Strong Advocates, Effective Solutions, Integrated Implementation

July 2, 2012

Mr. David Szymanski
New York State Dept. of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Riverbend Site (formerly Steelfields) (V00619-9)
Periodic Review Report (April 2, 2011 to July 2, 2012)

Dear Mr. Szymanski:

Please find enclosed one hard copy and one compact disc containing the Periodic Review Report (PRR) for the Riverbend Site, including all supporting appendices. The report has been prepared consistent with NYSDEC's DER-10 Technical Guidance (May 2010).

Please contact me if you have any questions regarding this submittal.

Sincerely,
TurnKey Environmental Restoration, LLC

Bryan C. Hann
Project Manager

Enc.

File: 0171-010-500

Periodic Review Report

April 2, 2011 through July 2, 2012

Riverbend Site (No. V00619)
Buffalo, New York

July 2012

0171-010-500

Prepared For:

Riverbend, LLC

Prepared By:

TurnKey Environmental Restoration, LLC

In Association With:

Benchmark Environmental Engineering & Science, PLLC

2558 Hamburg Turnpike, Suite 300, Buffalo, New York 14218 | phone: (716) 856-0635 | fax: (716) 856-0583

PERIODIC REVIEW REPORT
for the

STEELFIELDS (AKA RIVERBEND, LLC) SITE
(SITE NO. V00619)

BUFFALO, NEW YORK

July 2012 0171-010-500

Prepared for:

Riverbend, LLC

Prepared By:

TurnKey Environmental Restoration, LLC

In Association With:

Benchmark Environmental Engineering & Science, PLLC

Benchmark & TurnKey Companies
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716)856-0599

PERIODIC REVIEW REPORT
Steelfields (aka Riverbend, LLC) Site
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PERIODIC REVIEW REPORT
Steelfields (aka Riverbend, LLC) Site
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FIGURES

APPENDICIES

1.0 INTRODUCTION

TurnKey Environmental Restoration, LLC (TurnKey), in association with Benchmark Environmental Engineering and Science, PLLC (Benchmark) has prepared this Periodic Review Report (PRR) on behalf of Riverbend, LLC to summarize the post-remedial status of New York State Department of Environmental Conservation (NYSDEC) Voluntary Cleanup Program (VCP) Steelfields (aka Riverbend, LLC) Site No. V00619.

This PRR has been prepared in accordance with the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (May 2010; Ref. 1) and the NYSDEC's Institutional and Engineering Controls (IC/EC) Certification Forms have been prepared for each of the four designated areas (i.e., Area I, Area II, Area III, former August Feine) of the Site. This PRR and the associated IC/EC Form (see Appendix A) have been completed for the April 2, 2011 to July 2, 2012 reporting period.

1.1 Background

In October 2002, Steelfields Ltd. (Steelfields) purchased several vacant industrial properties in South Buffalo, New York (see Figures 1 and 2) out of bankruptcy from the LTV Steel Company and Hanna Furnace Corporation (a wholly owned subsidiary of the National Steel Corporation). At the same time, Steelfields entered into a Voluntary Cleanup Agreement (VCA) with the NYSDEC to remediate four parcels identified below, totaling approximately 218 acres. The parcels were divided based on the operational and ownership history of each:

- Area I – Former Republic (LTV) Steel Plant Parcel (± 90.6 acres)
- Area II – Former Donner-Hanna Coke Plant Parcel (± 53.0 acres)
- Area III - Former Republic (LTV) Steel Warehouse Parcel (± 43.2 acres)
- Area IV – Former Donner-Hanna Coke Yard Parcel (± 31.1 acres)

In July 2003, a fifth parcel, the formerly owned and operated August Feine & Sons property (± 4.7 acres), was acquired by Steelfields and was also subject to the original VCA. All five parcels were remediated by Steelfields under the NYSDEC VCA, and remedial activities for the entire Site were completed in 2007. Subsequent to completion of the remediation of Area IV by Steelfields in 2006, this parcel was separated from the Site, sold to Hydro-Air Components, Inc. (Hydro-Air), and entered into the Brownfield Cleanup

Program (NYSDEC BCP Site No. C915204) by Hydro-Air. As such, this report does not address Area IV. Riverbend, LLC (Riverbend) acquired the remaining four parcels from Steelfields in May 2008.

2.0 SITE OVERVIEW

The Riverbend Site, comprised of four former heavy industrial properties identified as Areas I, II, and III and the former August Feine parcel, encompasses approximately 192 acres in the City of Buffalo, Erie County, New York. The Site is bordered by the Buffalo River and South Park Avenue to the north; Abby Street and residential neighborhoods to the east; Former Area IV (currently Hydro-Air Components) to the south; and a railroad corridor and rail yard to the west (contiguous parcels owned by South Buffalo Railroad Company, Norfolk Southern Corporation, Buffalo Southern Railroad, and CSX Corporation) (see Figure 2).

The environmental investigations revealed the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs), and metals in soil and groundwater that required remediation. Remedial activities were completed across the Site from 2002 through 2006. Detailed description of the remedial efforts and construction documents are provided in the NYSDEC's approved Construction Closeout Report for Area I, including the Site Management Plan, prepared by TurnKey (April 2007; Ref. 2); and the Final Engineering Report for Areas II and III, Former Donner-Hanna Coke Plant and Republic (LTV) Steel Properties, including Site Management Plan, prepared by Malcolm Pirnie (May 2008; Ref. 3). A brief description of the remedial efforts described in those documents is presented below.

2.1 Area I - Former Republic (LTV) Steel Parcel

The former Republic Steel (LTV) Plant property encompasses two adjoining parcels (122.16-1-8.1 and 122.20-1-3.1) totaling approximately 90.6 acres. Area I is bordered by the Buffalo River and South Park Avenue to the north, Abby Street and residential neighborhoods to the east, Norfolk Southern property to the south, a railroad corridor and rail yard to the west. Remedial efforts conducted in Area I included:

- Remediation of petroleum/naphthalene/tar-impacted and metals-impacted soil/fill.
- Removal of former fuel oil and tar transfer pipelines, including disposal of residual product within the piping and impacted soil in the vicinity of the pipelines.
- Removal of former underground storage tanks.

- Buffalo River bank stabilization.

2.2 Area II – Former Donner-Hanna Coke Plant

The former Donner-Hanna Coke Plant property encompasses three adjoining parcels (122.20-1-21, 122.20-1-5.1, and 132.08-1-6) totaling approximately 53.0 acres. Area II, partially intersected by Baraga Street, is bordered by an adjacent earthen berm along Abby Street and residential neighborhoods to the east; Norfolk Southern property and the former August Feine parcel to the north; Area III to the south; and a railroad corridor and rail yard to the west. Remedial efforts conducted in Area II included:

- Construction of a 14-acre containment cell, slurry wall, low-permeability cover system and a groundwater collection and conveyance system
- Construction of a groundwater pre-treatment System (GWPTS)
- In-situ "hotspot" remediation

2.3 Area III – Former Warehouse Parcel

The former Republic Steel Warehouse property encompasses two adjoining parcels (132.08-1-7 and 132.12-1-9.11) totaling approximately 43.2 acres. Area III is bordered by Abby Street and residential neighborhoods to the east; Area II to the north; Former Area IV (currently Hydro-Air Components) to the south; and a railroad corridor and rail yard to the west. Remedial efforts conducted in Area III included:

- On-site blue-stained soil/fill treatment and disposal/consolidation in Area II containment cell
- On-site lead-impacted soil/fill treatment and disposal/consolidation in Area II containment cell
- Tar-impacted soil/fill disposal/consolidation in Area II containment cell
- In situ groundwater treatment with oxygen release compound (ORC) at 11 ORC treatment wells

2.4 Former August Feine Parcel

The former August Feine property encompasses one parcel (122.20-1-22) approximately 4.7 acres in size. This property is surrounded by Area II on the west, south,

and east; and Norfolk Southern property to the north (Baraga Street dead ends at the entrance to this parcel).

A July 2006 site assessment of this parcel identified localized VOC (primarily benzene) and total metal (plus cyanide) impacts to subsurface soil/fill and shallow groundwater along the common boundary with Area II. Based on the proximity of these identified impacts to the Area II groundwater collection trench, the leachable impacts, if any, are being captured and treated by the groundwater collection system, mitigating downgradient migration and potential environmental impact. As such, no additional remediation, beyond those already being implemented in accordance with the VCA for Area II, was recommended. Any potential for subsurface soil/fill exposure during future development of the property (i.e., utility installation) will be addressed in accordance with the Soil/Fill Management Plan (see Section 3.3).

3.0 SITE MANAGEMENT PLAN

The Riverbend Site is managed by two separate Site Management Plans (SMPs). One SMP covers Area I (prepared by TurnKey-Benchmark in April 2007; Ref. 2) and the second covers Areas II, III, and the former August Feine parcel (prepared by Malcolm Pirnie in May 2008; Ref. 3). Both SMPs include Operation, Monitoring, and Maintenance (OM&M) Plans; Long-Term Groundwater Monitoring (LTGWM) Plans; Soil/Fill Management Plans (SFMPs); and Environmental Easements (also identified as Covenant and Restrictions) for their respective parcels. A brief description of these SMP components is presented below.

3.1 Operation, Monitoring, and Maintenance (OM&M) Plan

As a requirement of the OM&M Plans, annual inspection of Areas I, II, III, and the former August Feine parcel are required. The NYSDEC PRR Institutional and Engineering Controls (IC/EC) Certification Form has replaced the previously used Environmental Inspection Forms for each Area. Appendix A includes the completed IC/EC Form. Details of the annual inspection and completion of the IC/EC Form is discussed in Sections 3.5 and 3.6 below.

3.1.1 Area I

The Area I SMP provides the details for Operation and Maintenance (O&M) related to the product recovery passive skimmer at monitoring well A1-MW-6. Specifically, the O&M Plan details the product recovery system inspection program, routine maintenance operations, and reporting requirements.

3.1.2 Area II

The Area II SMP provides the O&M details related to the groundwater collection and conveyance system, including the soil flushing system; groundwater pre-treatment system (GWPTS) including the bag filters, carbon vessels, transfer pumps, separator tank, and general house-keeping; sewer discharge effluent monitoring; and low-permeability cover system (i.e., landfill post-closure monitoring and cover maintenance). Appendix B includes the Area II GWPTS 2011 annual progress report submitted to the NYSDEC and the annual effluent monitoring report submitted to the Buffalo Sewer Authority (BSA) during the current reporting period.

3.1.3 Area III

The Area IIII O&M plan provides the details related to the in situ groundwater treatment with oxygen release compound (ORC) at 11 ORC treatment wells. ORC monitoring results are included in the annual groundwater monitoring report (Appendix C; Section 3.2 below). Appendix D includes the ORC annual inspection forms.

3.1.4 Former August Feine Parcel

There are no voluntary cleanup O&M requirements for the former August Feine parcel. In June 2009, the former August Feine building caught fire and emergency demolition followed. A concrete slab on grade foundation and a small brick walled shed is all that remains and storm water management of this area was subsequently discontinued

3.2 Long-Term Groundwater Monitoring (LTGWM) Plan

As a requirement of the SMPs, long-term groundwater monitoring is being performed at the Site. A Long-Term Groundwater Monitoring (LTGWM) Work Plan was prepared by TurnKey in March 2000 (revised April 2007) for Area I. Similarly, LTGWM Work Plans were prepared by others in October 2007 for Areas II (revised April 2008) and III. Groundwater monitoring began in 2004 for Area I and in 2007 for Areas II and III. Since 2009 and with NYSDEC approval, LTGWM for Areas I, II, and III were modified into a combined site-wide monitoring and reporting event. A total of 25 monitoring wells are monitored across the Site including 11 wells in Area I, 9 wells in Area II, and 5 wells in Area III. In addition to these monitoring wells, six additional wells (all in Area II) are monitored for water level only.

On May 5, 2011, the NYSDEC approved a modification of the groundwater parameter lists and sample frequency for Areas I, II, and III (see Appendix C). Currently, groundwater monitoring is performed on an annual basis and ORC monitoring is performed semi-annually. The activities performed during each groundwater monitoring event are performed in general accordance with the following documents:

- *Work Plan for Long-Term Groundwater Monitoring (LTGWM) of Area I* (revised June 2005; Ref. 4)
- *Work Plan for LTGWM of Areas II and III* (October 2007) submitted as Attachment A4 of Appendix HH of the Final Engineering Report for Areas II and III (May 2008; Ref. 5)

- May 5, 2008 Response to NYSDEC comment letter regarding Area III Site Management Plan (comment/responses 8, 9, and 10)
- May 5, 2008 Response to NYSDEC comment letter regarding Areas II and III Final Engineering Report (comment/responses 19 and 22)
- *ORC Maintenance and Monitoring Manual* (March 2008) submitted as Attachment A5 of Appendix HH of the Final Engineering Report for Areas II and III (May 2008; Ref. 5)
- May 5, 2011 NYSDEC Response to Modification Request Letter.

Appendix C includes the 2011 Comprehensive Annual Groundwater Monitoring Report for Areas I, II, and III. This report includes the results of the May 2011 groundwater monitoring event conducted as well as the results of the May and November 2011 ORC semi-annual monitoring events for Area III. Appendix D includes the ORC inspection forms for the May and November 2011 events.

3.3 Soil/Fill Management Plan

A Soil/Fill Management Plan (SFMP) was included in the approved SMPs for each Area of the Site. The SFMP provides guidelines for the management of soil and fill material during any future intrusive activities.

No intrusive activities requiring management of on-site soil or fill material, or the placement of backfill materials occurred during this monitoring period.

3.4 Institutional and Engineering Control Requirements and Compliance

As detailed in the SMPs, several institutional controls (ICs) and engineering controls (ECs) are to be maintained as a requirement of the VCA for the Site.

3.4.1 Institutional Controls

All four Riverbend parcels are subject to the following ICs:

- Groundwater-Use Restriction: The use of groundwater for potable and non-potable purposes is prohibited
- Land-Use Restriction: The controlled property may be used for commercial and/or industrial use
- Soil/Fill Management Plan

Additionally, Areas II and III are subject to compliance with the O&M Plans for their respective areas, as described in Section 3.1.

3.4.2 Engineering Controls

Three of the four Areas of the Riverbend Site are subject to several ECs as indicated below.

- Area I: Maintain vegetative cover and perimeter fencing; soil/fill management; soil vapor intrusion (SVI) evaluation before on-site building construction or installation of vapor mitigation system during on-site building construction and prior to occupancy (effective 08/16/2007)
- Area II: Maintain final cover system of containment cell and maintain vegetative cover outside containment cell area until build-out whereupon one foot of clean cover or alternative with a demarcation layer is required; O&M of GWPTS; O&M of containment cell and perimeter fencing; soil/fill management; soil vapor intrusion (SVI) evaluation before on-site building construction or installation of vapor mitigation system during on-site building construction and prior to occupancy (effective 05/21/2008)
- Area III: Maintain vegetative cover (limited area sampling required before build-out, failure to meet Site Specific Action Levels (SSALs) would require one foot of clean cover or alternative with a demarcation layer); O&M of passive groundwater treatment (e.g., ORC) and perimeter fencing; soil/fill management; soil vapor intrusion (SVI) evaluation before on-site building construction or installation of vapor mitigation system during on-site building construction and prior to occupancy (effective 05/21/2008)
- Former August Feine Parcel: Not subject to ECs

3.5 Site Inspection

On June 20, 2012, a TurnKey environmental scientist, accompanied by the NYSDEC Project Manager, performed a Site inspection of Areas I, II, III and the former August Feine parcel. At the time of the inspection, NYSDEC requested that the vegetation along the interior perimeter of the fencing be cut for aesthetics and to maintain the integrity of the fence. The following sections provide a parcel-by-parcel description of the Site inspection and maintenance activities performed. Appendix A includes the completed IC/EC Form for Areas I, II, and III. Appendix E includes a photographic log of the Site at the time of the inspection as well as follow-up perimeter fence mowing activities.

3.5.1 Area I

At the time of the inspection, Area I was vacant, and in compliance with the IC/ECs, with the minor exception of some areas of the perimeter fence needing routine repairs and the vegetation along the perimeter of the fence needing to be cut. The fence repairs and vegetative maintenance were performed by TurnKey in June 2012.

3.5.2 Area II

At the time of the inspection, Area II, including the GWTS and Containment Cell were in compliance with the IC/ECs, with the minor exception of some areas of the perimeter fence needing routine repairs and the vegetation within and around the GWTS building as well as along the perimeter fence needing to be cut. The fence repairs and vegetative maintenance were performed by TurnKey in June 2012. Monitoring well A2-MW-14 noted as vandalized/damaged during previous LTGWM events has not been replaced. Since water level and groundwater quality data from this well location does not provide critical information for Site characterization, TurnKey hereby requests approval from NYSDEC for decommissioning of the well.

3.5.3 Area III

At the time of the inspection, Area III was vacant and in compliance with the IC/ECs with the minor exception of some areas of the perimeter fence needing routine repairs and the vegetation along the perimeter of the fence needing to be cut. The fence repairs and vegetative maintenance were performed by TurnKey in June 2012.

3.5.4 Former August Feine Parcel

At the time of the inspection, the former August Feine parcel was vacant. There are no IC/ECs associated with this parcel; therefore, this property is not included on the IC/EC Form.

3.6 Abby & Baraga Streets Surface Drainage System

Although not a component of the Area II SMP, TurnKey personnel perform a monthly inspection of the drainage system including the Baraga Street manhole due to historic blockages in the system resulting in complaints by the NSYDEC of ponding water

along Abby Street. As requested by the NYSDEC, the surface drainage system background information as well as results of the monthly assessment are provided below.

3.6.1 Background

The surface drainage system at the Riverbend Site has three components, two Abby Street drains (Abby-West and Abby-East) and the Baraga Street drain lateral (Baraga lateral), as shown in Figure 3. The surface drainage system was installed to mitigate breakout of calcium-rich surface water resulting from the underlying slag and lime materials in the vicinity of the berm along Abby Street. Since 1998, the drainage system has functioned as intended, but has required periodic maintenance and repair to remedy clogs due to calcium and sediment build-up and, most recently, damage from heavy snow removal equipment.

The Abby-West drain (approximately 470 feet long) and the Baraga lateral (approximately 82 feet long) are both 6-inch perforated, corrugated collection pipes wrapped with filter fabric and backfilled with washed No. 2 stone. The Abby-West drain flows toward the south and the Baraga lateral to the east; both empty into the Baraga Street manhole at the intersection of Abby and Baraga Streets. The Abby-West drain has been in place since 1998 and the Baraga lateral since 2000. In addition, the Abby-East drain, a 4-inch perforated, corrugated collection pipe backfilled with washed No. 2 stone, was installed from the O'Conner Street manhole approximately 182 feet north (see Figure 3). The Abby-East drain and two nearby drop inlets (north and south) empty into the O'Conner Street manhole. The Abby-East and Abby-West drains are not connected and operate independently of each other.

3.6.2 Monthly Drainage System Inspections

Since the assessment, flushing, and repair activities performed during the last 2010/2011 PRR reporting period, TurnKey has performed monthly inspections of the Abby and Baraga Streets surface drainage system including the Baraga Street manhole for blockage and surficial ponding along Abby Street. During the current monitoring period, no surficial ponding, staining, or stressed vegetation was observed and the grass along the Abby Street berm has been restored. Periodic removal of calcium build-up within the Baraga Street manhole is performed and observed flow is occurring in the Baraga Street manhole indicating no blockages in the drainage system. No further action was necessary during the

reporting period. Appendix E includes photographic documentation of the above observations.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions for this reporting period and recommendations for the next reporting period are as follows:

- At the time of the inspection, the Site was in compliance with the IC/ECs including: groundwater monitoring; leachate collection and pump-and-treat system; containment cell; ORC monitoring; product removal monitoring and operational maintenance; groundwater use restriction; land use restriction; O&M Plan; and SFMP.
- Minor fence damage was noted in Areas I, II, and III during the 2011 and 2012 site inspections. The fence repairs were completed by TurnKey in June 2012.
- In June 2012, TurnKey mowed a 20-foot swath of vegetation along the interior perimeter of the fencing in all fours areas of the Site including the areas in and around the GWTS building. Additional hand clearing of larger vegetation along the fence is required in several areas and will be performed this summer.
- The LTGWM Plan was modified based on TurnKey's April 25, 2011 modification request letter and NYSDEC's comments. The approved LTGWM Plan was implemented beginning in May 2011. Monitoring well A2-MW-14 was noted vandalized/damaged during the May 2011 LTGWM event. TurnKey requests approval from NYSDEC for decommissioning of monitoring well A2-MW-14. Water level and groundwater quality data from this well location does not provide critical information for Site characterization.

5.0 DECLARATION/LIMITATION

TurnKey Environmental Restoration, LLC in association with Benchmark Environmental Engineering and Science, PLLC, personnel conducted the annual site inspections for Voluntary Cleanup Program Site No. V00619, located in Buffalo, New York, according to generally accepted practices. This report complied with the scope of work provided to Riverbend, LLC by TurnKey Environmental Restoration, LLC.

This report has been prepared for the exclusive use of Riverbend, LLC. 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 Riverbend, LLC. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of TurnKey Environmental Restoration, LLC.

6.0 REFERENCES

1. New York State Department of Environmental Conservation. *DER-10; Technical Guidance for Site Investigation and Remediation.* May 2010.

2. *Site Management Plan for Area I (former Republic (LTV) Steel Parcel), Steelfields Site, Buffalo, NY (NYSDEC Site # V00619-9),* dated April 2007, prepared by TurnKey Environmental Restoration, LLC and Benchmark Environmental Engineering and Science, PLLC.

