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/13 18:51	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/13 18:51	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/13 18:51	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/13 18:51	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/13 18:51	1
Methyl acetate	ND		1.0	0.50	ug/L			03/04/13 18:51	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/13 18:51	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/13 18:51	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/13 18:51	1
Styrene	ND		1.0	0.73	ug/L			03/04/13 18:51	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/13 18:51	1
Toluene	ND		1.0	0.51	ug/L			03/04/13 18:51	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/13 18:51	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/13 18:51	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/13 18:51	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/13 18:51	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/13 18:51	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/13 18:51	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Client Sample ID: MWN-61A
Date Collected: 02/26/13 12:08
Date Received: 02/27/13 12:25

Lab Sample ID: 480-33634-2
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*03/04/13 18:51*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*03/04/13 18:51*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*03/04/13 18:51*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.7	0.45	ug/L		03/02/13 07:34	03/08/13 17:15	1
2,4,6-Trichlorophenol	ND		4.7	0.58	ug/L		03/02/13 07:34	03/08/13 17:15	1
2,4-Dichlorophenol	ND		4.7	0.48	ug/L		03/02/13 07:34	03/08/13 17:15	1
2,4-Dimethylphenol	**0.67**	**J**	4.7	0.47	ug/L		03/02/13 07:34	03/08/13 17:15	1
2,4-Dinitrophenol	ND		9.4	2.1	ug/L		03/02/13 07:34	03/08/13 17:15	1
2,4-Dinitrotoluene	ND		4.7	0.42	ug/L		03/02/13 07:34	03/08/13 17:15	1
2,6-Dinitrotoluene	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 17:15	1
2-Chloronaphthalene	ND		4.7	0.43	ug/L		03/02/13 07:34	03/08/13 17:15	1
2-Chlorophenol	ND		4.7	0.50	ug/L		03/02/13 07:34	03/08/13 17:15	1
2-Methylnaphthalene	**4.9**		4.7	0.57	ug/L		03/02/13 07:34	03/08/13 17:15	1
2-Methylphenol	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 17:15	1
2-Nitroaniline	ND		9.4	0.40	ug/L		03/02/13 07:34	03/08/13 17:15	1
2-Nitrophenol	ND		4.7	0.45	ug/L		03/02/13 07:34	03/08/13 17:15	1
3,3'-Dichlorobenzidine	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 17:15	1
3-Nitroaniline	ND		9.4	0.45	ug/L		03/02/13 07:34	03/08/13 17:15	1
4,6-Dinitro-2-methylphenol	ND		9.4	2.1	ug/L		03/02/13 07:34	03/08/13 17:15	1
4-Bromophenyl phenyl ether	ND		4.7	0.42	ug/L		03/02/13 07:34	03/08/13 17:15	1
4-Chloro-3-methylphenol	ND		4.7	0.42	ug/L		03/02/13 07:34	03/08/13 17:15	1
4-Chloroaniline	ND		4.7	0.56	ug/L		03/02/13 07:34	03/08/13 17:15	1
4-Chlorophenyl phenyl ether	ND		4.7	0.33	ug/L		03/02/13 07:34	03/08/13 17:15	1
4-Methylphenol	ND		9.4	0.34	ug/L		03/02/13 07:34	03/08/13 17:15	1
4-Nitroaniline	ND		9.4	0.24	ug/L		03/02/13 07:34	03/08/13 17:15	1
4-Nitrophenol	ND		9.4	1.4	ug/L		03/02/13 07:34	03/08/13 17:15	1
Acenaphthene	**11**		4.7	0.39	ug/L		03/02/13 07:34	03/08/13 17:15	1
Acenaphthylene	**3.8**	**J**	4.7	0.36	ug/L		03/02/13 07:34	03/08/13 17:15	1
Acetophenone	ND		4.7	0.51	ug/L		03/02/13 07:34	03/08/13 17:15	1
Anthracene	**1.9**	**J**	4.7	0.26	ug/L		03/02/13 07:34	03/08/13 17:15	1
Atrazine	ND		4.7	0.43	ug/L		03/02/13 07:34	03/08/13 17:15	1
Benzaldehyde	ND		4.7	0.25	ug/L		03/02/13 07:34	03/08/13 17:15	1
Benzo(a)anthracene	ND		4.7	0.34	ug/L		03/02/13 07:34	03/08/13 17:15	1
Benzo(a)pyrene	ND		4.7	0.44	ug/L		03/02/13 07:34	03/08/13 17:15	1
Benzo(b)fluoranthene	ND		4.7	0.32	ug/L		03/02/13 07:34	03/08/13 17:15	1
Benzo(g,h,i)perylene	ND		4.7	0.33	ug/L		03/02/13 07:34	03/08/13 17:15	1
Benzo(k)fluoranthene	ND		4.7	0.69	ug/L		03/02/13 07:34	03/08/13 17:15	1
Biphenyl	**3.8**	**J**	4.7	0.62	ug/L		03/02/13 07:34	03/08/13 17:15	1
bis (2-chloroisopropyl) ether	ND		4.7	0.49	ug/L		03/02/13 07:34	03/08/13 17:15	1
Bis(2-chloroethoxy)methane	ND		4.7	0.33	ug/L		03/02/13 07:34	03/08/13 17:15	1
Bis(2-chloroethyl)ether	ND		4.7	0.38	ug/L		03/02/13 07:34	03/08/13 17:15	1
Bis(2-ethylhexyl) phthalate	ND		4.7	1.7	ug/L		03/02/13 07:34	03/08/13 17:15	1
Butyl benzyl phthalate	ND		4.7	0.40	ug/L		03/02/13 07:34	03/08/13 17:15	1
Caprolactam	ND		4.7	2.1	ug/L		03/02/13 07:34	03/08/13 17:15	1
Carbazole	**0.50**	**J**	4.7	0.28	ug/L		03/02/13 07:34	03/08/13 17:15	1
Chrysene	ND		4.7	0.31	ug/L		03/02/13 07:34	03/08/13 17:15	1
Dibenz(a,h)anthracene	ND		4.7	0.40	ug/L		03/02/13 07:34	03/08/13 17:15	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Client Sample ID: MWN-61A
Date Collected: 02/26/13 12:08
Date Received: 02/27/13 12:25