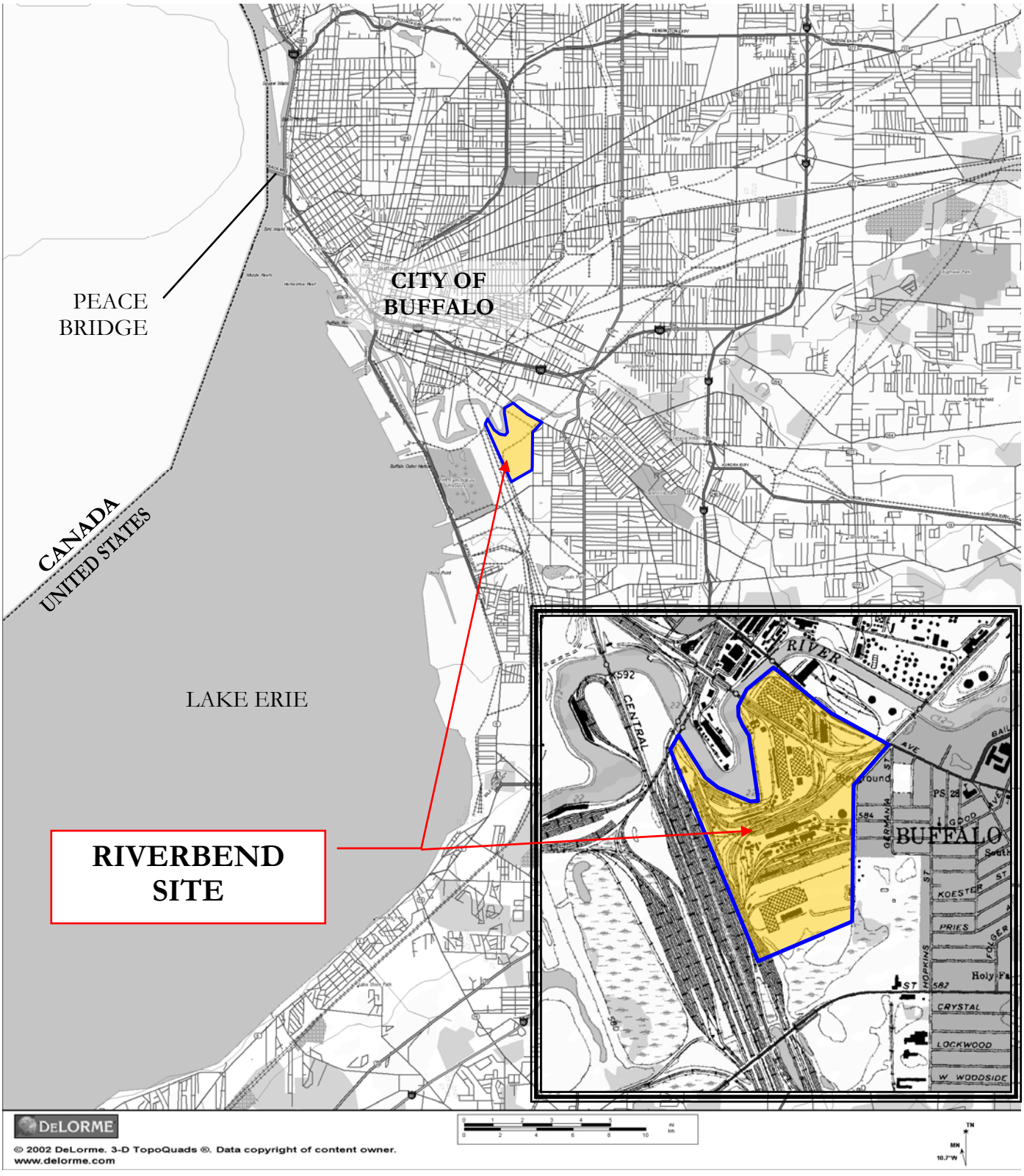
3. *Final Engineering Report for Areas II & III, Former Donner-Hanna Coke Plant and Republic (LTV) Steel Properties, Steelfields Site Buffalo, NY (NYSDEC Site #V00133-9), Appendix GG and HH,* dated May 2008, prepared by Malcolm Pirnie.

4. *Work Plan for Long-Term Groundwater Monitoring, Former Steel Manufacturing Site, Buffalo, NY*, prepared for Steelfields Ltd., revised June 2005 by TurnKey Environmental Restoration, LLC.

5. *Final Engineering Report for Areas II & III, Former Donner-Hanna Coke Plant and Republic (LTV) Steel Properties, Steelfields Site Buffalo, NY (NYSDEC Site #V00133-9), Appendix HH – Attachments A4 and A5,* dated May 2008, prepared by Malcolm Pirnie.

FIGURES

FIGURE 1



TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

PROJECT NO.: 0171-006-500

DATE: APRIL 2011

DRAFTED BY: BCH

SITE VICINITY AND LOCATION MAP

PERIODIC REVEIW REPORT

RIVERBEND SITE
BUFFALO, NEW YORK

PREPARED FOR
RIVERBEND, LLC

F:\CAD\Turnkey\Riverbend (Donnelly Dock#8&9)\PRR\Figure 2 - Site Plan (Apr8 2011).dwg

LEGEND:

- PROPERTY BOUNDARY OF AREAS I, II, & III
- APPROX. TAR & BLUE SOIL/FILL EXCAVATION LIMITS
- A1-MW-2 NETWORK MONITORING WELL
- A1-MW-7 NETWORK MONITORING WELL (WATER LEVEL ONLY)
- A1-MW-K2 NON-NETWORK MONITORING WELL
- A3-ORC-1 ORC SOCK WELL
- A3-SVE-2 SVE WELL
- A2-P-1 NON-NETWORK PIEZOMETER
- PS1 GROUNDWATER COLLECTION PUMP STATION
- SG-01 BUFFALO RIVER STAFF GAUGE LOCATION
- A4-MW-5R OFF-SITE MONITORING WELL
- SLURRY WALL
- GROUNDWATER COLLECTION TRENCH
- FORCEMAIN
- EXISTING 48" CONCRETE PIPE
- LIMITS OF CONTAINMENT CELL

BUFFALO RIVER

AREA I
(FORMERLY REPUBLIC STEEL PLANT PARCEL)
(± 90.6 ACRES)

AREA II
(FORMERLY DONNER-HANNA COKE PLANT PARCEL)
(± 53.0 ACRES)

AREA III
(FORMERLY REPUBLIC STEEL WAREHOUSE PARCEL)
(± 43.2 ACRES)

HYDRO-AIR
(FORMERLY DONNER-HANNA COKE YARD PARCEL)
(FORMERLY AREA IV)
(± 31.1 ACRES)

NORFOLK SOUTHERN PROPERTY (± 24.9 ACRES)

FMR. AUGUST FEINE & SONS, CO. (± 4.7 ACRES)

BERM AREA

GWPTS BUILDING

AREA II CONTAINMENT CELL

SLURRY WALL

FORCE-MAIN

GROUNDWATER COLLECTION TRENCH

TERMINAL BASIN

DETENTION POND

PLANT AREA 140,000 S.F.

FUTURE EXPANSION 100,000 S.F.

20' WIDE ACCESS ROAD

40 SPACES

122 SPACES

40 SPACE EXPANSION

FMR. HOOD INDUSTRIES

SOUTH BUFFALO & BUFFALO / PITTSBURGH RAILROAD

NORFOLK SOUTHERN RAILROAD

BUFFALO SOUTHERN RAILROAD

CSX RAILROAD

N

200' 0' 200' 400'

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

TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

JOB NO.: 0171-006-500

REVISIONS

NO.	BY	DATE	REMARKS

DRAWN BY: BCH
DATE: APRIL 2011
CHECKED BY:
APPROVED BY:

SEAL

SITE PLAN

PERIODIC REVIEW REPORT
RIVERBEND SITE
BUFFALO, NEW YORK

PREPARED FOR:
RIVERBEND, LLC

FIGURE 2

F:\CAD\TurnKey\Riverbend (formerly Steelfields)\PRR\Figure 3- Abby Street Drain Site Sketch.dwg

ABBY-EAST DRAIN
(4-INCH PERFORATED / CORRUGATED)

O'CONNER STREET MANHOLE

BARAGA STREET MANHOLE

O'CONNER ST.

BARAGA ST.

ABBY ST. (66' R.O.W.)

DI

STOP

16" WATER (1957)

16" PVC

CLEAN-OUT

ABBY-EAST DRAIN REPAIR AREA (MARCH 2011)

ABBY-WEST DRAIN
(6-INCH PERFORATED / CORRUGATED)

BERM AREA

ABBY-WEST DRAIN
(6-INCH PERFORATED / CORRUGATED)

BARAGA ST. DRAIN
(6-INCH PERFORATED / CORRUGATED)

NORFOLK SOUTHERN PROPERTY

RIVERBEND - AREA II

RIVERBEND - AREA II

BERM AREA

A2-MW-17

A2-MW-16

A2-MW-13

BARAGA ST. (60' R.O.W.)

GWPTS BUILDING

SHED

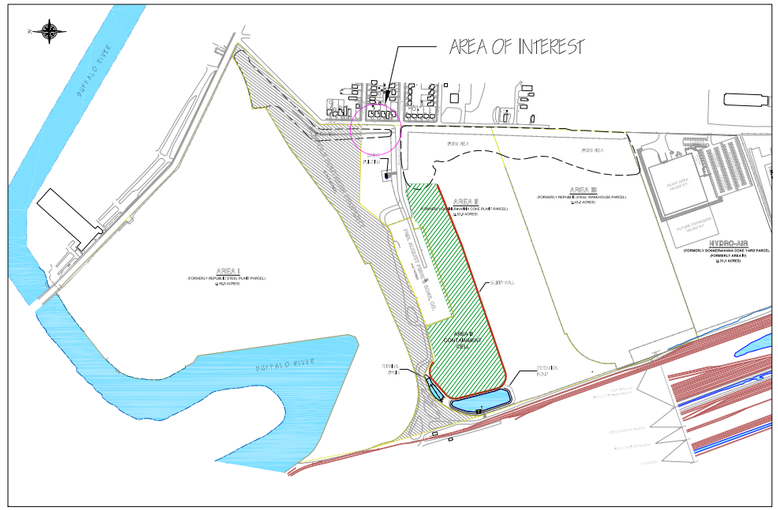
N

80' 0' 80' 160'

SCALE: 1 INCH = 80 FEET
SCALE IN FEET
(approximate)

SITE PLAN:

SCALE (APPROX.): 1" = 1200'



LEGEND:

- PROPERTY BOUNDARY OF AREAS I, II, & III
- RAILROAD
- SLURRY WALL
- FORCEMAIN
- SANITARY SEWER LINES (APPROX.)
- WATER LINES (APPROX.)
- GAS LINES (APPROX.)
- MANHOLE
- DI DROP INLET
- A1-MW-2 MONITORING WELL

DATE: APRIL 2011
DRAFTED BY: BCH

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TurnKey Environmental Restoration, LLC

JOB NO.: 0171-006-500

ABBEY STREET DRAIN SITE SKETCH

PERIODIC REVIEW REPORT

RIVERBEND SITE
BUFFALO, NEW YORK

PREPARED FOR
RIVERBEND, LLC

FIGURE 3

APPENDIX A

SITE INSPECTION (IC/EC) FORM

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. V00619

Site Name Steelfields (aka Riverbend, LLC)

Site Address: 304 Abby Street Zip Code: 14220
City/Town: Buffalo
County: Erie
Site Acreage: 182.0

Reporting Period: April 01, 2011 to May 01, 2012

	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

SITE NO. V00619 Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
122.16-1-8.1	Buffalo Urban Development Corporation	
		Ground Water Use Restriction
		Landuse Restriction
		Monitoring Plan O&M Plan Soil Management Plan
122.20-1-21	Buffalo Urban Development Corporation	
		Ground Water Use Restriction
		Landuse Restriction
		Monitoring Plan O&M Plan Soil Management Plan
122.20-1-3.1	Buffalo Urban Development Corporation	
		Ground Water Use Restriction
		Landuse Restriction
		Monitoring Plan O&M Plan Soil Management Plan
122.20-1-5.1	Buffalo Urban Development Corporation	
		Ground Water Use Restriction
		Landuse Restriction
		Monitoring Plan O&M Plan Soil Management Plan
132.08-1-6	Buffalo Urban Development Corporation	
		Ground Water Use Restriction
		Landuse Restriction
		Monitoring Plan O&M Plan Soil Management Plan
132.08-1-7	Buffalo Urban Development Corporation	

		Ground Water Use Restriction
		Landuse Restriction
		Monitoring Plan O&M Plan Soil Management Plan
132.12-1-9.11	Buffalo Urban Development Corporation	
		Ground Water Use Restriction
		Landuse Restriction
		Monitoring Plan O&M Plan Soil Management Plan

Box 4

Description of Engineering Controls

Parcel	Engineering Control
122.16-1-8.1	
	Cover System Fencing/Access Control Groundwater Containment Groundwater Treatment System Leachate Collection
122.20-1-21	
	Cover System Fencing/Access Control Groundwater Containment Groundwater Treatment System Leachate Collection
122.20-1-3.1	
	Cover System Fencing/Access Control Groundwater Containment Groundwater Treatment System Leachate Collection
122.20-1-5.1	
	Cover System Fencing/Access Control Groundwater Containment Groundwater Treatment System Leachate Collection
132.08-1-6	
	Cover System Fencing/Access Control Groundwater Containment Groundwater Treatment System Leachate Collection
132.08-1-7	
	Cover System Fencing/Access Control Groundwater Containment Groundwater Treatment System Leachate Collection
132.12-1-9.11	
	Cover System Fencing/Access Control Groundwater Containment Groundwater Treatment System

Parcel

Engineering Control

Leachate Collection

Engineering Control Details for Site No. V00619

Parcel: 122.16-1-8.1

Area I: Maintain vegetative cover, land use restriction, fencing, groundwater use prohibition, soil/fill management, SVI evaluation or installation of vapor mitigation system before buildout. (8/16/07)

Parcel: 122.20-1-21

Area II: Maintain vegetative cover until buildout whereupon one foot of clean cover or alternative with a demarcation layer is required, O&M of groundwater pre-treatment plant, O&M of containment cell, land use restriction, fencing, groundwater use prohibition, soil/fill management, SVI evaluation or installation of vapor mitigation system before buildout. (5/21/08)

Parcel: 122.20-1-3.1

Area I: Maintain vegetative cover, land use restriction, fencing, groundwater use prohibition, soil/fill management, SVI evaluation or installation of vapor mitigation system before buildout. (8/16/07)

Parcel: 122.20-1-5.1

Area II: Maintain vegetative cover until buildout whereupon one foot of clean cover or alternative with a demarcation layer is required, O&M of groundwater pre-treatment plant, O&M of containment cell, land use restriction, fencing, groundwater use prohibition, soil/fill management, SVI evaluation or installation of vapor mitigation system before buildout. (5/21/08)

Parcel: 132.08-1-6

Area II: maintain vegetative cover until buildout whereupon one foot of clean cover or alternative with a demarcation layer is required, O&M of groundwater pre-treatment plant, O&M of containment cell, land use restriction, fencing, groundwater use prohibition, soil/fill management, SVI evaluation or installation of vapor mitigation system before buildout. (5/21/08)

Parcel: 132.08-1-7

Area III: Maintain vegetative cover (limited area sampling required before buildout, failure to meet SSALs would require one foot of clean cover or alternative with a demarcation layer), O&M of passive groundwater treatment, land use restriction, fencing, groundwater use prohibition, soil/fill management, SVI evaluation or installation of vapor mitigation system before buildout. (5/21/08)

Parcel: 132.12-1-9.11

Area III: Maintain vegetative cover (limited area sampling required before buildout, failure to meet SSALs would require one foot of clean cover or alternative with a demarcation layer), O&M of passive groundwater treatment, land use restriction, fencing, groundwater use prohibition, soil/fill management, SVI evaluation or installation of vapor mitigation system before buildout. (5/21/08)

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. V00619

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 Peter M. Cammarata at 143 Genesee St.,
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.

Peter M. Cammarata
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

6/26/12
Date

IC/EC CERTIFICATIONS

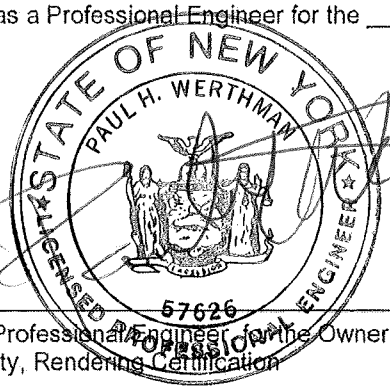
Box 7

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 Paul H. Werthman at 2558 Hamburg Turnpike, Ste 300, Buffalo NY 14218
print name print business address

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



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

Stamp (Required for PE)

7/2/12
Date

APPENDIX B

AREA II – 2011 ANNUAL GWPTS REPORT

(PROVIDED ELECTRONICALLY)

APPENDIX B-1

GWPTS PROGRESS REPORTS

ANNUAL PROGRESS REPORT NO. 12
JANUARY 1 THROUGH DECEMBER 31, 2011

ANNUAL PROGRESS REPORT FOR THE
OPERATION, MAINTENANCE, AND MONITORING SERVICES
Riverbend, LLC
197 Baraga St,
Buffalo NY, 14210

PROGRESS REPORT No. 12
REPORTING PERIOD ENDING DECEMBER 31, 2011

Project Description

This Annual Progress Report has been prepared for the Riverbend, LLC Groundwater Pre-Treatment System (GWPTS) located at 197 Baraga Street, Buffalo, NY. This Report has been prepared in accordance with the requirements of the Site Management Plan and at the request of the NYSDEC. In accordance with our NYSDEC-approved Modification Request (dated April 25, 2011), this Progress Report covers one year of the operation and maintenance of the GWPTS from January 1, 2011 through December 31, 2011.2

1.0 Treatment Statistics

- Approximately 11,385,689 gallons of collected groundwater were treated over the monitoring period averaging 31,277 gallons per day.
- System was operational for approximately 100% of the time.
- System was down for 0% of the time.
- Approximately 724.7 pounds of tar was generated from the oil/water separator (approximately 61 pounds/month).
- In April 2011, 12 drums of tar were removed and disposed at EQ Detroit Inc. of Detroit, Michigan as a D018 benzene waste. The Hazardous Waste Report was submitted in February 17, 2012. Going forward, tar will be disposed of on a semi-annual basis (tentatively June/December).

2.0 General Schedule of Maintenance Undergone

- Regular Maintenance Items
  - 3 bag filter changes/week or as necessary until October 2011 when off-site remote monitoring via the internet was functional. From that point forward, bag filter changes were modified to twice per week.
  - Carbon filtration vessel back-washing: 2-3 times per week or as necessary
  - Decant tar from separator : 2-3 times per week or as necessary
- January 6, 2011 - Flow meter was calibrated.
- January 6-7, 2011 - Pulled all three pumps from the pump stations; cleaned, changed oil; and replaced the chains on each pulley system.
- January 6-7, 2011 - Performed an electrical assessment on all 3 pump stations, which required some system reprogramming.
- April 2011 - Annual certification/inspection associated with the Periodic Review Report (PRR) in accordance with DER-10 was performed.
- June 20, 2011 - Changed the carbon in vessel #1 and cleaned the separator, influent tank and the effluent tank.

- July 25, 2011 - Pulled all three pumps from the pump stations; check oil, cleaned pumps, and replaced the guide for the pulley system at Pump Station #1.
- October 2011 - By utilizing on-site personal computer, Sensaphone SCADA 3000 AutoDialer, and the internet connection the frequency of on-site visits was reduced from three to two per week with periodic in-office virtual system checks per week.
- December 16, 2011 - Changed the carbon in vessel #2 and cleaned the separator, influent tank and the effluent tank.

3.0 Attachments/Logs

- Attachment 1: Graph of monitored flows through treatment system for 2011
- Attachment 2: Maintenance Log for 2011 (01/06/11 thru 12/30/11)
- Attachment 3: Generated Volume of Tar Material Log (01/01/11 thru 12/29/11)

ATTACHMENT 1

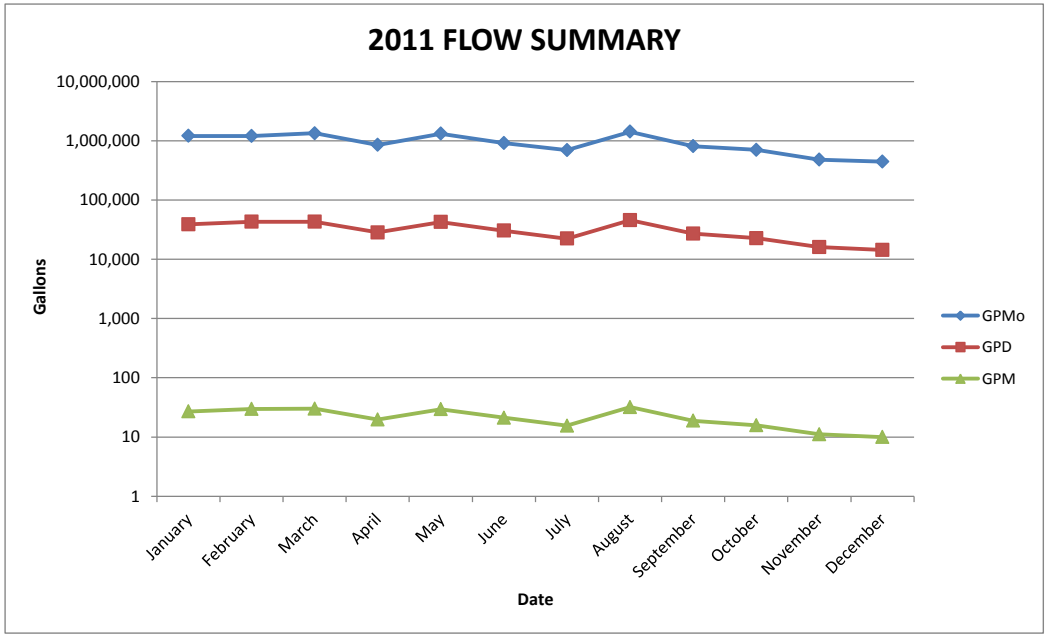
MONITORED FLOWS VS. TIME

ATTACHMENT 1

MONITORED FLOWS v. TIME
2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Month	GPMo	GPD	GPM
January	1,208,540	38,985	27
February	1,203,529	42,983	30
March	1,337,364	43,141	30
April	850,390	28,346	20
May	1,318,029	42,517	30
June	913,442	30,448	21
July	692,653	22,344	16
August	1,422,367	45,883	32
September	813,013	27,100	19
October	701,925	22,643	16
November	479,413	15,980	11
December	445,024	14,356	10
Min.	445,024	14,356	10
Max.	1,422,367	45,883	32
Ave.	948,807	31,227	22

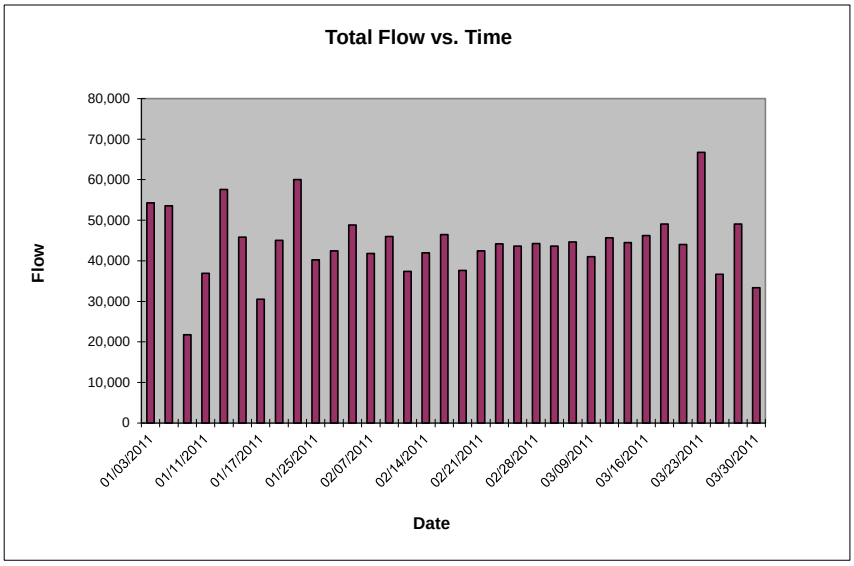


ATTACHMENT 1

MONITORED FLOWS v. TIME
FIRST QUARTER 2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Date	Total Flow	Daily Avg
01/03/2011	11,532,778	54,307
01/06/2011	11,693,520	53,581
01/07/2011	21,753	21,753
01/11/2011	169,298	36,886
01/13/2011	284,533	57,618
01/14/2011	330,387	45,854
01/17/2011	421,961	30,525
01/19/2011	512,006	45,023
01/21/2011	632,083	60,039
01/25/2011	792,947	40,216
01/31/2011	1,047,798	42,475
02/02/2011	1,145,471	48,837
02/07/2011	1,354,632	41,832
02/09/2011	1,446,630	45,999
02/11/2011	1,521,410	37,390
02/14/2011	1,647,379	41,990
02/16/2011	1,740,356	46,489
02/18/2011	1,815,544	37,594
02/21/2011	1,942,931	42,462
02/23/2011	2,031,287	44,178
02/25/2011	2,118,471	43,592
02/28/2011	2,251,327	44,285
03/02/2011	2,338,545	43,609
03/04/2011	2,427,904	44,680
03/09/2011	2,632,933	41,006
03/11/2011	2,724,318	45,693
03/14/2011	2,857,730	44,471
03/16/2011	2,950,190	46,230
03/18/2011	3,048,333	49,072
03/21/2011	3,180,299	43,989
03/23/2011	3,313,758	66,730
03/26/2011	3,423,746	36,663
03/28/2011	3,521,889	49,072
03/30/2011	3,588,691	33,401



Total Quarterly Flow: 3,749,433 gallons
Ave. Quarterly Flow: 41,703 gallons/day

JANUARY	
1,208,540	gallons/month
31	days
38,985	gallons/day
27	gallons/min

FEBRUARY	
1,203,529	gallons/month
28	days
42,983	gallons/day
30	gallons/min

MARCH	
1,337,364	gallons/month
31	days
43,141	gallons/day
30	gallons/min

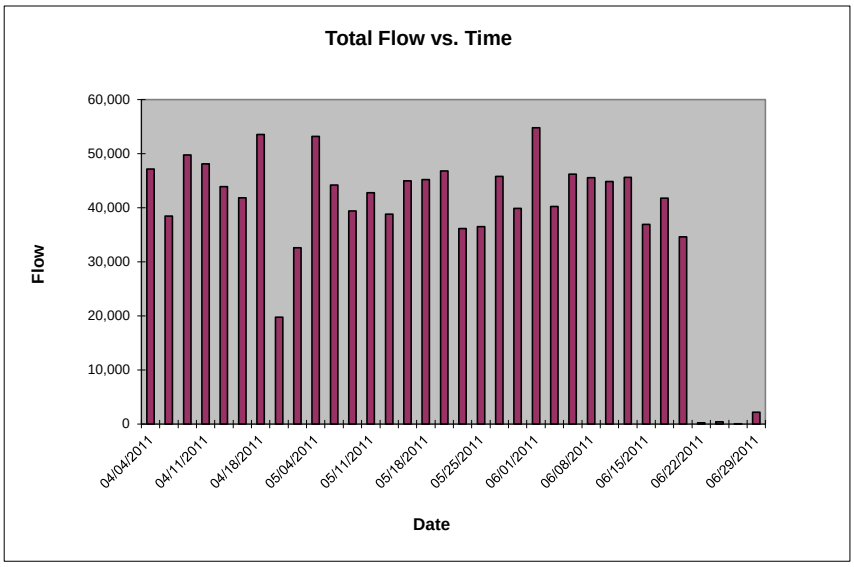
Notes:
* = flow meter calibrated and reset to zero on 01/06/11

ATTACHMENT 1

MONITORED FLOWS v. TIME
SECOND QUARTER 2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Date	Total Flow	Daily Avg
04/04/2011	3,824,610	47,184
04/06/2011	3,901,480	38,435
04/08/2011	4,000,952	49,736
04/11/2011	4,145,243	48,097
04/13/2011	4,233,060	43,909
04/15/2011	4,316,672	41,806
04/18/2011	4,477,277	53,535
04/28/2011	4,675,000	19,772
05/02/2011	4,805,294	32,574
05/04/2011	4,911,692	53,199
05/06/2011	5,000,041	44,175
05/09/2011	5,118,178	39,379
05/11/2011	5,203,780	42,801
05/13/2011	5,281,392	38,806
05/16/2011	5,416,277	44,962
05/18/2011	5,506,687	45,205
05/20/2011	5,600,316	46,815
05/23/2011	5,708,815	36,166
05/25/2011	5,781,794	36,490
05/27/2011	5,873,348	45,777
05/30/2011	5,993,029	39,894
06/01/2011	6,102,568	54,770
06/03/2011	6,183,050	40,241
06/06/2011	6,321,648	46,199
06/08/2011	6,412,803	45,578
06/10/2011	6,502,527	44,862
06/13/2011	6,639,466	45,646
06/15/2011	6,713,284	36,909
06/17/2011	6,796,804	41,760
06/20/2011	6,900,728	34,641
06/22/2011	6,901,143	208
06/24/2011	6,901,992	425
06/27/2011	6,902,162	57
06/29/2011	6,906,471	2,155



Total Quarterly Flow: 3,081,861 gallons
Ave. Quarterly Flow: 33,770 gallons/day

APRIL	
850,390	gallons/month
30	days
28,346	gallons/day
20	gallons/min

MAY	
1,318,029	gallons/month
31	days
42,517	gallons/day
30	gallons/min

JUNE	
913,442	gallons/month
30	days
30,448	gallons/day
21	gallons/min

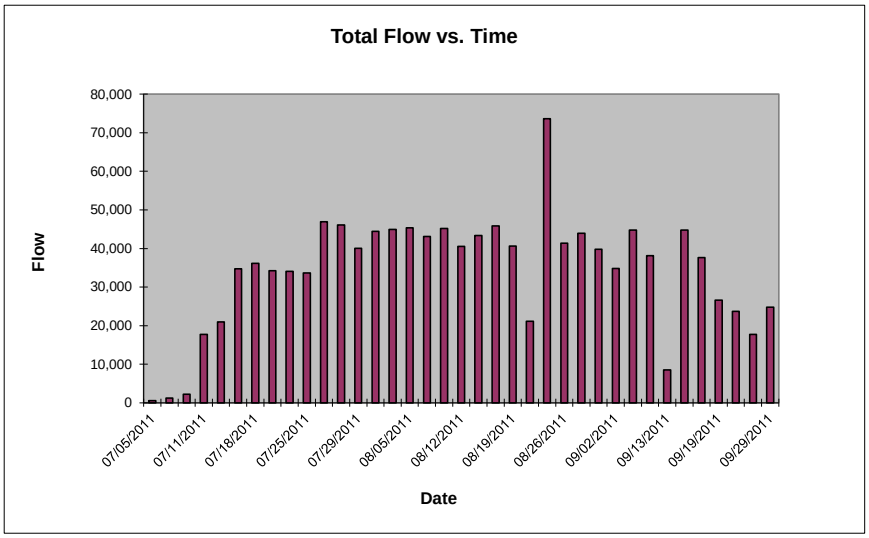
Notes:
* = flow meter calibrated and reset to zero on 01/05/10

ATTACHMENT 1

MONITORED FLOWS v. TIME
THIRD QUARTER 2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Date	Total Flow	Daily Avg
07/05/2011	6,909,947	579
07/06/2011	6,911,149	1,202
07/08/2011	6,915,484	2,168
07/11/2011	6,968,536	17,684
07/13/2011	7,010,520	20,992
07/15/2011	7,079,931	34,706
07/18/2011	7,188,453	36,174
07/20/2011	7,256,892	34,220
07/22/2011	7,325,020	34,064
07/25/2011	7,425,967	33,649
07/26/2011	7,472,869	46,902
07/27/2011	7,518,958	46,089
07/29/2011	7,599,124	40,083
08/01/2011	7,732,372	44,416
08/03/2011	7,822,292	44,960
08/05/2011	7,913,020	45,364
08/08/2011	8,042,348	43,109
08/10/2011	8,132,745	45,199
08/12/2011	8,213,765	40,510
08/15/2011	8,343,758	43,331
08/17/2011	8,435,380	45,811
08/19/2011	8,516,563	40,592
08/22/2011	8,579,921	21,119
08/24/2011	8,727,256	73,668
08/26/2011	8,810,010	41,377
08/29/2011	8,941,958	43,983
08/31/2011	9,021,491	39,767
09/02/2011	9,091,164	34,837
09/06/2011	9,270,093	44,732
09/09/2011	9,384,441	38,116
09/13/2011	9,418,466	8,506
09/14/2011	9,463,260	44,794
09/16/2011	9,538,504	37,622
09/19/2011	9,618,390	26,629
09/22/2011	9,689,504	23,705
09/26/2011	9,760,236	17,683
09/29/2011	9,834,504	24,756



Total Quarterly Flow: 2,928,033 gallons
Ave. Quarterly Flow: 34,047 gallons

JULY	
692,653	gallons/month
31	days
22,344	gallons/day
16	gallons/min

AUGUST	
1,422,367	gallons/month
31	days
45,883	gallons/day
32	gallons/min

SEPTEMBER	
813,013	gallons/month
30	days
27,100	gallons/day
19	gallons/min

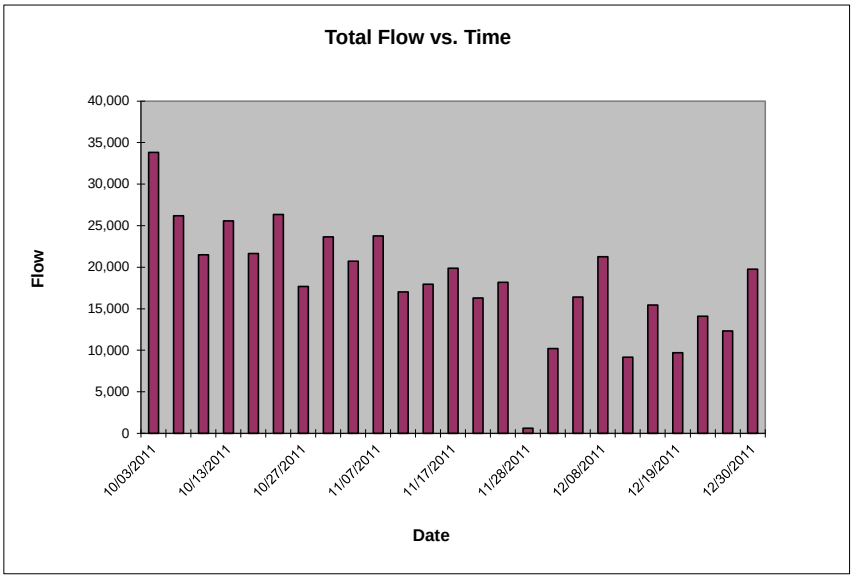
Notes:
* = flow meter calibrated and reset to zero on 01/05/10

ATTACHMENT 1

MONITORED FLOWS v. TIME
FOURTH QUARTER 2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Date	Total Flow	Daily Avg
10/03/2011	9,911,340	33,811
10/06/2011	9,989,885	26,182
10/10/2011	10,075,862	21,494
10/13/2011	10,152,595	25,578
10/17/2011	10,239,198	21,651
10/20/2011	10,318,186	26,329
10/27/2011	10,441,836	17,664
10/31/2011	10,536,429	23,648
11/03/2011	10,598,650	20,740
11/07/2011	10,693,650	23,750
11/10/2011	10,744,752	17,034
11/14/2011	10,816,537	17,946
11/17/2011	10,876,133	19,865
11/21/2011	10,941,258	16,281
11/25/2011	11,014,026	18,192
11/28/2011	11,015,842	605
12/01/2011	11,046,418	10,192
12/05/2011	11,112,065	16,412
12/08/2011	11,175,877	21,271
12/12/2011	11,212,581	9,176
12/15/2011	11,258,948	15,456
12/19/2011	11,297,703	9,689
12/22/2011	11,340,001	14,099
12/27/2011	11,401,573	12,314
12/30/2011	11,460,866	19,764



Total Quarterly Flow: 1,626,362 gallons
Ave. Quarterly Flow: 18,481 gallons

OCTOBER	
701,925	gallons/month
31	days
22,643	gallons/day
16	gallons/min

NOVEMBER	
479,413	gallons/month
30	days
15,980	gallons/day
11	gallons/min

DECEMBER	
445,024	gallons/month
31	days
14,356	gallons/day
10	gallons/min

Notes:
* = flow meter calibrated and reset to zero on 01/05/10

ATTACHMENT 2

MAINTENANCE LOGS

500

Waste Water Treatment Plant - Riverbend
Maintenance Log

Flow Before/after

Date/Time	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After	
1-6-11 09:00	11693520	X		X	X	12	10	X	X	28	21	X
1-7-11 10:00	21753	X		X		11	8	X	X	28	21	X
1-11-11 14:00	169,298	X		X		12	8	X	X	24	20	X
1-13-11 16:00	284,533	X		X		10	8	X	X	24	21	X
1-14-11 17:00	330,387	X		X	X	4	2	X	X	24	20	X
1-17-11 16:00	421,961	X		X		4	2	X	X	24	20	X
1-19-11 16:00	512,006	X		X		6	3	X	X	26	20	X
1-21-11 17:00	632,083	X		X	X	4	2	X	X	25	20	X
1-25-11 11:00	792,947	X		X		4	2	X	X	23	20	X
1-31-11 8:00	1047798	X		X		5	5	X	X	22	20	X
2-2-11 15:00	1'145'471	X		X	X	4	2	X	X	—	19	X
2-7-11 17:00	1354657	X		X		-	2	X	X	-	19.5	X
2-9-11 16:30	1446630	X		X		-	2	X	X	—	20	X
2-11-11 11:00	1521410	X		X	X	-	2	X	X	-	20	X
2-14-11 10:30	1677579	X		X		-	2	X	X	-	21	X
2-16-11 16:00	1740356	X		X		3.5	2	X	X	22	20	X
2-18-11 11:00	1815544	X		X	X	—	2	X	X	22	20	X
2-21-11 11:00	1947931	X		X		-	2	X	X	-	20	X
2-23- 14:00	2031787	X		X		3.5	2	X	X	22	19	X
2-25-11 09:45	2118471	X		X	X	-	2	X	X	-	20	X
2-28-11 18:00	2251377	X		X		3	2	X	X	23	20	X
3-2-11 11:30	2338545	X		X		3.5	2	X	X	22	20	X
3-4-11 8:00	2477904	X		X	X	-	10	X	X	—	20	X

60 GPM / 76 GPM
75
61 GPM / 73 GPM
74

80.62
-180.49
72.03/80.60
73.26/83.05
-186.73
66.51/81.90
-180.66
68.11/79.49
68.04/81:00
-179.44

1-6-11 @ 10:00 flow meter was calibrated and reset to 0

FILTRATION UNLIMITED

PE 700
EX PC

9.4" Project

Waste Water Treatment Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
5-9-11 800	26327933	X		X		11	8	X	X	23	20	X	65.66	80.25
5-11-11 800	27274318	X		X	X	–	10	X	X	–	20	X (2)	–	81.50
5-14-11 800	28577130	X		X		11	9	X	X	22	20	X	64.38	80.53
5-16-11 826	29501901	X		X		9.5	10	X	X	21	20	X	65.31	80.24
5-18-11 1200	30485335	X		X	X	9	10	X	X	22	20	X	67.76	83.25
5-21-11 950	31802994	X		X		–	10	X	X	–	20	X	–	81.56
5-23-11 0730	32357588	X		X		–	10	X	X	–	20	X	–	81.26
5-26-11 1900	34739416	X		X	X	12	10	X	X	24	20	X	48.05	78.29
5-28-11 0830	35721889	X		X		–	10	X	X	–	20	X	62.61	80.47
5-30-11 0830	36886911	X		X		12	11	X	X	24	21	X	51.96	77.85

Waste Water Treatment Plant - Riverbend
Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
4-4-11	3824610	X		X	X	15	11	X	X	29	21	X	19.13	75.43
4-6-11	3901480	X		X		—	10	X	X	—	21	X	—	77.98
4-8-11	4000952	X		X	X	—	10	X	X	—	20	X	—	76.74
4-11-11	4145243	X		X	X	17	11	X	X	26	21	X	25.90	75.80
4-13-11	4233060	X		X		11	11	X	X	24	21	X	56.10	75.98
4-15-11	4316677	X		X	X	17	11	X	X	23.5	21.5	X	54.76	75.00
4-18-11	4477779	X		X		11	11	X	X	24	23	X	50.52	71.23
4-28-11	4675000	X		X	X	10	11	X	X	28	22	X	0.0	78.71
5-2-11	4805294	X		X		11	10	X	X	27	22	X	22.72	76.40

Checked Flow all 3 pumps

Waste Water Treatment Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow (GPM)	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
5-2-11	~~4~~805294	X		X		11	10	X	X	27	22	X	22	76
5-4-11	4911697	X		X		12	10	X	X	25	23	X	~~70~~ —	72.14
5-6-11	5000041	X		X	X	11	11	X	X	25	22	X	37.93	77.18
5-9-11	5118178	X		X		9	11	X	X	27	22		—	72.54
5-11-11	5203780	X		X		12	10	X	X	25	21	X	45.55	77.12
5-13-11	5281392	X		X	X	12	10	X	X	25	21	X	—	80.54
5-16-11	5416279	X		X		11	10	X	X	29	21	X	29.29	79.18
5-18-11	5566687	X		X		—	10	X	X	—	20	X	—	80.91
5-20-11	5700316	X		X	X	12	10	X	X	24	22	X	60	81.03
5-23-11	5908815	X		X		12	10	X	X	22	21		14	75
5-25-11	5781794	X		X		11	10	X	X	28	21	X	0	80.12
5-27-11	5873548	X		X	X	—	10	X	X	—	22	X	—	85.94
5-30-11	5993029	X		X		—	10	X	X	—	21	X	—	80.44
6-1-11	6102568	X		X		—	10	X	X	—	21	X	—	80.41
6-3-11	~~5~~6183050	X		X	X	11	10	X	X	23	21	X	64.43	84.32
6-6-11	6321648	X		X		—	10	X	X	—	21	X	—	81.02
6-8-11	6417803	X		X		10	10	X	X	27	21	X	31.27	85.50

TurnKey Environmental Restoration, LLC

Waste Water Treatment Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
6-10-11	6502527	X		X	X	11	10	X	X	24	21	X(2)	57.99	84.45
6-13-11	6639466	X		X		11	10	X	X	26	23	X	73.64	80.40
6-15-11	6713284	X		X		12	10	X	X	24	21	X	—	77.64
6-17-11	6796804	X		X	X	M	10	X	X	26	21	X	27.33	78.95
6-20-11	6900728		X		X	—	5	X	X	—	25	X	—	52.61
6-22-11	6901143		X		X	2	10	X	X	27	22	X	0	77.85
6-24-11	6901942		X	X	X	—	10	X	X	—	22	X	—	80.74
6-27-11	6902162		X	X	X	2	10	X	X	26	22	X	0	83.69
6-29-11	6906471		X		X	2	10	X	X	24	22	X	24.17	80.92
7-1-11	6908791		X	X	X	—	10	X	X	—	22	X	0	80.41
7-5-11	6909447		X		X	2	10	X	X	26	22	X	13.62	79.85
7-6-11	6911149		X		X	—	10	X	X	—	21	X	—	87.63

Waste Water Treatment Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
7-8-11	6915484		X	X	X	2	10	X	X	26	21	X	0	87.01
7-11-11	6968556		X		X	2	10	X	X	27	21	X	0	87.00
7-13-11	7010570		X		X	8	10	X	X	22	20.5	X	69.96	~~69.96~~ 87.03
7-15-11	7079951		X	X	X	8	10	X	X	22.5	20.5	X	73.13	90.73
7-18-11	7188453		X		X	10	10	X	X	22	21	X	72.50	89.20
7-20-11	7256892		X		X	10	10	X	X	21.5	21	X	72.09	88.58
7-22-11	7325020		X	X	X	—	10	X	X	—	20.5	X	—	90.90
7-25-11	7427596		X		X	—	10	X	X	—	21	X	—	88.01
7-26-11	7447269		X		X	6	10	X	X	23	21	X	36.69	87.21

Waste Water Tre ent Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
7-27-11	7518958		X		X	10	10	X	X	23	21.5	X	78.42	90.14
7-29-11	7599178		X	X	X	-	10	X	X	-	21	X	-	92.12
8-1-11	7732377		X		X	12	10	X	X	23	21	X	72.61	88.54
8-3-11	7822297		X		X	-	10	X	X	-	21.5	X	-	89.51
8-5-11	7913020		X	X	X	12	10	X	X	22.5	21	X	69.83	91.76

Waste Water Tre ent Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
8-8-11	8047348		X		X	13	10	X	X	23.5	21	X	67.40	90.22
8-10-11	8132745		X		X	-	10	X	X	-	21	X	-	87.33
8-12-11	8213765		X	X	X	-	10	X	X	-	21	X	-	88.73

TurnKey

Waste Water Treatment Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
8-15-11	8543758		X		X	13	10	X	X	24	21	X	63.90	91.24
8-17-11	8455380		X		X	12	10	X	X	23	21	X	74.38	88.45
8-19-11	8516563		X	X	X	—	10	X	X	—	21	X	—	89.19
8-22-11	8579921		X		X	12	10	X	X	23.5	21	X	60.91	89.69
8-24-11	8727256		X		X	10	10	X	X	21	21	X	77.98	90.30
8-26-11	8810010		X	X	X	10	10	X	X	22	21	X	76.74	89.84
8-29-11	8941958		X		X	—	10	X	X	—	21	X	—	89.74
8-31-11	9021491		X		X	10	10	X	X	22	21	X	78.25	92.69
9-2-11	9091164		X	X	X	10	10	X	X	23	20	X	76.37	93.33

Waste Water Treatment Plant - Riverbend
Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
9-6-11	9270093		X		X	4	10	X	X	26	21	X	24.94	92.13
9-9-11	9358414411		X	X	X	9	10	X	X	22	20	X	75.84	90.48
9-														

TurnKey Environmental LLC

Waste Water Treatment Plant - Riverbend
Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
9-13-11	94186466		X		X	2	10	X	X	27	19.5	X	60	89.66
9-14-11	94637260		X		X	2	10	X	X	25	20	X	45.30	91.68
9-16-11	95385O4		X		X	-	10	X	X	-	20.5	X	-	92.73

Waste Water Treatment Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
9-19-11	9618390		X		X	—	10	X	X	—	20	X	—	93.95
9-22-11	9684504		X	X	X	—	10	X	X	—	20	X	—	92.81
9-26-11	9760256		X		X	2	10	X	X	27	20	X	0	93.55
9-29-11	9834504		X	X	X	2	10	X	X	25	19	X	43.66	92.71

Waste Water Treatment Plant - Riverbend
Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
10-3-11	9911340		X		X	0	10	X	X	17.5	21	X	0.00	93.37
10-6-11	9989885		X	X	X	2	10	X	X	27	20	X	0	94.85
10-10-11	10075862		X		X	-	10	X	X	-	20	X	-	92.29
10-13-11	10152598		X	X	X	-	10	X	X	-	21	X	-	94.77

Waste Water Treatment Plant - Riverbend
Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
10-17-11	10739198		X		X	–	10	X	X	–	21	X	–	96.55
10-20-11	10318186		X	X	X	8	10	X	X	23.5	20	X	72.96	92.66
10-24-11	10408237		X		X	8	10	X	X	21.5	20	X	78.42	94.82
10-27-11	10441836		X	X	X	8	10	X	X	21	20	X	87.46	92.66

TurnKey

Waste Water Treatment Plant - Riverbend
Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
10-31-11	10556429		X		X	-	10	X	X	-	20	X	-	93.79
11-3-11	10598650		X	X	X	-	10	X	X	-	20.5	X	-	94.05
11-7-11	10693650		X		X	-	10	X	X	-	21.	X	-	94.05
11-10-11	10744752		X	X	X	5	10	X	X	21	20	X	82.44	93.91

Waste Water Tre[illegible]ent Plant - Riverbend

Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
11-14-11	10816537		X		X	–	10	X	X	–	20	X	–	93.80
11-17-11	10576133		X	X	X	–	10	X	X	–	20	X	–	92.26
11-21-11	10941758		X		X	–	10	X	X	–	20	X	–	93.66
11-25-11	11014076		X	X	X	–	10	X	X	–	20	X	–	93.19
11-28-11	11015842		X		X	–	–	X	X	–	20	X	–	91.23

11-28-11 Flow meter malfunction

Waste Water Treatment Plant - Riverbend
Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
~~11-28-11~~	~~1165 11015380~~		X		X	-		X	X		20	X	-	91.25
12-1-11	11046418		X	X	X	-	-	X	X	27	20	X	-	93.48
12-5-11	11112065		X		X	-	-	X	X	26	21	X	-	89.65
12-8-11	11175877		X	X	X	-	-	X	X	-	20	X	-	90.72

Waste Water Treatment Plant - Riverbend
Maintenance Log

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
12-12-11	11212581		X		X	—		X	X	—	21	X	—	92.63
12-15-11	11258948		X	X	X	—		X	X	—	20	X	—	80.99

TurnKey Environmental LLC

Waste Water Treatment Plant - Riverbend
Maintenance Log

NEEDS CLEANED | REPLACED

Date	Flow Meter Reading	Lead Tank		Back Flush		Pressure Differential (PSI)		Bag Filter Change		Bag Pressure (PSI)		Decant Oil Seperator	Instantaneous Flow	
		Tank 1	Tank 2	Tank 1	Tank 2	Before	After	Tank 1	Tank 2	Before	After		Before	After
12-19-11	11799705	X		X		-	-	X	X	-	19.5	X	-	81.60
12-22-11	11340001	X		X	X	-	-8	X	X	-	20	X	-	92.63
12-27-4	11401573	X		X		-	8	X	X	21	20	X	-	91.77
12-30-11	11460566	X		X	X	6	8	X	X	21	20	X	87.99	94.60
1-3-12	11516087	X		X		-	8	X	X	-	20	X	-	98.69

ATTACHMENT 3

GENERATED VOLUME OF TAR MATERIAL

ATTACHMENT 3

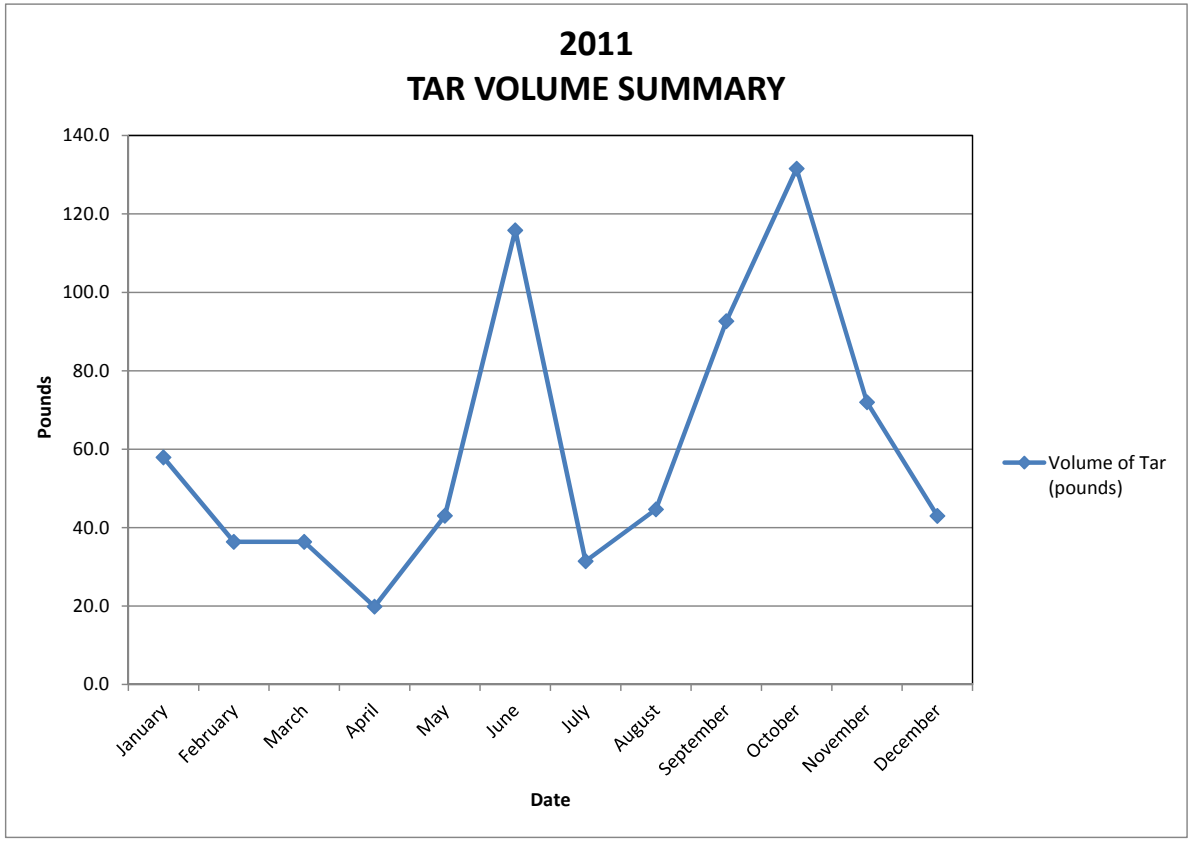
GENERATED VOLUME OF TAR MATERIAL
2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Month	Volume of Tar (pounds)
January	57.9
February	36.4
March	36.4
April	19.9
May	43.0
June	115.8
July	31.4
August	44.7
September	92.7
October	131.5
November	72.0
December	43.0

Total: 724.7 pounds
Drums: 1.37

Min. 19.9 pounds
Max. 131.5 pounds
Ave. 60.4 pounds



ATTACHMENT 3

GENERATED VOLUME OF TAR MATERIAL
FIRST QUARTER 2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Date	Decant	Clean Seperator	Tar Level in Drum (inches)	Accumulated Tar Since Last Check (inches)	Volume of Tar (gallons)	Volume of Tar (pounds)
01/01/11 thru 02/10/11	X	X	3.5	3.5	6.02	57.9
02/11/11	X	X	3.5	0	0	0.0
02/14/11	X	X	3.8	0.3	0.516	5.0
02/16/11	X	X	4.1	0.3	0.516	5.0
02/18/11	X	X	4.6	0.5	0.86	8.3
02/21/11	X	X	4.9	0.3	0.516	5.0
02/23/11	X	X	5.2	0.3	0.516	5.0
02/25/11	X	X	5.4	0.2	0.344	3.3
02/28/11	X	X	5.7	0.3	0.516	5.0
03/02/11	X	X	6	0.3	0.516	5.0
03/04/11	X	X	6.3	0.3	0.516	5.0
03/07/11	X	X	6.5	0.2	0.344	3.3
03/09/11	X	X	6.7	0.2	0.344	3.3
03/11/11	X	X	6.8	0.1	0.172	1.7
03/14/11	X	X	6.9	0.1	0.172	1.7
03/16/11	X	X	7	0.1	0.172	1.7
03/18/11	X	X	7.1	0.1	0.172	1.7
03/21/11	X	X	7.2	0.1	0.172	1.7
03/23/11	X	X	7.3	0.1	0.172	1.7
03/26/11	X	X	7.6	0.3	0.516	5.0
03/28/11	X	X	7.7	0.1	0.172	1.7
03/30/11	X	X	7.9	0.2	0.344	3.3
Total Tar:						**130.7**

Density of Tar (published value) (lbs/gallon): **9.62**
Gallons of Tar per inch: **1.72**
Pounds of Tar per inch: **16.53**

ATTACHMENT 3

GENERATED VOLUME OF TAR MATERIAL
SECOND QUARTER 2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Date	Decant	Clean Seperator	Tar Level in Drum (inches)	Accumulated Tar Since Last Check (inches)	Volume of Tar (gallons)	Volume of Tar (pounds)
03/30/11	X		7.9	0	0	0.0
04/04/11	X		8.3	0.4	0.688	6.6
04/06/11	X		8.5	0.2	0.344	3.3
04/08/11	X		8.7	0.2	0.344	3.3
04/28/11	X		9.1	0.4	0.688	6.6
05/02/11	X		10	0.9	1.548	14.9
05/07/11	X		10.6	0.6	1.032	9.9
05/11/11	X		10.8	0.2	0.344	3.3
05/20/11	X		11	0.2	0.344	3.3
05/23/11	X		11.1	0.1	0.172	1.7
05/25/11	X		11.4	0.3	0.516	5.0
05/27/11	X		11.6	0.2	0.344	3.3
05/30/11	X		11.7	0.1	0.172	1.7
06/01/11	X		11.9	0.2	0.344	3.3
06/03/11	X		12.1	0.2	0.344	3.3
06/06/11	X		12.4	0.3	0.516	5.0
06/08/11	X		12.6	0.2	0.344	3.3
06/10/11	X		17.6	5	8.6	82.7
06/13/11	X	X	17.9	0.3	0.516	5.0
06/15/11	X	X	17.9	0	0	0.0
06/17/11	X	X	18.1	0.2	0.344	3.3
06/20/11	X	X	18.2	0.1	0.172	1.7
06/22/11	X	X	18.2	0	0	0.0
06/24/11	X	X	18.5	0.3	0.516	5.0
06/27/11	X	X	18.7	0.2	0.344	3.3
06/29/11	X	X	18.7	0	0	0.0
					Total Tar:	**178.7**

Density of Tar (published value) (lbs/gallon):	**9.62**
Gallons of Tar per inch:	**1.72**
Pounds of Tar per inch:	**16.53**

ATTACHMENT 3

GENERATED VOLUME OF TAR MATERIAL
THIRD QUARTER 2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Date	Decant	Clean Seperator	Tar Level in Drum (inches)	Accumulated Tar Since Last Check (inches)	Volume of Tar (gallons)	Volume of Tar (pounds)
07/01/11	X		19	0.3	0.516	5.0
07/05/11	X		19.4	0.4	0.688	6.6
07/06/11	X		19.5	0.1	0.172	1.7
07/08/11	X		19.5	0	0	0.0
07/11/11	X		19.7	0.2	0.344	3.3
07/13/11	X		19.7	0	0	0.0
07/15/11	X		19.8	0.1	0.172	1.7
07/18/11	X		20	0.2	0.344	3.3
07/20/11	X		20	0	0	0.0
07/22/11	X		20.1	0.1	0.172	1.7
07/25/11	X		20.3	0.2	0.344	3.3
07/27/11	X		20.3	0	0	0.0
07/29/11	X		20.6	0.3	0.516	5.0
08/01/11	X		20.7	0.1	0.172	1.7
08/03/11	X		20.7	0	0	0.0
08/05/11	X		20.9	0.2	0.344	3.3
08/08/11	X		21.1	0.2	0.344	3.3
08/10/11	X		21.1	0	0	0.0
08/12/11	X		21.6	0.5	0.86	8.3
08/15/11	X		21.9	0.3	0.516	5.0
08/17/11	X		21.9	0	0	0.0
08/19/11	X		22.3	0.4	0.688	6.6
08/22/11	X		22.5	0.2	0.344	3.3
08/24/11	X		22.5	0	0	0.0
08/26/11	X		22.9	0.4	0.688	6.6
08/29/11	X		23.3	0.4	0.688	6.6
08/31/11	X		23.3	0	0	0.0
09/02/11	X		23.8	0.5	0.86	8.3
09/05/11	X		24.4	0.6	1.032	9.9
09/07/11	X		24.4	0	0	0.0
09/09/11	X		24.9	0.5	0.86	8.3
09/12/11	X		25.5	0.6	1.032	9.9
09/14/11	X		25.5	0	0	0.0
09/16/11	X		26.1	0.6	1.032	9.9
09/19/11	X		26.8	0.7	1.204	11.6
09/22/11	X		27.3	0.5	0.86	8.3
09/26/11	X		28.2	0.9	1.548	14.9
09/29/11	X		28.9	0.7	1.204	11.6
					Total Tar:	**168.8**

Density of Tar (published value) (lbs/gallon): **9.62**
Gallons of Tar per inch: **1.72**
Pounds of Tar per inch: **16.53**

ATTACHMENT 3

GENERATED VOLUME OF TAR MATERIAL
FOURTH QUARTER 2011

Groundwater Pre-Treatment System (GWPTS)
Riverbend, LLC
Buffalo, New York

Date	Decant	Clean Seperator	Tar Level in Drum (inches)	Accumulated Tar Since Last Check (inches)	Volume of Tar (gallons)	Volume of Tar (pounds)
10/03/11	X		29.7	0.8	1.376	13.2
10/06/11	X		30.3	0.6	1.032	9.9
10/10/11	X		31.4	1.1	1.892	18.2
10/13/11	X		32	0.6	1.032	9.9
10/17/11	X		33.2	1.2	2.064	19.9
10/20/11	X		34.5	1.3	2.236	21.5
10/24/11	X		36.1	1.6	2.752	26.5
10/27/11	X		0	0	0	0.0
10/31/11	X		0.75	0.75	1.29	12.4
11/03/11	X		1.25	0.5	0.86	8.3
11/07/11	X		2	0.75	1.29	12.4
11/10/11	X		2.25	0.25	0.43	4.1
11/14/11	X		3	0.75	1.29	12.4
11/17/11	X		3.15	0.15	0.258	2.5
11/21/11	X		3.6	0.45	0.774	7.4
11/24/11	X		4.2	0.6	1.032	9.9
11/28/11	X		5.1	0.9	1.548	14.9
12/01/11	X		5.75	0.65	1.118	10.8
12/05/11	X		6.5	0.75	1.29	12.4
12/08/11	X		6.9	0.4	0.688	6.6
12/12/11	X		7	0.1	0.172	1.7
12/15/11	X		7.2	0.2	0.344	3.3
12/19/11	X		7.3	0.1	0.172	1.7
12/22/11	X		7.5	0.2	0.344	3.3
12/27/11	X		7.5	0	0	0.0
12/29/11	X		7.7	0.2	0.344	3.3
					Total Tar:	**246.5**

Density of Tar (published value) (lbs/gallon): **9.62**
Gallons of Tar per inch: **1.72**
Pounds of Tar per inch: **16.53**

APPENDIX B-2

GWPTS EFFLUENT MONITORING REPORTS (BSA CORRESPONDENCE)

2011 ANNUAL COMPLIANCE REPORT

January 11, 2012

Mr. James Overholt
Buffalo Sewer Authority
Industrial Waste Section
90 West Ferry Street
Buffalo, NY 14213-1799

Re: Riverbend, LLC
Ground Water Pre-Treatment Discharge Monitoring Results
2011 Annual Compliance Monitoring Report
BPDES Permit No. 06 -03- BU101

Dear Mr. Overholt:

On behalf of our client, Riverbend, LLC, TurnKey Environmental Restoration, LLC has prepared this correspondence to present the 2011 discharge monitoring results for the groundwater pre-treatment system at the above-referenced facility. Discharge monitoring was performed during the periods of June 23 to 24 and November 30 to December 1, 2011.

SAMPLE COLLECTION

Samples were collected from the pretreated process effluent (Outfall 001) in general accordance with permit No. 06-03-BU101 in laboratory-provided, precleaned, and pre-preserved sample bottles. Four grab samples for volatile organic compound (VOC) and semi-volatile organic compound (SVOC) analysis were containerized in individual sample bottles for laboratory composite preparation during sample extraction and USEPA Method 624 and Method 625 analysis, respectively. Composite samples were also collected for laboratory pH and total cyanide analysis. Per the Buffalo Sewer Authority's (BSA's) verbal approval, composite samples were prepared for all required parameters by combining grab samples collected at four equally spaced intervals over the 24-hour monitoring period.

ANALYTICAL RESULTS

Analytical results are presented as Attachment 1. Data are summarized in Table 1 with permitted discharge limits. As indicated, all parameters are well within allowable limits.

FLOW MONITORING

Flow measurement data is presented in Table 1. Quarterly flow monitoring was based on the total flow recorded during the monitoring period divided by the number of days in the monitoring period. A copy of the flow meter calibration data is presented in Attachment 2.

Please contact us if you have any questions.

Sincerely,
TurnKey Environmental Restoration, LLC

Bryan C. Hann.
Project Manager

ec: Peter Cammarata (BUDC)
David Stebbins (BUDC)
Paul Werthman (TurnKey)

File: 0171-010-500

TABLES

TABLE 1

GROUNDWATER PRETREATMENT SYSTEM 2010 DATA SUMMARY

BPDES Permit #06-03-BU101
Riverbend, LLC
Baraga Street, Buffalo, NY

Parameter	June 23-24, 2011		December 1, 2011		Daily Discharge Limits [2]
	Concentration (units as indicated)	*Mass [1] (pounds)*	Concentration (units as indicated)	*Mass [1] (pounds)*	
Laboratory pH (S.U.)	7.71	na	7.62	na	5.0 - 12.0
Field pH (S.U.) [3]	7.33	na	7.05	na	5.0 - 12.0
Volatile Organic Compounds - Method 624 (mg/L)					
Benzene	ND	na	0.06	na	Monitor
Semi-Volatile Organic Compounds - Method 625 (mg/L)					
Acenapthene	ND	na	0.00012 J	na	Monitor
Anthracene	0.00023 J	na	ND	na	Monitor
Benzo(a)anthracene	0.00035 J	na	ND	na	Monitor
Benzo(a)pyrene	0.00024 J	na	ND	na	Monitor
Bis(2-ethylhexyl) phthalate	0.001 J	na	ND	na	Monitor
Chrysene	0.00027 J	na	ND	na	Monitor
Fluoranthene	0.00068 J	na	ND	na	Monitor
Phenanthrene	0.00033 J	na	ND	na	Monitor
Pyrene	0.00051 J	na	ND	na	Monitor
Inorganics (mg/L)					
Total Cyanide	0.89	0.296	0.46	0.101	2.882 lbs
Average Daily Flow (gallons per day) [4,5]	39,812		26,397		*see Note 6*

Notes:

1. The monitoring result is calculated based on the concentration of detected parameters and the average daily flow rate identified below.
2. Mass limits are based on flow of 39,812 gpd for the June event and 26,397 gpd for the December event; limits may be adjusted based on actual discharge.
3. Field pH is an average of 4 grab samples collected over a 24-hour period.
4. Average daily flow based on net flow recorded between January 3, 2011 through June 24, 2011 for the June event.
5. Average daily flow based on net flow recorded between June 27, 2011 through December 1, 2011 for the December event.
6. Permitted maximum allowable daily flow is 110,000 gpd. An action level of 57,600 gpd is identified in the Permit. The BSA is to be notified if flow consistently exceeds this action level so that the permit can be modifed.
7. " ND " = Indicates compound was analyzed for, but not detectewd at or above the reporting limit.

Flow Calculations:

Event	Date	Flow Measurement (gallons)	Average Daily Flow (gallons)
June 2011	1/3/2011	54,307	39,812
	6/24/2011	6,901,992	
December 2011	6/27/2011	6,902,162	26,397
	12/1/2011	11,046,418	

ATTACHMENT 1

ANALYTICAL DATA

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: 480-5260-1
Client Project/Site: River Bend Site
Sampling Event: Effluent sampling

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

Attn: Mr. Bryan Hann

Authorized for release by:
06/07/2011 10:19:55 AM

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

Table of Contents

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

Qualifiers

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.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes

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.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

Job ID: 480-5260-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-5260-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method(s) 624: The following sample was composited by the laboratory on 5/25/11 as requested on the chain-of-custody: Process Effluent (480-5260-2).

Method(s) 624: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: Process Effluent (480-5260-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method(s) 625: Surrogate recovery was outside control limits for the following samples: (LCS 480-17617/2-A), (LCSD 480-17617/3-A). Re-extraction and re-analysis is required.

Method(s) 625: One of the two spiking mixes used in the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) was mistaken as the second and therefore added twice. As a result, only a select number of targeted spike analytes have a percent recovery, while the remaining are not detected. Re-extraction and re-analysis of the associated samples is required.

No other analytical or quality issues were noted.

General Chemistry
Method(s) 9040B, SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Process Effluent (480-5260-1)

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

Client Sample ID: Process Effluent — Lab Sample ID: 480-5260-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide	0.89		0.020		mg/L	2		335.4	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.71	HF	0.100		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: Process Effluent — Lab Sample ID: 480-5260-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.23	J	5.0	0.052	ug/L	1		625	Total/NA
Benzo[a]anthracene	0.35	J	5.0	0.043	ug/L	1		625	Total/NA
Benzo[a]pyrene	0.24	J	5.0	0.058	ug/L	1		625	Total/NA
Bis(2-ethylhexyl) phthalate	1.0	J	10	0.86	ug/L	1		625	Total/NA
Chrysene	0.27	J	5.0	0.036	ug/L	1		625	Total/NA
Fluoranthene	0.68	J	5.0	0.11	ug/L	1		625	Total/NA
Phenanthrene	0.33	J	5.0	0.071	ug/L	1		625	Total/NA
Pyrene	0.51	J	5.0	0.041	ug/L	1		625	Total/NA

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

Client Sample ID: Process Effluent
Date Collected: 05/24/11 08:00
Date Received: 05/24/11 17:00

Lab Sample ID: 480-5260-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	0.89		0.020		mg/L		05/26/11 17:57	06/01/11 11:49	2

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.71	HF	0.100		SU			05/24/11 21:31	1

Client Sample ID: Process Effluent
Date Collected: 05/24/11 08:00
Date Received: 05/24/11 17:00

Lab Sample ID: 480-5260-2
Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		20	2.4	ug/L			05/25/11 15:59	4
Bromodichloromethane	ND		20	2.1	ug/L			05/25/11 15:59	4
Bromoform	ND		20	1.9	ug/L			05/25/11 15:59	4
Bromomethane	ND		20	4.8	ug/L			05/25/11 15:59	4
Carbon tetrachloride	ND		20	2.0	ug/L			05/25/11 15:59	4
Chlorobenzene	ND		20	1.9	ug/L			05/25/11 15:59	4
Chloroethane	ND		20	3.5	ug/L			05/25/11 15:59	4
2-Chloroethyl vinyl ether	ND		100	7.4	ug/L			05/25/11 15:59	4
Chloroform	ND		20	2.2	ug/L			05/25/11 15:59	4
Chloromethane	ND		20	2.5	ug/L			05/25/11 15:59	4
Chlorodibromomethane	ND		20	1.7	ug/L			05/25/11 15:59	4
1,1-Dichloroethane	ND		20	2.4	ug/L			05/25/11 15:59	4
1,2-Dichloroethane	ND		20	2.4	ug/L			05/25/11 15:59	4
1,1-Dichloroethene	ND		20	3.4	ug/L			05/25/11 15:59	4
trans-1,2-Dichloroethene	ND		20	2.4	ug/L			05/25/11 15:59	4
1,2-Dichloropropane	ND		20	2.4	ug/L			05/25/11 15:59	4
cis-1,3-Dichloropropene	ND		20	1.3	ug/L			05/25/11 15:59	4
trans-1,3-Dichloropropene	ND		20	1.8	ug/L			05/25/11 15:59	4
Ethylbenzene	ND		20	1.9	ug/L			05/25/11 15:59	4
Methylene Chloride	ND		20	3.3	ug/L			05/25/11 15:59	4
1,1,2,2-Tetrachloroethane	ND		20	1.0	ug/L			05/25/11 15:59	4
Tetrachloroethene	ND		20	1.4	ug/L			05/25/11 15:59	4
Toluene	ND		20	1.8	ug/L			05/25/11 15:59	4
1,1,1-Trichloroethane	ND		20	1.5	ug/L			05/25/11 15:59	4
1,1,2-Trichloroethane	ND		20	1.9	ug/L			05/25/11 15:59	4
Trichloroethene	ND		20	2.4	ug/L			05/25/11 15:59	4
Vinyl chloride	ND		20	3.0	ug/L			05/25/11 15:59	4
1,2-Dichlorobenzene	ND		20	1.8	ug/L			05/25/11 15:59	4
1,3-Dichlorobenzene	ND		20	2.2	ug/L			05/25/11 15:59	4
1,4-Dichlorobenzene	ND		20	2.0	ug/L			05/25/11 15:59	4
Trichlorofluoromethane	ND		20	1.8	ug/L			05/25/11 15:59	4

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*72 - 130*		*05/25/11 15:59*	*4*
4-Bromofluorobenzene (Surr)	*100*		*69 - 121*		*05/25/11 15:59*	*4*
Toluene-d8 (Surr)	*93*		*70 - 123*		*05/25/11 15:59*	*4*

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.060	ug/L		05/31/11 17:57	06/02/11 00:36	1
Acenaphthylene	ND		5.0	0.034	ug/L		05/31/11 17:57	06/02/11 00:36	1
Anthracene	**0.23**	**J**	5.0	0.052	ug/L		05/31/11 17:57	06/02/11 00:36	1
Benzidine	ND		80	2.5	ug/L		05/31/11 17:57	06/02/11 00:36	1
Benzo[a]anthracene	**0.35**	**J**	5.0	0.043	ug/L		05/31/11 17:57	06/02/11 00:36	1
Benzo[a]pyrene	**0.24**	**J**	5.0	0.058	ug/L		05/31/11 17:57	06/02/11 00:36	1
Benzo[b]fluoranthene	ND		5.0	0.062	ug/L		05/31/11 17:57	06/02/11 00:36	1
Benzo[g,h,i]perylene	ND		5.0	0.10	ug/L		05/31/11 17:57	06/02/11 00:36	1
Benzo[k]fluoranthene	ND		5.0	0.042	ug/L		05/31/11 17:57	06/02/11 00:36	1
Bis(2-chloroethyl)ether	ND		5.0	1.1	ug/L		05/31/11 17:57	06/02/11 00:36	1
Bis(2-chloroethoxy)methane	ND		5.0	0.085	ug/L		05/31/11 17:57	06/02/11 00:36	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

Client Sample ID: Process Effluent
Date Collected: 05/24/11 08:00
Date Received: 05/24/11 17:00

Lab Sample ID: 480-5260-2
Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
bis (2-chloroisopropyl) ether	ND		5.0	0.086	ug/L		05/31/11 17:57	06/02/11 00:36	1
Bis(2-ethylhexyl) phthalate	**1.0**	**J**	10	0.86	ug/L		05/31/11 17:57	06/02/11 00:36	1
4-Bromophenyl phenyl ether	ND		5.0	0.11	ug/L		05/31/11 17:57	06/02/11 00:36	1
Butyl benzyl phthalate	ND		5.0	1.3	ug/L		05/31/11 17:57	06/02/11 00:36	1
2-Chloronaphthalene	ND		5.0	0.068	ug/L		05/31/11 17:57	06/02/11 00:36	1
4-Chlorophenyl phenyl ether	ND		5.0	0.21	ug/L		05/31/11 17:57	06/02/11 00:36	1
Chrysene	**0.27**	**J**	5.0	0.036	ug/L		05/31/11 17:57	06/02/11 00:36	1
Dibenz(a,h)anthracene	ND		5.0	0.055	ug/L		05/31/11 17:57	06/02/11 00:36	1
Di-n-butyl phthalate	ND		5.0	0.94	ug/L		05/31/11 17:57	06/02/11 00:36	1
1,2-Dichlorobenzene	ND		10	0.14	ug/L		05/31/11 17:57	06/02/11 00:36	1
1,3-Dichlorobenzene	ND		10	0.069	ug/L		05/31/11 17:57	06/02/11 00:36	1
1,4-Dichlorobenzene	ND		10	0.090	ug/L		05/31/11 17:57	06/02/11 00:36	1
3,3'-Dichlorobenzidine	ND		5.0	0.82	ug/L		05/31/11 17:57	06/02/11 00:36	1
Diethyl phthalate	ND		5.0	0.17	ug/L		05/31/11 17:57	06/02/11 00:36	1
Dimethyl phthalate	ND		5.0	0.17	ug/L		05/31/11 17:57	06/02/11 00:36	1
2,4-Dinitrotoluene	ND		5.0	0.26	ug/L		05/31/11 17:57	06/02/11 00:36	1
2,6-Dinitrotoluene	ND		5.0	0.72	ug/L		05/31/11 17:57	06/02/11 00:36	1
Di-n-octyl phthalate	ND		5.0	4.5	ug/L		05/31/11 17:57	06/02/11 00:36	1
1,2-Diphenylhydrazine	ND		10	0.063	ug/L		05/31/11 17:57	06/02/11 00:36	1
Fluoranthene	**0.68**	**J**	5.0	0.11	ug/L		05/31/11 17:57	06/02/11 00:36	1
Fluorene	ND		5.0	0.043	ug/L		05/31/11 17:57	06/02/11 00:36	1
Hexachlorobenzene	ND		5.0	0.28	ug/L		05/31/11 17:57	06/02/11 00:36	1
Hexachlorobutadiene	ND		5.0	0.62	ug/L		05/31/11 17:57	06/02/11 00:36	1
Hexachlorocyclopentadiene	ND		5.0	0.45	ug/L		05/31/11 17:57	06/02/11 00:36	1
Hexachloroethane	ND		5.0	0.48	ug/L		05/31/11 17:57	06/02/11 00:36	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.19	ug/L		05/31/11 17:57	06/02/11 00:36	1
Isophorone	ND		5.0	0.16	ug/L		05/31/11 17:57	06/02/11 00:36	1
Naphthalene	ND		5.0	0.080	ug/L		05/31/11 17:57	06/02/11 00:36	1
Nitrobenzene	ND		5.0	0.11	ug/L		05/31/11 17:57	06/02/11 00:36	1
N-Nitrosodi-n-propylamine	ND		5.0	0.23	ug/L		05/31/11 17:57	06/02/11 00:36	1
N-Nitrosodimethylamine	ND		10	0.96	ug/L		05/31/11 17:57	06/02/11 00:36	1
N-Nitrosodiphenylamine	ND		5.0	0.40	ug/L		05/31/11 17:57	06/02/11 00:36	1
Phenanthrene	**0.33**	**J**	5.0	0.071	ug/L		05/31/11 17:57	06/02/11 00:36	1
Pyrene	**0.51**	**J**	5.0	0.041	ug/L		05/31/11 17:57	06/02/11 00:36	1
1,2,4-Trichlorobenzene	ND		10	0.49	ug/L		05/31/11 17:57	06/02/11 00:36	1
4-Chloro-3-methylphenol	ND		5.0	0.56	ug/L		05/31/11 17:57	06/02/11 00:36	1
2-Chlorophenol	ND		5.0	0.16	ug/L		05/31/11 17:57	06/02/11 00:36	1
2,4-Dichlorophenol	ND		5.0	0.30	ug/L		05/31/11 17:57	06/02/11 00:36	1
2,4-Dimethylphenol	ND		5.0	0.13	ug/L		05/31/11 17:57	06/02/11 00:36	1
2,4-Dinitrophenol	ND		10	0.84	ug/L		05/31/11 17:57	06/02/11 00:36	1
4,6-Dinitro-2-methylphenol	ND		10	0.76	ug/L		05/31/11 17:57	06/02/11 00:36	1
2-Nitrophenol	ND		5.0	0.14	ug/L		05/31/11 17:57	06/02/11 00:36	1
4-Nitrophenol	ND		10	1.3	ug/L		05/31/11 17:57	06/02/11 00:36	1
Pentachlorophenol	ND		10	0.41	ug/L		05/31/11 17:57	06/02/11 00:36	1
Phenol	ND		5.0	0.12	ug/L		05/31/11 17:57	06/02/11 00:36	1
2,4,6-Trichlorophenol	ND		5.0	0.23	ug/L		05/31/11 17:57	06/02/11 00:36	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*107*		*52 - 151*	*05/31/11 17:57*	*06/02/11 00:36*	*1*
2-Fluorobiphenyl	*82*		*44 - 120*	*05/31/11 17:57*	*06/02/11 00:36*	*1*

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

Client Sample ID: Process Effluent
Date Collected: 05/24/11 08:00
Date Received: 05/24/11 17:00

Lab Sample ID: 480-5260-2
Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	37		17 - 120	05/31/11 17:57	06/02/11 00:36	1
Nitrobenzene-d5	68		42 - 120	05/31/11 17:57	06/02/11 00:36	1
Phenol-d5	29		10 - 120	05/31/11 17:57	06/02/11 00:36	1
p-Terphenyl-d14	70		22 - 125	05/31/11 17:57	06/02/11 00:36	1

Surrogate Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		12DCE	BFB	TOL						
Lab Sample ID	Client Sample ID	(72-130)	(69-121)	(70-123)						
480-5260-2	Process Effluent	109	100	93						
LCS 480-17490/4	LCS 480-17490/4	100	99	93						
MB 480-17490/5	MB 480-17490/5	107	99	93						

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
		TBP	FBP	2FP	NBZ	PHL	TPH		
Lab Sample ID	Client Sample ID	(52-151)	(44-120)	(17-120)	(42-120)	(10-120)	(22-125)		
480-5260-2	Process Effluent	107	82	37	68	29	70		
LCS 480-18129/2-A	LCS 480-18129/2-A	101	89	52	83	39	112		
LCSD 480-18129/3-A	LCSD 480-18129/3-A	110	94	53	90	39	115		
MB 480-18129/1-A	MB 480-18129/1-A	91	76	40	72	29	113		

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPH = p-Terphenyl-d14

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-17490/5
Matrix: Water
Analysis Batch: 17490

Client Sample ID: MB 480-17490/5
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	0.60	ug/L			05/25/11 12:31	1
Bromodichloromethane	ND		5.0	0.54	ug/L			05/25/11 12:31	1
Bromoform	ND		5.0	0.47	ug/L			05/25/11 12:31	1
Bromomethane	ND		5.0	1.2	ug/L			05/25/11 12:31	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			05/25/11 12:31	1
Chlorobenzene	ND		5.0	0.48	ug/L			05/25/11 12:31	1
Chloroethane	ND		5.0	0.87	ug/L			05/25/11 12:31	1
2-Chloroethyl vinyl ether	ND		25	1.8	ug/L			05/25/11 12:31	1
Chloroform	ND		5.0	0.54	ug/L			05/25/11 12:31	1
Chloromethane	ND		5.0	0.64	ug/L			05/25/11 12:31	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			05/25/11 12:31	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			05/25/11 12:31	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			05/25/11 12:31	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			05/25/11 12:31	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			05/25/11 12:31	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			05/25/11 12:31	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			05/25/11 12:31	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			05/25/11 12:31	1
Ethylbenzene	ND		5.0	0.46	ug/L			05/25/11 12:31	1
Methylene Chloride	ND		5.0	0.81	ug/L			05/25/11 12:31	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			05/25/11 12:31	1
Tetrachloroethene	ND		5.0	0.34	ug/L			05/25/11 12:31	1
Toluene	ND		5.0	0.45	ug/L			05/25/11 12:31	1
1,1,1-Trichloroethane	ND		5.0	0.38	ug/L			05/25/11 12:31	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			05/25/11 12:31	1
Trichloroethene	ND		5.0	0.60	ug/L			05/25/11 12:31	1
Vinyl chloride	ND		5.0	0.75	ug/L			05/25/11 12:31	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			05/25/11 12:31	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			05/25/11 12:31	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			05/25/11 12:31	1
Trichlorofluoromethane	ND		5.0	0.45	ug/L			05/25/11 12:31	1

Surrogate	*MB % Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*72 - 130*		*05/25/11 12:31*	*1*
4-Bromofluorobenzene (Surr)	*99*		*69 - 121*		*05/25/11 12:31*	*1*
Toluene-d8 (Surr)	*93*		*70 - 123*		*05/25/11 12:31*	*1*

Lab Sample ID: LCS 480-17490/4
Matrix: Water
Analysis Batch: 17490

Client Sample ID: LCS 480-17490/4
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Benzene	20.0	18.9		ug/L		94	64 - 136
Bromodichloromethane	20.0	18.9		ug/L		94	66 - 135
Bromoform	20.0	15.4		ug/L		77	71 - 129
Bromomethane	20.0	19.7		ug/L		98	14 - 186
Carbon tetrachloride	20.0	17.8		ug/L		89	73 - 127
Chlorobenzene	20.0	18.0		ug/L		90	66 - 134
Chloroethane	20.0	20.2		ug/L		101	38 - 162

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-17490/4
Matrix: Water
Analysis Batch: 17490

Client Sample ID: LCS 480-17490/4
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
2-Chloroethyl vinyl ether	100	93.5		ug/L		94	1 - 224
Chloroform	20.0	19.7		ug/L		98	68 - 133
Chloromethane	20.0	20.1		ug/L		100	1 - 204
Chlorodibromomethane	20.0	16.6		ug/L		83	68 - 133
1,1-Dichloroethane	20.0	18.8		ug/L		94	73 - 128
1,2-Dichloroethane	20.0	18.6		ug/L		93	68 - 132
1,1-Dichloroethene	20.0	17.3		ug/L		86	51 - 150
trans-1,2-Dichloroethene	20.0	19.5		ug/L		98	72 - 133
1,2-Dichloropropane	20.0	19.5		ug/L		98	34 - 166
cis-1,3-Dichloropropene	20.0	18.8		ug/L		94	24 - 176
trans-1,3-Dichloropropene	20.0	16.6		ug/L		83	50 - 150
Ethylbenzene	20.0	18.5		ug/L		92	59 - 141
Methylene Chloride	20.0	18.9		ug/L		94	61 - 140
1,1,2,2-Tetrachloroethane	20.0	16.1		ug/L		80	61 - 140
Tetrachloroethene	20.0	17.6		ug/L		88	74 - 127
Toluene	20.0	17.9		ug/L		90	75 - 126
1,1,1-Trichloroethane	20.0	19.3		ug/L		96	75 - 125
1,1,2-Trichloroethane	20.0	16.7		ug/L		84	71 - 129
Trichloroethene	20.0	18.2		ug/L		91	67 - 134
Vinyl chloride	20.0	20.9		ug/L		104	4 - 196
1,2-Dichlorobenzene	20.0	18.1		ug/L		90	63 - 137
1,3-Dichlorobenzene	20.0	18.4		ug/L		92	73 - 127
1,4-Dichlorobenzene	20.0	17.6		ug/L		88	63 - 137
Trichlorofluoromethane	20.0	23.4		ug/L		117	48 - 152

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*
4-Bromofluorobenzene (Surr)	*99*		*69 - 121*
Toluene-d8 (Surr)	*93*		*70 - 123*

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-18129/1-A
Matrix: Water
Analysis Batch: 18239

Client Sample ID: MB 480-18129/1-A
Prep Type: Total/NA
Prep Batch: 18129

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.060	ug/L		05/31/11 17:57	06/01/11 21:28	1
Acenaphthylene	ND		5.0	0.034	ug/L		05/31/11 17:57	06/01/11 21:28	1
Anthracene	ND		5.0	0.052	ug/L		05/31/11 17:57	06/01/11 21:28	1
Benzidine	ND		80	2.5	ug/L		05/31/11 17:57	06/01/11 21:28	1
Benzo[a]anthracene	ND		5.0	0.043	ug/L		05/31/11 17:57	06/01/11 21:28	1
Benzo[a]pyrene	ND		5.0	0.058	ug/L		05/31/11 17:57	06/01/11 21:28	1
Benzo[b]fluoranthene	ND		5.0	0.062	ug/L		05/31/11 17:57	06/01/11 21:28	1
Benzo[g,h,i]perylene	ND		5.0	0.10	ug/L		05/31/11 17:57	06/01/11 21:28	1
Benzo[k]fluoranthene	ND		5.0	0.042	ug/L		05/31/11 17:57	06/01/11 21:28	1
Bis(2-chloroethyl)ether	ND		5.0	1.1	ug/L		05/31/11 17:57	06/01/11 21:28	1
Bis(2-chloroethoxy)methane	ND		5.0	0.085	ug/L		05/31/11 17:57	06/01/11 21:28	1
bis (2-chloroisopropyl) ether	ND		5.0	0.086	ug/L		05/31/11 17:57	06/01/11 21:28	1

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-18129/1-A
Matrix: Water
Analysis Batch: 18239

Client Sample ID: MB 480-18129/1-A
Prep Type: Total/NA
Prep Batch: 18129

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		10	0.86	ug/L		05/31/11 17:57	06/01/11 21:28	1
4-Bromophenyl phenyl ether	ND		5.0	0.11	ug/L		05/31/11 17:57	06/01/11 21:28	1
Butyl benzyl phthalate	ND		5.0	1.3	ug/L		05/31/11 17:57	06/01/11 21:28	1
2-Chloronaphthalene	ND		5.0	0.068	ug/L		05/31/11 17:57	06/01/11 21:28	1
4-Chlorophenyl phenyl ether	ND		5.0	0.21	ug/L		05/31/11 17:57	06/01/11 21:28	1
Chrysene	ND		5.0	0.036	ug/L		05/31/11 17:57	06/01/11 21:28	1
Dibenz(a,h)anthracene	ND		5.0	0.055	ug/L		05/31/11 17:57	06/01/11 21:28	1
Di-n-butyl phthalate	ND		5.0	0.94	ug/L		05/31/11 17:57	06/01/11 21:28	1
1,2-Dichlorobenzene	5.55	J	10	0.14	ug/L		05/31/11 17:57	06/01/11 21:28	1
1,3-Dichlorobenzene	1.85	J	10	0.069	ug/L		05/31/11 17:57	06/01/11 21:28	1
1,4-Dichlorobenzene	13.0		10	0.090	ug/L		05/31/11 17:57	06/01/11 21:28	1
3,3'-Dichlorobenzidine	ND		5.0	0.82	ug/L		05/31/11 17:57	06/01/11 21:28	1
Diethyl phthalate	ND		5.0	0.17	ug/L		05/31/11 17:57	06/01/11 21:28	1
Dimethyl phthalate	ND		5.0	0.17	ug/L		05/31/11 17:57	06/01/11 21:28	1
2,4-Dinitrotoluene	ND		5.0	0.26	ug/L		05/31/11 17:57	06/01/11 21:28	1
2,6-Dinitrotoluene	ND		5.0	0.72	ug/L		05/31/11 17:57	06/01/11 21:28	1
Di-n-octyl phthalate	ND		5.0	4.5	ug/L		05/31/11 17:57	06/01/11 21:28	1
1,2-Diphenylhydrazine	ND		10	0.063	ug/L		05/31/11 17:57	06/01/11 21:28	1
Fluoranthene	ND		5.0	0.11	ug/L		05/31/11 17:57	06/01/11 21:28	1
Fluorene	ND		5.0	0.043	ug/L		05/31/11 17:57	06/01/11 21:28	1
Hexachlorobenzene	ND		5.0	0.28	ug/L		05/31/11 17:57	06/01/11 21:28	1
Hexachlorobutadiene	ND		5.0	0.62	ug/L		05/31/11 17:57	06/01/11 21:28	1
Hexachlorocyclopentadiene	ND		5.0	0.45	ug/L		05/31/11 17:57	06/01/11 21:28	1
Hexachloroethane	ND		5.0	0.48	ug/L		05/31/11 17:57	06/01/11 21:28	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.19	ug/L		05/31/11 17:57	06/01/11 21:28	1
Isophorone	ND		5.0	0.16	ug/L		05/31/11 17:57	06/01/11 21:28	1
Naphthalene	ND		5.0	0.080	ug/L		05/31/11 17:57	06/01/11 21:28	1
Nitrobenzene	ND		5.0	0.11	ug/L		05/31/11 17:57	06/01/11 21:28	1
N-Nitrosodi-n-propylamine	ND		5.0	0.23	ug/L		05/31/11 17:57	06/01/11 21:28	1
N-Nitrosodimethylamine	ND		10	0.96	ug/L		05/31/11 17:57	06/01/11 21:28	1
N-Nitrosodiphenylamine	ND		5.0	0.40	ug/L		05/31/11 17:57	06/01/11 21:28	1
Phenanthrene	ND		5.0	0.071	ug/L		05/31/11 17:57	06/01/11 21:28	1
Pyrene	ND		5.0	0.041	ug/L		05/31/11 17:57	06/01/11 21:28	1
1,2,4-Trichlorobenzene	31.4		10	0.49	ug/L		05/31/11 17:57	06/01/11 21:28	1
4-Chloro-3-methylphenol	ND		5.0	0.56	ug/L		05/31/11 17:57	06/01/11 21:28	1
2-Chlorophenol	ND		5.0	0.16	ug/L		05/31/11 17:57	06/01/11 21:28	1
2,4-Dichlorophenol	ND		5.0	0.30	ug/L		05/31/11 17:57	06/01/11 21:28	1
2,4-Dimethylphenol	ND		5.0	0.13	ug/L		05/31/11 17:57	06/01/11 21:28	1
2,4-Dinitrophenol	ND		10	0.84	ug/L		05/31/11 17:57	06/01/11 21:28	1
4,6-Dinitro-2-methylphenol	ND		10	0.76	ug/L		05/31/11 17:57	06/01/11 21:28	1
2-Nitrophenol	ND		5.0	0.14	ug/L		05/31/11 17:57	06/01/11 21:28	1
4-Nitrophenol	ND		10	1.3	ug/L		05/31/11 17:57	06/01/11 21:28	1
Pentachlorophenol	ND		10	0.41	ug/L		05/31/11 17:57	06/01/11 21:28	1
Phenol	ND		5.0	0.12	ug/L		05/31/11 17:57	06/01/11 21:28	1
2,4,6-Trichlorophenol	ND		5.0	0.23	ug/L		05/31/11 17:57	06/01/11 21:28	1

Surrogate	*MB % Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*91*		*52 - 151*	*05/31/11 17:57*	*06/01/11 21:28*	*1*
2-Fluorobiphenyl	*76*		*44 - 120*	*05/31/11 17:57*	*06/01/11 21:28*	*1*

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-18129/1-A
Matrix: Water
Analysis Batch: 18239

Client Sample ID: MB 480-18129/1-A
Prep Type: Total/NA
Prep Batch: 18129

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	40		17 - 120	05/31/11 17:57	06/01/11 21:28	1
Nitrobenzene-d5	72		42 - 120	05/31/11 17:57	06/01/11 21:28	1
Phenol-d5	29		10 - 120	05/31/11 17:57	06/01/11 21:28	1
p-Terphenyl-d14	113		22 - 125	05/31/11 17:57	06/01/11 21:28	1

Lab Sample ID: LCS 480-18129/2-A
Matrix: Water
Analysis Batch: 18239

Client Sample ID: LCS 480-18129/2-A
Prep Type: Total/NA
Prep Batch: 18129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Acenaphthene	100	87.9		ug/L		88	47 - 145
Acenaphthylene	100	91.9		ug/L		92	33 - 145
Anthracene	100	95.7		ug/L		96	27 - 133
Benzo[a]anthracene	100	97.6		ug/L		98	33 - 143
Benzo[a]pyrene	100	95.7		ug/L		96	17 - 163
Benzo[b]fluoranthene	100	91.2		ug/L		91	24 - 159
Benzo[g,h,i]perylene	100	93.0		ug/L		93	1 - 219
Benzo[k]fluoranthene	100	105		ug/L		105	11 - 162
Bis(2-chloroethyl)ether	100	74.1		ug/L		74	12 - 158
Bis(2-chloroethoxy)methane	100	85.2		ug/L		85	33 - 184
bis (2-chloroisopropyl) ether	100	76.9		ug/L		77	36 - 166
Bis(2-ethylhexyl) phthalate	100	99.8		ug/L		100	8 - 158
4-Bromophenyl phenyl ether	100	86.8		ug/L		87	53 - 127
Butyl benzyl phthalate	100	95.4		ug/L		95	1 - 152
2-Chloronaphthalene	100	81.2		ug/L		81	60 - 118
4-Chlorophenyl phenyl ether	100	93.1		ug/L		93	25 - 158
Chrysene	100	95.6		ug/L		96	17 - 168
Dibenz(a,h)anthracene	100	101		ug/L		101	1 - 227
Di-n-butyl phthalate	100	98.2		ug/L		98	1 - 118
1,2-Dichlorobenzene	100	60.1		ug/L		60	32 - 129
1,3-Dichlorobenzene	100	57.7		ug/L		58	1 - 172
1,4-Dichlorobenzene	100	59.8		ug/L		60	20 - 124
3,3'-Dichlorobenzidine	100	80.0		ug/L		80	1 - 262
Diethyl phthalate	100	100		ug/L		100	1 - 114
Dimethyl phthalate	100	95.8		ug/L		96	1 - 112
2,4-Dinitrotoluene	100	104		ug/L		104	39 - 139
2,6-Dinitrotoluene	100	108		ug/L		108	50 - 158
Di-n-octyl phthalate	100	103		ug/L		103	4 - 146
Fluoranthene	100	99.1		ug/L		99	26 - 137
Fluorene	100	96.1		ug/L		96	59 - 121
Hexachlorobenzene	100	87.8		ug/L		88	1 - 152
Hexachlorocyclopentadiene	100	68.3		ug/L		68	5 - 120
Hexachloroethane	100	56.6		ug/L		57	40 - 113
Indeno[1,2,3-cd]pyrene	100	98.4		ug/L		98	1 - 171
Isophorone	100	87.8		ug/L		88	21 - 196
Naphthalene	100	74.6		ug/L		75	21 - 133
Nitrobenzene	100	80.2		ug/L		80	35 - 180
N-Nitrosodi-n-propylamine	100	83.4		ug/L		83	1 - 230
N-Nitrosodiphenylamine	100	94.1		ug/L		94	54 - 125

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-18129/2-A
Matrix: Water
Analysis Batch: 18239

Client Sample ID: LCS 480-18129/2-A
Prep Type: Total/NA
Prep Batch: 18129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Phenanthrene	100	95.0		ug/L		95	54 - 120
Pyrene	100	96.9		ug/L		97	52 - 115
1,2,4-Trichlorobenzene	100	66.1		ug/L		66	44 - 142
4-Chloro-3-methylphenol	100	98.4		ug/L		98	22 - 147
2-Chlorophenol	100	73.0		ug/L		73	23 - 134
2,4-Dichlorophenol	100	85.9		ug/L		86	39 - 135
2,4-Dimethylphenol	100	86.7		ug/L		87	32 - 119
2,4-Dinitrophenol	100	104		ug/L		104	1 - 191
4,6-Dinitro-2-methylphenol	100	110		ug/L		110	1 - 181
2-Nitrophenol	100	86.4		ug/L		86	29 - 182
4-Nitrophenol	100	60.8		ug/L		61	1 - 132
Pentachlorophenol	100	109		ug/L		109	14 - 176
Phenol	100	40.5		ug/L		40	5 - 112
2,4,6-Trichlorophenol	100	89.5		ug/L		90	37 - 144

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*101*		*52 - 151*
2-Fluorobiphenyl	*89*		*44 - 120*
2-Fluorophenol	*52*		*17 - 120*
Nitrobenzene-d5	*83*		*42 - 120*
Phenol-d5	*39*		*10 - 120*
p-Terphenyl-d14	*112*		*22 - 125*

Lab Sample ID: LCSD 480-18129/3-A
Matrix: Water
Analysis Batch: 18239

Client Sample ID: LCSD 480-18129/3-A
Prep Type: Total/NA
Prep Batch: 18129

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Acenaphthene	100	90.7		ug/L		91	47 - 145	3	25
Acenaphthylene	100	93.8		ug/L		94	33 - 145	2	22
Anthracene	100	103		ug/L		103	27 - 133	7	15
Benzo[a]anthracene	100	104		ug/L		104	33 - 143	7	15
Benzo[a]pyrene	100	104		ug/L		104	17 - 163	8	15
Benzo[b]fluoranthene	100	107		ug/L		107	24 - 159	16	17
Benzo[g,h,i]perylene	100	99.5		ug/L		100	1 - 219	7	19
Benzo[k]fluoranthene	100	105		ug/L		105	11 - 162	1	19
Bis(2-chloroethyl)ether	100	79.4		ug/L		79	12 - 158	7	33
Bis(2-chloroethoxy)methane	100	89.6		ug/L		90	33 - 184	5	23
bis (2-chloroisopropyl) ether	100	76.2		ug/L		76	36 - 166	1	36
Bis(2-ethylhexyl) phthalate	100	106		ug/L		106	8 - 158	6	15
4-Bromophenyl phenyl ether	100	95.6		ug/L		96	53 - 127	10	16
Butyl benzyl phthalate	100	101		ug/L		101	1 - 152	6	15
2-Chloronaphthalene	100	76.7		ug/L		77	60 - 118	6	30
4-Chlorophenyl phenyl ether	100	98.4		ug/L		98	25 - 158	6	15
Chrysene	100	102		ug/L		102	17 - 168	6	15
Dibenz(a,h)anthracene	100	108		ug/L		108	1 - 227	7	18
Di-n-butyl phthalate	100	107		ug/L		107	1 - 118	8	15
1,2-Dichlorobenzene	100	55.5		ug/L		56	32 - 129	8	38
1,3-Dichlorobenzene	100	54.9		ug/L		55	1 - 172	5	37

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-18129/3-A
Matrix: Water
Analysis Batch: 18239

Client Sample ID: LCSD 480-18129/3-A
Prep Type: Total/NA
Prep Batch: 18129

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene			100	55.1		ug/L		55	20 - 124	8	40
3,3'-Dichlorobenzidine			100	85.0		ug/L		85	1 - 262	6	31
Diethyl phthalate			100	110		ug/L		110	1 - 114	9	15
Dimethyl phthalate			100	105		ug/L		105	1 - 112	9	15
2,4-Dinitrotoluene			100	116		ug/L		116	39 - 139	11	20
2,6-Dinitrotoluene			100	118		ug/L		118	50 - 158	9	17
Di-n-octyl phthalate			100	108		ug/L		108	4 - 146	5	15
Fluoranthene			100	106		ug/L		106	26 - 137	7	15
Fluorene			100	102		ug/L		102	59 - 121	6	18
Hexachlorobenzene			100	96.1		ug/L		96	1 - 152	9	15
Hexachlorocyclopentadiene			100	61.1		ug/L		61	5 - 120	11	50
Hexachloroethane			100	52.5		ug/L		52	40 - 113	8	43
Indeno[1,2,3-cd]pyrene			100	106		ug/L		106	1 - 171	7	17
Isophorone			100	96.4		ug/L		96	21 - 196	9	21
Naphthalene			100	68.2		ug/L		68	21 - 133	9	31
Nitrobenzene			100	86.9		ug/L		87	35 - 180	8	27
N-Nitrosodi-n-propylamine			100	87.7		ug/L		88	1 - 230	5	23
N-Nitrosodiphenylamine			100	102		ug/L		102	54 - 125	8	15
Phenanthrene			100	102		ug/L		102	54 - 120	7	16
Pyrene			100	103		ug/L		103	52 - 115	6	15
1,2,4-Trichlorobenzene			100	58.5		ug/L		58	44 - 142	12	34
4-Chloro-3-methylphenol			100	108		ug/L		108	22 - 147	9	16
2-Chlorophenol			100	76.5		ug/L		76	23 - 134	5	26
2,4-Dichlorophenol			100	94.5		ug/L		94	39 - 135	10	23
2,4-Dimethylphenol			100	93.8		ug/L		94	32 - 119	8	18
2,4-Dinitrophenol			100	110		ug/L		110	1 - 191	6	29
4,6-Dinitro-2-methylphenol			100	120		ug/L		120	1 - 181	9	30
2-Nitrophenol			100	93.4		ug/L		93	29 - 182	8	28
4-Nitrophenol			100	65.2		ug/L		65	1 - 132	7	24
Pentachlorophenol			100	121		ug/L		121	14 - 176	10	21
Phenol			100	41.2		ug/L		41	5 - 112	2	36
2,4,6-Trichlorophenol			100	99.1		ug/L		99	37 - 144	10	20

Surrogate	*LCSD % Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*110*		*52 - 151*
2-Fluorobiphenyl	*94*		*44 - 120*
2-Fluorophenol	*53*		*17 - 120*
Nitrobenzene-d5	*90*		*42 - 120*
Phenol-d5	*39*		*10 - 120*
p-Terphenyl-d14	*115*		*22 - 125*

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 480-17730/2-A
Matrix: Water
Analysis Batch: 18230

Client Sample ID: MB 480-17730/2-A
Prep Type: Total/NA
Prep Batch: 17730

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	ND		0.010		mg/L		05/26/11 17:57	06/01/11 10:05	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 480-17730/1-A
Matrix: Water
Analysis Batch: 18230

Client Sample ID: LCS 480-17730/1-A
Prep Type: Total/NA
Prep Batch: 17730

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits		
Cyanide			0.250	0.252		mg/L		101	90 - 110		

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 480-17411/1
Matrix: Water
Analysis Batch: 17411

Client Sample ID: LCS 480-17411/1
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits		
pH			7.00	6.990		SU		100	99 - 101		

Lab Sample ID: 480-5260-1 DU
Matrix: Water
Analysis Batch: 17411

Client Sample ID: Process Effluent
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.71	HF		7.720		SU				0.1	5

QC Association Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

GC/MS VOA

Analysis Batch: 17490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-17490/4	LCS 480-17490/4	Total/NA	Water	624	
MB 480-17490/5	MB 480-17490/5	Total/NA	Water	624	
480-5260-2	Process Effluent	Total/NA	Water	624	

GC/MS Semi VOA

Prep Batch: 18129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-18129/1-A	MB 480-18129/1-A	Total/NA	Water	625	
LCS 480-18129/2-A	LCS 480-18129/2-A	Total/NA	Water	625	
LCSD 480-18129/3-A	LCSD 480-18129/3-A	Total/NA	Water	625	
480-5260-2	Process Effluent	Total/NA	Water	625	

Analysis Batch: 18239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-18129/1-A	MB 480-18129/1-A	Total/NA	Water	625	18129
LCS 480-18129/2-A	LCS 480-18129/2-A	Total/NA	Water	625	18129
LCSD 480-18129/3-A	LCSD 480-18129/3-A	Total/NA	Water	625	18129
480-5260-2	Process Effluent	Total/NA	Water	625	18129

General Chemistry

Analysis Batch: 17411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-17411/1	LCS 480-17411/1	Total/NA	Water	SM 4500 H+ B	
480-5260-1	Process Effluent	Total/NA	Water	SM 4500 H+ B	
480-5260-1 DU	Process Effluent	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 17730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-17730/1-A	LCS 480-17730/1-A	Total/NA	Water	Distill/CN	
MB 480-17730/2-A	MB 480-17730/2-A	Total/NA	Water	Distill/CN	
480-5260-1	Process Effluent	Total/NA	Water	Distill/CN	

Analysis Batch: 18230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-17730/1-A	LCS 480-17730/1-A	Total/NA	Water	335.4	17730
MB 480-17730/2-A	MB 480-17730/2-A	Total/NA	Water	335.4	17730
480-5260-1	Process Effluent	Total/NA	Water	335.4	17730

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

Client Sample ID: Process Effluent

Lab Sample ID: 480-5260-1

Date Collected: 05/24/11 08:00

Matrix: Water

Date Received: 05/24/11 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 H+ B		1	17411	05/24/11 21:31	JS	TAL BUF
Total/NA	Prep	Distill/CN			17730	05/26/11 17:57	AP	TAL BUF
Total/NA	Analysis	335.4		2	18230	06/01/11 11:49	JM	TAL BUF

Client Sample ID: Process Effluent

Lab Sample ID: 480-5260-2

Date Collected: 05/24/11 08:00

Matrix: Water

Date Received: 05/24/11 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	624		4	17490	05/25/11 15:59	TRB	TAL BUF
Total/NA	Prep	625			18129	05/31/11 17:57	LT	TAL BUF
Total/NA	Analysis	625		1	18239	06/02/11 00:36	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: River Bend Site

TestAmerica Job ID: 480-5260-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Buffalo	Arkansas	State Program	6	88-0686
TestAmerica Buffalo	California	NELAC	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAC	4	E87672
TestAmerica Buffalo	Georgia	Georgia EPD	4	N/A
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Illinois	NELAC	5	100325 / 200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAC	7	E-10187
TestAmerica Buffalo	Kentucky	Kentucky UST	4	30
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Louisiana	NELAC	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY0044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAC	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAC	1	68-00281
TestAmerica Buffalo	New Hampshire	NELAC	1	2337
TestAmerica Buffalo	New Jersey	NELAC	2	NY455
TestAmerica Buffalo	New York	NELAC	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAC	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAC	6	T104704412-08-TX
TestAmerica Buffalo	USDA	USDA	0	P330-08-00242
TestAmerica Buffalo	Virginia	State Program	3	278
TestAmerica Buffalo	Washington	State Program	10	C1677
TestAmerica Buffalo	West Virginia	West Virginia DEP	3	252
TestAmerica Buffalo	Wisconsin	State Program	5	998310390

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-5260-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
625	Semivolatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
335.4	Cyanide, Total	MCAWW	TAL BUF
SM 4500 H+ B	pH	SM	TAL BUF

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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: River Bend Site

TestAmerica Job ID: 480-5260-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-5260-1	Process Effluent	Water	05/24/11 08:00	05/24/11 17:00
480-5260-2	Process Effluent	Water	05/24/11 08:00	05/24/11 17:00

TestAmerica Buffalo
10 Hazelwood Drive
Amherst NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brock Greene	Lab PM: Fischer, Brian	Carrier Tracking No(s):	COC No: 480-12290-2172.1
Client Contact: Mr. ~~Tom Bernardo~~ Bryan Hann	Phone: 716-225-3314	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 1
Company: Benchmark Env. Eng. & Science, PLLC				Job #:
Address: 2558 Hamburg Turnpike Suite 300	Due Date Requested:			
City: Lackawanna	TAT Requested (days): 14			
State, Zip: NY, 14218				
Phone:	PO #: 0171-006-500 Purchase Order Requested			
Email: ~~lbelwindt~~ Hann@benchmarkturnkey.com	WO #:			
Project Name: River Bend Site/	Project #: 48003578			
Site: New York	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify); Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	624 5ml - (MOD) Priority Pollutant List - VOA - 62	625 - (MOD) Priority Pollutant List - SVOA - 6	335.4 - Cyanide	SM4500_H+ - pH	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	A	N	B	N	X	
Process Effluent	5-23-11	0808	G	Water			2	N				
" "	5-23-11	1216	G	"			2	N				
" "	5-23-11	1750	G	"			2	N				
" "	5-24-11	0800	G	"			2	N				
" "	5-24-11	0800	C	"					1	1		

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Brock Greene	Date/Time: 5-24-11/1200	Company: TK	Received by:		Date/Time: 5/24/11 1701	Company: TAL	
Relinquished by:	Date/Time:	Company:	Received by:		Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:		Date/Time:	Company:	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No:		Cooler Temperature(s) °C and Other Remarks:				

Login Sample Receipt Checklist

Client: Turnkey Environmental Restoration, LLC

Job Number: 480-5260-1

Login Number: 5260
List Number: 1
Creator: Wienke, Robert

List Source: TestAmerica Buffalo

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.	False	Lab to comp VOC/SVOC
Sampling Company provided.	True	TK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	True	NON DETECT

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: 480-13451-1
Client Project/Site: River Bend Site
Sampling Event: Effluent sampling

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

Attn: Mr. Bryan Hann

Authorized for release by:
12/22/2011 3:40:57 PM

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

Table of Contents

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

Qualifiers

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.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes
H	Sample was prepped or analyzed beyond the specified holding time

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
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
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
RL	Reporting Limit
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: 480-13451-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-13451-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method(s) 624: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: Process Effluent COMP (480-13451-1). Elevated reporting limits (RLs) are provided.

Method(s) 624: The following sample was composited by the laboratory on 12/6/11 as requested on the chain-of-custody: Process Effluent COMP (480-13451-1).

No other analytical or quality issues were noted.

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

General Chemistry
Method(s) 335.4: The following sample(s) was analyzed outside of analytical holding time due to failing quality control samples: Process Effluent COMP (480-13451-1).

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

Client Sample ID: Process Effluent COMP

Lab Sample ID: 480-13451-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	60		20	2.4	ug/L	4		624	Total/NA
Acenaphthene	0.12	J	5.0	0.060	ug/L	1		625	Total/NA
Cyanide	0.46	H	0.010		mg/L	1		335.4	Total/NA
Cyanide	0.51	H	0.010		mg/L	1		335.4	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.62	HF	0.100		SU	1		SM 4500 H+ B	Total/NA

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

Client Sample ID: Process Effluent COMP
Date Collected: 12/01/11 08:40
Date Received: 12/02/11 12:40

Lab Sample ID: 480-13451-1
Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**60**		20	2.4	ug/L			12/06/11 19:50	4
Bromodichloromethane	ND		20	2.1	ug/L			12/06/11 19:50	4
Bromoform	ND		20	1.9	ug/L			12/06/11 19:50	4
Bromomethane	ND		20	4.8	ug/L			12/06/11 19:50	4
Carbon tetrachloride	ND		20	2.0	ug/L			12/06/11 19:50	4
Chlorobenzene	ND		20	1.9	ug/L			12/06/11 19:50	4
Chloroethane	ND		20	3.5	ug/L			12/06/11 19:50	4
2-Chloroethyl vinyl ether	ND		100	7.4	ug/L			12/06/11 19:50	4
Chloroform	ND		20	2.2	ug/L			12/06/11 19:50	4
Chloromethane	ND		20	2.5	ug/L			12/06/11 19:50	4
Chlorodibromomethane	ND		20	1.7	ug/L			12/06/11 19:50	4
1,1-Dichloroethane	ND		20	2.4	ug/L			12/06/11 19:50	4
1,2-Dichloroethane	ND		20	2.4	ug/L			12/06/11 19:50	4
1,1-Dichloroethene	ND		20	3.4	ug/L			12/06/11 19:50	4
trans-1,2-Dichloroethene	ND		20	2.4	ug/L			12/06/11 19:50	4
1,2-Dichloropropane	ND		20	2.4	ug/L			12/06/11 19:50	4
cis-1,3-Dichloropropene	ND		20	1.3	ug/L			12/06/11 19:50	4
trans-1,3-Dichloropropene	ND		20	1.8	ug/L			12/06/11 19:50	4
Ethylbenzene	ND		20	1.9	ug/L			12/06/11 19:50	4
Methylene Chloride	ND		20	3.3	ug/L			12/06/11 19:50	4
1,1,2,2-Tetrachloroethane	ND		20	1.0	ug/L			12/06/11 19:50	4
Tetrachloroethene	ND		20	1.4	ug/L			12/06/11 19:50	4
Toluene	ND		20	1.8	ug/L			12/06/11 19:50	4
1,1,1-Trichloroethane	ND		20	1.5	ug/L			12/06/11 19:50	4
1,1,2-Trichloroethane	ND		20	1.9	ug/L			12/06/11 19:50	4
Trichloroethene	ND		20	2.4	ug/L			12/06/11 19:50	4
Vinyl chloride	ND		20	3.0	ug/L			12/06/11 19:50	4
1,2-Dichlorobenzene	ND		20	1.8	ug/L			12/06/11 19:50	4
1,3-Dichlorobenzene	ND		20	2.2	ug/L			12/06/11 19:50	4
1,4-Dichlorobenzene	ND		20	2.0	ug/L			12/06/11 19:50	4
Trichlorofluoromethane	ND		20	1.8	ug/L			12/06/11 19:50	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*72 - 130*		*12/06/11 19:50*	*4*
4-Bromofluorobenzene (Surr)	*94*		*69 - 121*		*12/06/11 19:50*	*4*
Toluene-d8 (Surr)	*105*		*70 - 123*		*12/06/11 19:50*	*4*

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.12**	**J**	5.0	0.060	ug/L		12/08/11 07:41	12/09/11 18:20	1
Acenaphthylene	ND		5.0	0.034	ug/L		12/08/11 07:41	12/09/11 18:20	1
Anthracene	ND		5.0	0.052	ug/L		12/08/11 07:41	12/09/11 18:20	1
Benzidine	ND		80	2.5	ug/L		12/08/11 07:41	12/09/11 18:20	1
Benzo[a]anthracene	ND		5.0	0.043	ug/L		12/08/11 07:41	12/09/11 18:20	1
Benzo[a]pyrene	ND		5.0	0.058	ug/L		12/08/11 07:41	12/09/11 18:20	1
Benzo[b]fluoranthene	ND		5.0	0.062	ug/L		12/08/11 07:41	12/09/11 18:20	1
Benzo[g,h,i]perylene	ND		5.0	0.10	ug/L		12/08/11 07:41	12/09/11 18:20	1
Benzo[k]fluoranthene	ND		5.0	0.042	ug/L		12/08/11 07:41	12/09/11 18:20	1
Bis(2-chloroethyl)ether	ND		5.0	1.1	ug/L		12/08/11 07:41	12/09/11 18:20	1
Bis(2-chloroethoxy)methane	ND		5.0	0.085	ug/L		12/08/11 07:41	12/09/11 18:20	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

Client Sample ID: Process Effluent COMP
Date Collected: 12/01/11 08:40
Date Received: 12/02/11 12:40

Lab Sample ID: 480-13451-1
Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
bis (2-chloroisopropyl) ether	ND		5.0	0.086	ug/L		12/08/11 07:41	12/09/11 18:20	1
Bis(2-ethylhexyl) phthalate	ND		10	0.86	ug/L		12/08/11 07:41	12/09/11 18:20	1
4-Bromophenyl phenyl ether	ND		5.0	0.11	ug/L		12/08/11 07:41	12/09/11 18:20	1
Butyl benzyl phthalate	ND		5.0	1.3	ug/L		12/08/11 07:41	12/09/11 18:20	1
2-Chloronaphthalene	ND		5.0	0.068	ug/L		12/08/11 07:41	12/09/11 18:20	1
4-Chlorophenyl phenyl ether	ND		5.0	0.21	ug/L		12/08/11 07:41	12/09/11 18:20	1
Chrysene	ND		5.0	0.036	ug/L		12/08/11 07:41	12/09/11 18:20	1
Dibenz(a,h)anthracene	ND		5.0	0.055	ug/L		12/08/11 07:41	12/09/11 18:20	1
Di-n-butyl phthalate	ND		5.0	0.94	ug/L		12/08/11 07:41	12/09/11 18:20	1
1,2-Dichlorobenzene	ND		10	0.15	ug/L		12/08/11 07:41	12/09/11 18:20	1
1,3-Dichlorobenzene	ND		10	0.069	ug/L		12/08/11 07:41	12/09/11 18:20	1
1,4-Dichlorobenzene	ND		10	0.090	ug/L		12/08/11 07:41	12/09/11 18:20	1
3,3'-Dichlorobenzidine	ND		5.0	0.82	ug/L		12/08/11 07:41	12/09/11 18:20	1
Diethyl phthalate	ND		5.0	0.17	ug/L		12/08/11 07:41	12/09/11 18:20	1
Dimethyl phthalate	ND		5.0	0.17	ug/L		12/08/11 07:41	12/09/11 18:20	1
2,4-Dinitrotoluene	ND		5.0	0.26	ug/L		12/08/11 07:41	12/09/11 18:20	1
2,6-Dinitrotoluene	ND		5.0	0.72	ug/L		12/08/11 07:41	12/09/11 18:20	1
Di-n-octyl phthalate	ND		5.0	4.5	ug/L		12/08/11 07:41	12/09/11 18:20	1
1,2-Diphenylhydrazine	ND		10	0.063	ug/L		12/08/11 07:41	12/09/11 18:20	1
Fluoranthene	ND		5.0	0.11	ug/L		12/08/11 07:41	12/09/11 18:20	1
Fluorene	ND		5.0	0.043	ug/L		12/08/11 07:41	12/09/11 18:20	1
Hexachlorobenzene	ND		5.0	0.28	ug/L		12/08/11 07:41	12/09/11 18:20	1
Hexachlorobutadiene	ND		5.0	0.62	ug/L		12/08/11 07:41	12/09/11 18:20	1
Hexachlorocyclopentadiene	ND		5.0	0.45	ug/L		12/08/11 07:41	12/09/11 18:20	1
Hexachloroethane	ND		5.0	0.48	ug/L		12/08/11 07:41	12/09/11 18:20	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.19	ug/L		12/08/11 07:41	12/09/11 18:20	1
Isophorone	ND		5.0	0.16	ug/L		12/08/11 07:41	12/09/11 18:20	1
Naphthalene	ND		5.0	0.080	ug/L		12/08/11 07:41	12/09/11 18:20	1
Nitrobenzene	ND		5.0	0.11	ug/L		12/08/11 07:41	12/09/11 18:20	1
N-Nitrosodi-n-propylamine	ND		5.0	0.23	ug/L		12/08/11 07:41	12/09/11 18:20	1
N-Nitrosodimethylamine	ND		10	0.96	ug/L		12/08/11 07:41	12/09/11 18:20	1
N-Nitrosodiphenylamine	ND		5.0	0.40	ug/L		12/08/11 07:41	12/09/11 18:20	1
Phenanthrene	ND		5.0	0.071	ug/L		12/08/11 07:41	12/09/11 18:20	1
Pyrene	ND		5.0	0.041	ug/L		12/08/11 07:41	12/09/11 18:20	1
1,2,4-Trichlorobenzene	ND		10	0.49	ug/L		12/08/11 07:41	12/09/11 18:20	1
4-Chloro-3-methylphenol	ND		5.0	0.56	ug/L		12/08/11 07:41	12/09/11 18:20	1
2-Chlorophenol	ND		5.0	0.16	ug/L		12/08/11 07:41	12/09/11 18:20	1
2,4-Dichlorophenol	ND		5.0	0.30	ug/L		12/08/11 07:41	12/09/11 18:20	1
2,4-Dimethylphenol	ND		5.0	0.13	ug/L		12/08/11 07:41	12/09/11 18:20	1
2,4-Dinitrophenol	ND		10	0.84	ug/L		12/08/11 07:41	12/09/11 18:20	1
4,6-Dinitro-2-methylphenol	ND		10	0.76	ug/L		12/08/11 07:41	12/09/11 18:20	1
2-Nitrophenol	ND		5.0	0.14	ug/L		12/08/11 07:41	12/09/11 18:20	1
4-Nitrophenol	ND		10	1.3	ug/L		12/08/11 07:41	12/09/11 18:20	1
Pentachlorophenol	ND		10	0.41	ug/L		12/08/11 07:41	12/09/11 18:20	1
Phenol	ND		5.0	0.12	ug/L		12/08/11 07:41	12/09/11 18:20	1
2,4,6-Trichlorophenol	ND		5.0	0.23	ug/L		12/08/11 07:41	12/09/11 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*103*		*52 - 151*	*12/08/11 07:41*	*12/09/11 18:20*	*1*
2-Fluorobiphenyl	*80*		*44 - 120*	*12/08/11 07:41*	*12/09/11 18:20*	*1*

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

Client Sample ID: Process Effluent COMP
Date Collected: 12/01/11 08:40
Date Received: 12/02/11 12:40

Lab Sample ID: 480-13451-1
Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*34*		*17 - 120*	*12/08/11 07:41*	*12/09/11 18:20*	*1*
Nitrobenzene-d5	*79*		*42 - 120*	*12/08/11 07:41*	*12/09/11 18:20*	*1*
Phenol-d5	*24*		*10 - 120*	*12/08/11 07:41*	*12/09/11 18:20*	*1*
p-Terphenyl-d14	*87*		*22 - 125*	*12/08/11 07:41*	*12/09/11 18:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	0.46	H	0.010		mg/L		12/19/11 12:13	12/19/11 14:16	1
Cyanide	0.51	H	0.010		mg/L		12/20/11 15:43	12/21/11 12:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.62	HF	0.100		SU			12/02/11 23:05	1

Surrogate Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(72-130)	(69-121)	(70-123)
480-13451-1	Process Effluent COMP	109	94	105
LCS 480-43009/3	Lab Control Sample	106	98	104
MB 480-43009/5	Method Blank	107	95	106

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(52-151)	(44-120)	(17-120)	(42-120)	(10-120)	(22-125)
480-13451-1	Process Effluent COMP	103	80	34	79	24	87
LCS 480-43392/2-A	Lab Control Sample	103	84	47	91	35	112
LCSD 480-43392/3-A	Lab Control Sample Dup	104	84	45	88	33	111
MB 480-43392/1-A	Method Blank	117	74	41	75	30	102

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPH = p-Terphenyl-d14

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-43009/5
Matrix: Water
Analysis Batch: 43009

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	0.60	ug/L			12/06/11 12:02	1
Bromodichloromethane	ND		5.0	0.54	ug/L			12/06/11 12:02	1
Bromoform	ND		5.0	0.47	ug/L			12/06/11 12:02	1
Bromomethane	ND		5.0	1.2	ug/L			12/06/11 12:02	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			12/06/11 12:02	1
Chlorobenzene	ND		5.0	0.48	ug/L			12/06/11 12:02	1
Chloroethane	ND		5.0	0.87	ug/L			12/06/11 12:02	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			12/06/11 12:02	1
Chloroform	ND		5.0	0.54	ug/L			12/06/11 12:02	1
Chloromethane	ND		5.0	0.64	ug/L			12/06/11 12:02	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			12/06/11 12:02	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			12/06/11 12:02	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			12/06/11 12:02	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			12/06/11 12:02	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			12/06/11 12:02	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			12/06/11 12:02	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			12/06/11 12:02	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			12/06/11 12:02	1
Ethylbenzene	ND		5.0	0.46	ug/L			12/06/11 12:02	1
Methylene Chloride	ND		5.0	0.81	ug/L			12/06/11 12:02	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			12/06/11 12:02	1
Tetrachloroethene	ND		5.0	0.34	ug/L			12/06/11 12:02	1
Toluene	ND		5.0	0.45	ug/L			12/06/11 12:02	1
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			12/06/11 12:02	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			12/06/11 12:02	1
Trichloroethene	ND		5.0	0.60	ug/L			12/06/11 12:02	1
Vinyl chloride	ND		5.0	0.75	ug/L			12/06/11 12:02	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			12/06/11 12:02	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			12/06/11 12:02	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			12/06/11 12:02	1
Trichlorofluoromethane	ND		5.0	0.45	ug/L			12/06/11 12:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*72 - 130*		*12/06/11 12:02*	*1*
4-Bromofluorobenzene (Surr)	*95*		*69 - 121*		*12/06/11 12:02*	*1*
Toluene-d8 (Surr)	*106*		*70 - 123*		*12/06/11 12:02*	*1*

Lab Sample ID: LCS 480-43009/3
Matrix: Water
Analysis Batch: 43009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.7		ug/L		99	64 - 136
Bromodichloromethane	20.0	18.6		ug/L		93	66 - 135
Bromoform	20.0	20.1		ug/L		101	71 - 129
Bromomethane	20.0	18.7		ug/L		94	14 - 186
Carbon tetrachloride	20.0	18.4		ug/L		92	73 - 127
Chlorobenzene	20.0	21.4		ug/L		107	66 - 134
Chloroethane	20.0	19.0		ug/L		95	38 - 162

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-43009/3
Matrix: Water
Analysis Batch: 43009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	100	131		ug/L		131	1 - 224
Chloroform	20.0	19.0		ug/L		95	68 - 133
Chloromethane	20.0	17.7		ug/L		89	1 - 204
Chlorodibromomethane	20.0	20.5		ug/L		103	68 - 133
1,1-Dichloroethane	20.0	18.8		ug/L		94	73 - 128
1,2-Dichloroethane	20.0	20.2		ug/L		101	68 - 132
1,1-Dichloroethene	20.0	17.2		ug/L		86	51 - 150
trans-1,2-Dichloroethene	20.0	18.2		ug/L		91	72 - 133
1,2-Dichloropropane	20.0	20.2		ug/L		101	34 - 166
cis-1,3-Dichloropropene	20.0	19.4		ug/L		97	24 - 176
trans-1,3-Dichloropropene	20.0	21.2		ug/L		106	50 - 150
Ethylbenzene	20.0	21.5		ug/L		108	59 - 141
Methylene Chloride	20.0	18.5		ug/L		93	61 - 140
1,1,2,2-Tetrachloroethane	20.0	24.6		ug/L		123	61 - 140
Tetrachloroethene	20.0	20.2		ug/L		101	74 - 127
Toluene	20.0	21.1		ug/L		106	75 - 126
1,1,1-Trichloroethane	20.0	19.3		ug/L		97	75 - 125
1,1,2-Trichloroethane	20.0	23.1		ug/L		116	71 - 129
Trichloroethene	20.0	19.6		ug/L		98	67 - 134
Vinyl chloride	20.0	18.7		ug/L		94	4 - 196
1,2-Dichlorobenzene	20.0	22.0		ug/L		110	63 - 137
1,3-Dichlorobenzene	20.0	22.1		ug/L		111	73 - 127
1,4-Dichlorobenzene	20.0	22.0		ug/L		110	63 - 137
Trichlorofluoromethane	20.0	20.0		ug/L		100	48 - 152

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*72 - 130*
4-Bromofluorobenzene (Surr)	*98*		*69 - 121*
Toluene-d8 (Surr)	*104*		*70 - 123*

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-43392/1-A
Matrix: Water
Analysis Batch: 44018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.060	ug/L		12/08/11 07:41	12/12/11 19:51	1
Acenaphthylene	ND		5.0	0.034	ug/L		12/08/11 07:41	12/12/11 19:51	1
Anthracene	ND		5.0	0.052	ug/L		12/08/11 07:41	12/12/11 19:51	1
Benzidine	ND		80	2.5	ug/L		12/08/11 07:41	12/12/11 19:51	1
Benzo[a]anthracene	ND		5.0	0.043	ug/L		12/08/11 07:41	12/12/11 19:51	1
Benzo[a]pyrene	ND		5.0	0.058	ug/L		12/08/11 07:41	12/12/11 19:51	1
Benzo[b]fluoranthene	ND		5.0	0.062	ug/L		12/08/11 07:41	12/12/11 19:51	1
Benzo[g,h,i]perylene	ND		5.0	0.10	ug/L		12/08/11 07:41	12/12/11 19:51	1
Benzo[k]fluoranthene	ND		5.0	0.042	ug/L		12/08/11 07:41	12/12/11 19:51	1
Bis(2-chloroethyl)ether	ND		5.0	1.1	ug/L		12/08/11 07:41	12/12/11 19:51	1
Bis(2-chloroethoxy)methane	ND		5.0	0.085	ug/L		12/08/11 07:41	12/12/11 19:51	1
bis (2-chloroisopropyl) ether	ND		5.0	0.086	ug/L		12/08/11 07:41	12/12/11 19:51	1

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-43392/1-A
Matrix: Water
Analysis Batch: 44018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		10	0.86	ug/L		12/08/11 07:41	12/12/11 19:51	1
4-Bromophenyl phenyl ether	ND		5.0	0.11	ug/L		12/08/11 07:41	12/12/11 19:51	1
Butyl benzyl phthalate	ND		5.0	1.3	ug/L		12/08/11 07:41	12/12/11 19:51	1
2-Chloronaphthalene	ND		5.0	0.068	ug/L		12/08/11 07:41	12/12/11 19:51	1
4-Chlorophenyl phenyl ether	ND		5.0	0.21	ug/L		12/08/11 07:41	12/12/11 19:51	1
Chrysene	ND		5.0	0.036	ug/L		12/08/11 07:41	12/12/11 19:51	1
Dibenz(a,h)anthracene	ND		5.0	0.055	ug/L		12/08/11 07:41	12/12/11 19:51	1
Di-n-butyl phthalate	ND		5.0	0.94	ug/L		12/08/11 07:41	12/12/11 19:51	1
1,2-Dichlorobenzene	ND		10	0.15	ug/L		12/08/11 07:41	12/12/11 19:51	1
1,3-Dichlorobenzene	ND		10	0.069	ug/L		12/08/11 07:41	12/12/11 19:51	1
1,4-Dichlorobenzene	ND		10	0.090	ug/L		12/08/11 07:41	12/12/11 19:51	1
3,3'-Dichlorobenzidine	ND		5.0	0.82	ug/L		12/08/11 07:41	12/12/11 19:51	1
Diethyl phthalate	ND		5.0	0.17	ug/L		12/08/11 07:41	12/12/11 19:51	1
Dimethyl phthalate	ND		5.0	0.17	ug/L		12/08/11 07:41	12/12/11 19:51	1
2,4-Dinitrotoluene	ND		5.0	0.26	ug/L		12/08/11 07:41	12/12/11 19:51	1
2,6-Dinitrotoluene	ND		5.0	0.72	ug/L		12/08/11 07:41	12/12/11 19:51	1
Di-n-octyl phthalate	ND		5.0	4.5	ug/L		12/08/11 07:41	12/12/11 19:51	1
1,2-Diphenylhydrazine	ND		10	0.063	ug/L		12/08/11 07:41	12/12/11 19:51	1
Fluoranthene	ND		5.0	0.11	ug/L		12/08/11 07:41	12/12/11 19:51	1
Fluorene	ND		5.0	0.043	ug/L		12/08/11 07:41	12/12/11 19:51	1
Hexachlorobenzene	ND		5.0	0.28	ug/L		12/08/11 07:41	12/12/11 19:51	1
Hexachlorobutadiene	ND		5.0	0.62	ug/L		12/08/11 07:41	12/12/11 19:51	1
Hexachlorocyclopentadiene	ND		5.0	0.45	ug/L		12/08/11 07:41	12/12/11 19:51	1
Hexachloroethane	ND		5.0	0.48	ug/L		12/08/11 07:41	12/12/11 19:51	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.19	ug/L		12/08/11 07:41	12/12/11 19:51	1
Isophorone	ND		5.0	0.16	ug/L		12/08/11 07:41	12/12/11 19:51	1
Naphthalene	ND		5.0	0.080	ug/L		12/08/11 07:41	12/12/11 19:51	1
Nitrobenzene	ND		5.0	0.11	ug/L		12/08/11 07:41	12/12/11 19:51	1
N-Nitrosodi-n-propylamine	ND		5.0	0.23	ug/L		12/08/11 07:41	12/12/11 19:51	1
N-Nitrosodimethylamine	ND		10	0.96	ug/L		12/08/11 07:41	12/12/11 19:51	1
N-Nitrosodiphenylamine	ND		5.0	0.40	ug/L		12/08/11 07:41	12/12/11 19:51	1
Phenanthrene	ND		5.0	0.071	ug/L		12/08/11 07:41	12/12/11 19:51	1
Pyrene	ND		5.0	0.041	ug/L		12/08/11 07:41	12/12/11 19:51	1
1,2,4-Trichlorobenzene	ND		10	0.49	ug/L		12/08/11 07:41	12/12/11 19:51	1
4-Chloro-3-methylphenol	ND		5.0	0.56	ug/L		12/08/11 07:41	12/12/11 19:51	1
2-Chlorophenol	ND		5.0	0.16	ug/L		12/08/11 07:41	12/12/11 19:51	1
2,4-Dichlorophenol	ND		5.0	0.30	ug/L		12/08/11 07:41	12/12/11 19:51	1
2,4-Dimethylphenol	ND		5.0	0.13	ug/L		12/08/11 07:41	12/12/11 19:51	1
2,4-Dinitrophenol	ND		10	0.84	ug/L		12/08/11 07:41	12/12/11 19:51	1
4,6-Dinitro-2-methylphenol	ND		10	0.76	ug/L		12/08/11 07:41	12/12/11 19:51	1
2-Nitrophenol	ND		5.0	0.14	ug/L		12/08/11 07:41	12/12/11 19:51	1
4-Nitrophenol	ND		10	1.3	ug/L		12/08/11 07:41	12/12/11 19:51	1
Pentachlorophenol	ND		10	0.41	ug/L		12/08/11 07:41	12/12/11 19:51	1
Phenol	ND		5.0	0.12	ug/L		12/08/11 07:41	12/12/11 19:51	1
2,4,6-Trichlorophenol	ND		5.0	0.23	ug/L		12/08/11 07:41	12/12/11 19:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*117*		*52 - 151*	*12/08/11 07:41*	*12/12/11 19:51*	*1*
2-Fluorobiphenyl	*74*		*44 - 120*	*12/08/11 07:41*	*12/12/11 19:51*	*1*

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-43392/1-A
Matrix: Water
Analysis Batch: 44018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43392

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	41		17 - 120	12/08/11 07:41	12/12/11 19:51	1
Nitrobenzene-d5	75		42 - 120	12/08/11 07:41	12/12/11 19:51	1
Phenol-d5	30		10 - 120	12/08/11 07:41	12/12/11 19:51	1
p-Terphenyl-d14	102		22 - 125	12/08/11 07:41	12/12/11 19:51	1

Lab Sample ID: LCS 480-43392/2-A
Matrix: Water
Analysis Batch: 43693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	100	92.0		ug/L		92	47 - 145
Acenaphthylene	100	93.8		ug/L		94	33 - 145
Anthracene	100	95.5		ug/L		96	27 - 133
Benzo[a]anthracene	100	100		ug/L		100	33 - 143
Benzo[a]pyrene	100	101		ug/L		101	17 - 163
Benzo[b]fluoranthene	100	91.0		ug/L		91	24 - 159
Benzo[g,h,i]perylene	100	102		ug/L		102	1 - 219
Benzo[k]fluoranthene	100	104		ug/L		104	11 - 162
Bis(2-chloroethyl)ether	100	75.5		ug/L		76	12 - 158
Bis(2-chloroethoxy)methane	100	95.1		ug/L		95	33 - 184
bis (2-chloroisopropyl) ether	100	78.4		ug/L		78	36 - 166
Bis(2-ethylhexyl) phthalate	100	110		ug/L		110	8 - 158
4-Bromophenyl phenyl ether	100	104		ug/L		104	53 - 127
Butyl benzyl phthalate	100	91.9		ug/L		92	1 - 152
2-Chloronaphthalene	100	82.9		ug/L		83	60 - 118
4-Chlorophenyl phenyl ether	100	113		ug/L		113	25 - 158
Chrysene	100	97.9		ug/L		98	17 - 168
Dibenz(a,h)anthracene	100	128		ug/L		128	1 - 227
Di-n-butyl phthalate	100	98.8		ug/L		99	1 - 118
1,2-Dichlorobenzene	100	54.4		ug/L		54	32 - 129
1,3-Dichlorobenzene	100	53.0		ug/L		53	1 - 172
1,4-Dichlorobenzene	100	52.7		ug/L		53	20 - 124
3,3'-Dichlorobenzidine	100	70.6		ug/L		71	1 - 262
Diethyl phthalate	100	98.0		ug/L		98	1 - 114
Dimethyl phthalate	100	102		ug/L		102	1 - 112
2,4-Dinitrotoluene	100	102		ug/L		102	39 - 139
2,6-Dinitrotoluene	100	106		ug/L		106	50 - 158
Di-n-octyl phthalate	100	100		ug/L		100	4 - 146
Fluoranthene	100	94.8		ug/L		95	26 - 137
Fluorene	100	116		ug/L		116	59 - 121
Hexachlorobenzene	100	102		ug/L		102	1 - 152
Hexachlorocyclopentadiene	100	54.5		ug/L		55	5 - 120
Hexachloroethane	100	50.9		ug/L		51	40 - 113
Indeno[1,2,3-cd]pyrene	100	118		ug/L		118	1 - 171
Isophorone	100	99.9		ug/L		100	21 - 196
Naphthalene	100	76.1		ug/L		76	21 - 133
Nitrobenzene	100	93.7		ug/L		94	35 - 180
N-Nitrosodi-n-propylamine	100	97.6		ug/L		98	1 - 230
N-Nitrosodiphenylamine	100	104		ug/L		104	54 - 125

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-43392/2-A
Matrix: Water
Analysis Batch: 43693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenanthrene	100	96.7		ug/L		97	54 - 120
Pyrene	100	103		ug/L		103	52 - 115
1,2,4-Trichlorobenzene	100	65.2		ug/L		65	44 - 142
4-Chloro-3-methylphenol	100	111		ug/L		111	22 - 147
2-Chlorophenol	100	75.0		ug/L		75	23 - 134
2,4-Dichlorophenol	100	97.4		ug/L		97	39 - 135
2,4-Dimethylphenol	100	103		ug/L		103	32 - 119
2,4-Dinitrophenol	100	91.3		ug/L		91	1 - 191
4,6-Dinitro-2-methylphenol	100	108		ug/L		108	1 - 181
2-Nitrophenol	100	94.2		ug/L		94	29 - 182
4-Nitrophenol	100	57.9		ug/L		58	1 - 132
Pentachlorophenol	100	102		ug/L		102	14 - 176
Phenol	100	37.8		ug/L		38	5 - 112
2,4,6-Trichlorophenol	100	89.2		ug/L		89	37 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*52 - 151*
2-Fluorobiphenyl	*84*		*44 - 120*
2-Fluorophenol	*47*		*17 - 120*
Nitrobenzene-d5	*91*		*42 - 120*
Phenol-d5	*35*		*10 - 120*
p-Terphenyl-d14	*112*		*22 - 125*

Lab Sample ID: LCSD 480-43392/3-A
Matrix: Water
Analysis Batch: 43693

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43392

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	100	92.0		ug/L		92	47 - 145	0	25
Acenaphthylene	100	95.1		ug/L		95	33 - 145	1	22
Anthracene	100	96.4		ug/L		96	27 - 133	1	15
Benzo[a]anthracene	100	102		ug/L		102	33 - 143	2	15
Benzo[a]pyrene	100	100		ug/L		100	17 - 163	1	15
Benzo[b]fluoranthene	100	91.9		ug/L		92	24 - 159	1	17
Benzo[g,h,i]perylene	100	96.1		ug/L		96	1 - 219	6	19
Benzo[k]fluoranthene	100	101		ug/L		101	11 - 162	3	19
Bis(2-chloroethyl)ether	100	73.9		ug/L		74	12 - 158	2	33
Bis(2-chloroethoxy)methane	100	91.5		ug/L		92	33 - 184	4	23
bis (2-chloroisopropyl) ether	100	76.8		ug/L		77	36 - 166	2	36
Bis(2-ethylhexyl) phthalate	100	114		ug/L		114	8 - 158	3	15
4-Bromophenyl phenyl ether	100	106		ug/L		106	53 - 127	2	16
Butyl benzyl phthalate	100	92.7		ug/L		93	1 - 152	1	15
2-Chloronaphthalene	100	85.9		ug/L		86	60 - 118	4	30
4-Chlorophenyl phenyl ether	100	113		ug/L		113	25 - 158	0	15
Chrysene	100	101		ug/L		101	17 - 168	3	15
Dibenz(a,h)anthracene	100	125		ug/L		125	1 - 227	2	18
Di-n-butyl phthalate	100	98.2		ug/L		98	1 - 118	1	15
1,2-Dichlorobenzene	100	54.2		ug/L		54	32 - 129	0	38
1,3-Dichlorobenzene	100	51.2		ug/L		51	1 - 172	3	37

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-43392/3-A
Matrix: Water
Analysis Batch: 43693

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43392

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene			100	51.5		ug/L		52	20 - 124	2	40
3,3'-Dichlorobenzidine			100	79.0		ug/L		79	1 - 262	11	31
Diethyl phthalate			100	97.1		ug/L		97	1 - 114	1	15
Dimethyl phthalate			100	100		ug/L		100	1 - 112	2	15
2,4-Dinitrotoluene			100	102		ug/L		102	39 - 139	0	20
2,6-Dinitrotoluene			100	104		ug/L		104	50 - 158	2	17
Di-n-octyl phthalate			100	102		ug/L		102	4 - 146	2	15
Fluoranthene			100	94.8		ug/L		95	26 - 137	0	15
Fluorene			100	114		ug/L		114	59 - 121	1	18
Hexachlorobenzene			100	101		ug/L		101	1 - 152	1	15
Hexachlorocyclopentadiene			100	57.2		ug/L		57	5 - 120	5	50
Hexachloroethane			100	49.3		ug/L		49	40 - 113	3	43
Indeno[1,2,3-cd]pyrene			100	115		ug/L		115	1 - 171	2	17
Isophorone			100	96.1		ug/L		96	21 - 196	4	21
Naphthalene			100	75.1		ug/L		75	21 - 133	1	31
Nitrobenzene			100	90.3		ug/L		90	35 - 180	4	27
N-Nitrosodi-n-propylamine			100	94.8		ug/L		95	1 - 230	3	23
N-Nitrosodiphenylamine			100	105		ug/L		105	54 - 125	1	15
Phenanthrene			100	97.3		ug/L		97	54 - 120	1	16
Pyrene			100	105		ug/L		105	52 - 115	1	15
1,2,4-Trichlorobenzene			100	63.4		ug/L		63	44 - 142	3	34
4-Chloro-3-methylphenol			100	111		ug/L		111	22 - 147	0	16
2-Chlorophenol			100	72.7		ug/L		73	23 - 134	3	26
2,4-Dichlorophenol			100	94.1		ug/L		94	39 - 135	3	23
2,4-Dimethylphenol			100	97.9		ug/L		98	32 - 119	5	18
2,4-Dinitrophenol			100	91.6		ug/L		92	1 - 191	0	29
4,6-Dinitro-2-methylphenol			100	110		ug/L		110	1 - 181	2	30
2-Nitrophenol			100	90.7		ug/L		91	29 - 182	4	28
4-Nitrophenol			100	58.2		ug/L		58	1 - 132	1	24
Pentachlorophenol			100	104		ug/L		104	14 - 176	2	21
Phenol			100	37.3		ug/L		37	5 - 112	1	36
2,4,6-Trichlorophenol			100	89.0		ug/L		89	37 - 144	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*104*		*52 - 151*
2-Fluorobiphenyl	*84*		*44 - 120*
2-Fluorophenol	*45*		*17 - 120*
Nitrobenzene-d5	*88*		*42 - 120*
Phenol-d5	*33*		*10 - 120*
p-Terphenyl-d14	*111*		*22 - 125*

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 480-45301/1-A
Matrix: Water
Analysis Batch: 45555

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45301

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	ND		0.010		mg/L		12/20/11 15:43	12/21/11 12:21	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 480-45301/2-A
Matrix: Water
Analysis Batch: 45555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45301

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide	0.250	0.258		mg/L		103	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 480-42760/1
Matrix: Water
Analysis Batch: 42760

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.000		SU		100	99 - 101

QC Association Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

GC/MS VOA

Analysis Batch: 43009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-13451-1	Process Effluent COMP	Total/NA	Water	624	
LCS 480-43009/3	Lab Control Sample	Total/NA	Water	624	
MB 480-43009/5	Method Blank	Total/NA	Water	624	

GC/MS Semi VOA

Prep Batch: 43392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-13451-1	Process Effluent COMP	Total/NA	Water	625	
LCS 480-43392/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 480-43392/3-A	Lab Control Sample Dup	Total/NA	Water	625	
MB 480-43392/1-A	Method Blank	Total/NA	Water	625	

Analysis Batch: 43693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-13451-1	Process Effluent COMP	Total/NA	Water	625	43392
LCS 480-43392/2-A	Lab Control Sample	Total/NA	Water	625	43392
LCSD 480-43392/3-A	Lab Control Sample Dup	Total/NA	Water	625	43392

Analysis Batch: 44018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-43392/1-A	Method Blank	Total/NA	Water	625	43392

General Chemistry

Analysis Batch: 42760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-13451-1	Process Effluent COMP	Total/NA	Water	SM 4500 H+ B	
LCS 480-42760/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 45090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-13451-1	Process Effluent COMP	Total/NA	Water	Distill/CN	

Analysis Batch: 45120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-13451-1	Process Effluent COMP	Total/NA	Water	335.4	45090

Prep Batch: 45301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-13451-1	Process Effluent COMP	Total/NA	Water	Distill/CN	
LCS 480-45301/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 480-45301/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 45555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-13451-1	Process Effluent COMP	Total/NA	Water	335.4	45301
LCS 480-45301/2-A	Lab Control Sample	Total/NA	Water	335.4	45301
MB 480-45301/1-A	Method Blank	Total/NA	Water	335.4	45301

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

Client Sample ID: Process Effluent COMP
Date Collected: 12/01/11 08:40
Date Received: 12/02/11 12:40

Lab Sample ID: 480-13451-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		4	43009	12/06/11 19:50	TRB	TAL BUF
Total/NA	Prep	625			43392	12/08/11 07:41	TR	TAL BUF
Total/NA	Analysis	625		1	43693	12/09/11 18:20	RMM	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	42760	12/02/11 23:05	EGN	TAL BUF
Total/NA	Prep	Distill/CN			45090	12/19/11 12:13	PN	TAL BUF
Total/NA	Analysis	335.4		1	45120	12/19/11 14:16	KS	TAL BUF
Total/NA	Prep	Distill/CN			45301	12/20/11 15:43	JR	TAL BUF
Total/NA	Analysis	335.4		1	45555	12/21/11 12:36	JR	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: River Bend Site

TestAmerica Job ID: 480-13451-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Buffalo	Arkansas	State Program	6	88-0686
TestAmerica Buffalo	California	NELAC	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAC	4	E87672
TestAmerica Buffalo	Georgia	Georgia EPD	4	N/A
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Illinois	NELAC	5	100325 / 200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAC	7	E-10187
TestAmerica Buffalo	Kentucky	Kentucky UST	4	30
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Louisiana	NELAC	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY0044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAC	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAC	1	2337
TestAmerica Buffalo	New Hampshire	NELAC	1	68-00281
TestAmerica Buffalo	New Jersey	NELAC	2	NY455
TestAmerica Buffalo	New York	NELAC	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAC	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAC	6	T104704412-08-TX
TestAmerica Buffalo	USDA	USDA		P330-08-00242
TestAmerica Buffalo	Virginia	NELAC Secondary AB	3	460185
TestAmerica Buffalo	Virginia	State Program	3	278
TestAmerica Buffalo	Washington	State Program	10	C1677
TestAmerica Buffalo	Wisconsin	State Program	5	998310390

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: River Bend Site

TestAmerica Job ID: 480-13451-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
625	Semivolatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
335.4	Cyanide, Total	MCAWW	TAL BUF
SM 4500 H+ B	pH	SM	TAL BUF

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater",

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: River Bend Site

TestAmerica Job ID: 480-13451-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-13451-1	Process Effluent COMP	Water	12/01/11 08:40	12/02/11 12:40

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica

Client Information	Sampler: TAB	Lab PM: Fischer, Brian	Carrier Tracking No(s):	COC No: 480-19355-2172.1
Client Contact: Mr. Tom Behrendt	Phone: 856-0635	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 1
Company: Benchmark Env. Eng. & Science, PLLC				Job #:
Address: 2558 Hamburg Turnpike Suite 300	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Lackawanna	TAT Requested (days): STD			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: NY, 14218	PO #: Purchase Order Requested			
Phone:	WO #:			Other:
Email: tbehrendt@benchmarkturnkey.com	Project #: 48003578			
Project Name: River Bend Site/ GWTS Semi Annual	SSOW#:			
Site: New York				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	624_5ml - (MOD) Priority Pollutant List - VOA - 82	625 - (MOD) Priority Pollutant List - SVOA - 8	335.4 - Cyanide	SM4500 H+ - pH	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	B	N		
Process Effluent	12/1/11	1510	Comp	Water			X	X	X	X		* To be composited By Lab

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

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

Deliverable Requested: I, II, III, IV, Other (specify): STD

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:	Date/Time: 12/2/11 0730	Company: TK	Received by:	Date/Time: 12-02-11 10:50	Company: BFLO		
Relinquished by:	Date/Time: 12-02-11 12:40	Company: BFLO	Received by:	Date/Time: 12/2/11 1240	Company: TK		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:		

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.8

12/22/2011

Login Sample Receipt Checklist

Client: Turnkey Environmental Restoration, LLC

Job Number: 480-13451-1

Login Number: 13451

List Source: TestAmerica Buffalo

List Number: 1

Creator: Janish, Carl

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.	False	LAB TO COMP
Sampling Company provided.	True	BMTK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	False	LAB TO CHECK

ATTACHMENT 2

FLOW METER CALIBRATION DATA

Northeast Metrology Corp.
2601 Genesee Street
Buffalo, NY 14225
Tel: 716-827-3770 Fax: 716-827-3775
Website: www.vantek-nem.com e-mail: nem@nemcal.com

Calibration Certificate

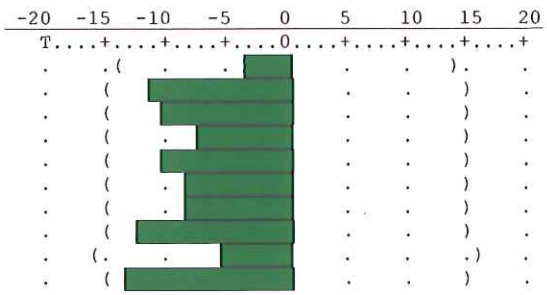
Company:	STEELFIELDS RIVERBEND	**Certificate #:**	1114898
Address:	197 BARAGA STREET	**Calibration Date:**	1/6/2011
	BUFFALO, NY 14210	**PO/Acct:**	
Contact:	PAUL W. WERTHMAN	**Page:**	1 of 2
Department:		**Recv'd Condition:**	
		Date Received:	
Gage Desc:	Flow Transmitter / Sensor	**Control #:**	SFRB#80210142061
Manufacturer:	Georg Fischer Signet	**Model:**	8550 / 515
Location:		**Serial #:**	80210142061

Repairs:

+ / - Tolerances: 2.000% / 2.000%
Graph Scale: +0.100000

GPM

Nominal	Actual	Deviation	
+74.970000	+74.630000	-0.340000	
+76.072500	+74.980000	-1.092500	
+76.072500	+75.040000	-1.032500	
+77.175000	+76.440000	-0.735000	
+76.072500	+75.050000	-1.022500	
+76.072500	+75.313000	-0.759500	Avg of 10
+76.072500	+75.264000	-0.808500	Avg of 10
+77.790000	+76.620000	-1.170000	Timed
+80.540000	+80.050000	-0.490000	Calculated
+75.940000	+74.620000	-1.320000	Timed



Comments:

CALIBRATION PERFORMED AT AMBIENT CONDITIONS: 64.5°F & 42.3% R.H.
RESET TOTAL GALLONS @ 11,693,715 (2010)
11,517,800 (2009)
PERM GALLONS: 76,000,540 (2010)
64,306,778 (2009)
mA LOOP OUTPUT: 0 = 3.99 - 16.87

Procedure:

110476:Flowme01.gdf (Manual 1000)