Lab Sample ID: 480-33634-2
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	**13**		9.4	0.48	ug/L		03/02/13 07:34	03/08/13 17:15	1
Diethyl phthalate	ND		4.7	0.21	ug/L		03/02/13 07:34	03/08/13 17:15	1
Dimethyl phthalate	ND		4.7	0.34	ug/L		03/02/13 07:34	03/08/13 17:15	1
Di-n-butyl phthalate	ND		4.7	0.29	ug/L		03/02/13 07:34	03/08/13 17:15	1
Di-n-octyl phthalate	ND		4.7	0.44	ug/L		03/02/13 07:34	03/08/13 17:15	1
Fluoranthene	**3.3**	**J**	4.7	0.38	ug/L		03/02/13 07:34	03/08/13 17:15	1
Fluorene	**12**		4.7	0.34	ug/L		03/02/13 07:34	03/08/13 17:15	1
Hexachlorobenzene	ND		4.7	0.48	ug/L		03/02/13 07:34	03/08/13 17:15	1
Hexachlorobutadiene	ND		4.7	0.64	ug/L		03/02/13 07:34	03/08/13 17:15	1
Hexachlorocyclopentadiene	ND		4.7	0.56	ug/L		03/02/13 07:34	03/08/13 17:15	1
Hexachloroethane	ND		4.7	0.56	ug/L		03/02/13 07:34	03/08/13 17:15	1
Indeno(1,2,3-cd)pyrene	ND		4.7	0.44	ug/L		03/02/13 07:34	03/08/13 17:15	1
Isophorone	ND		4.7	0.41	ug/L		03/02/13 07:34	03/08/13 17:15	1
Naphthalene	**25**		4.7	0.72	ug/L		03/02/13 07:34	03/08/13 17:15	1
Nitrobenzene	**0.49**	**J**	4.7	0.27	ug/L		03/02/13 07:34	03/08/13 17:15	1
N-Nitrosodi-n-propylamine	ND		4.7	0.51	ug/L		03/02/13 07:34	03/08/13 17:15	1
N-Nitrosodiphenylamine	ND		4.7	0.48	ug/L		03/02/13 07:34	03/08/13 17:15	1
Pentachlorophenol	ND		9.4	2.1	ug/L		03/02/13 07:34	03/08/13 17:15	1
Phenanthrene	**17**		4.7	0.42	ug/L		03/02/13 07:34	03/08/13 17:15	1
Phenol	ND		4.7	0.37	ug/L		03/02/13 07:34	03/08/13 17:15	1
Pyrene	**2.2**	**J**	4.7	0.32	ug/L		03/02/13 07:34	03/08/13 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*91*		*52 - 132*	*03/02/13 07:34*	*03/08/13 17:15*	*1*
2-Fluorobiphenyl	*89*		*48 - 120*	*03/02/13 07:34*	*03/08/13 17:15*	*1*
2-Fluorophenol	*40*		*20 - 120*	*03/02/13 07:34*	*03/08/13 17:15*	*1*
Nitrobenzene-d5	*70*		*46 - 120*	*03/02/13 07:34*	*03/08/13 17:15*	*1*
Phenol-d5	*25*		*16 - 120*	*03/02/13 07:34*	*03/08/13 17:15*	*1*
p-Terphenyl-d14	*83*		*67 - 150*	*03/02/13 07:34*	*03/08/13 17:15*	*1*

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Client Sample ID: MWN-10A

Lab Sample ID: 480-33634-1

Date Collected: 02/26/13 11:15

Matrix: Water

Date Received: 02/27/13 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	105630	03/04/13 18:28	CDC	TAL BUF
Total/NA	Prep	3510C			105551	03/02/13 07:34	MZ	TAL BUF
Total/NA	Analysis	8270C		1	106502	03/08/13 16:50	RMM	TAL BUF

Client Sample ID: MWN-61A

Lab Sample ID: 480-33634-2

Date Collected: 02/26/13 12:08

Matrix: Water

Date Received: 02/27/13 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	105630	03/04/13 18:51	CDC	TAL BUF
Total/NA	Prep	3510C			105551	03/02/13 07:34	MZ	TAL BUF
Total/NA	Analysis	8270C		1	106502	03/08/13 17:15	RMM	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-13
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	06-30-13
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-01-13
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-13
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-13
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	03-31-13
North Dakota	State Program	8	R-176	03-31-13
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-13
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

Method Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Tecumseh

TestAmerica Job ID: 480-33634-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-33634-1	MWN-10A	Water	02/26/13 11:15	02/27/13 12:25
480-33634-2	MWN-61A	Water	02/26/13 12:08	02/27/13 12:25

Login Sample Receipt Checklist

Client: Turnkey Environmental Restoration, LLC

Job Number: 480-33634-1

Login Number: 33634

List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	TURNKEY
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client: Turnkey Environmental	Project Manager: T. Forbes	Date: 2/26/13	Chain of Custody Number: 190797
Address: 2558 Hamburg Turnpike	Telephone Number (Area Code)/Fax Number: (716) 856-0599	Lab Number:	Page 1 of 1
City: Buffalo / State: NY / Zip Code: 14218	Site Contact: T. Beckwith	Lab Contact: B. Fischer	
Project Name and Location (State): 0071-011322	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: TCL VOC 8260	TCL SVOC 8270	Special Instructions/ Conditions of Receipt
MW-10A	2/26/13	1115		X			X			X			3	2	
MW-61A	↓	1208		X			X			X			3	2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STD

QC Requirements (Specify): CAT B

	Date	Time		Date	Time
1. Relinquished By	2/26/13	1400	1. Received By	2/27/13	1135
2. Relinquished By	2/27/13	1225	2. Received By (T A Buffalo)	2/27/13	1225
3. Relinquished By			3. Received By		

Comments

1.8°C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy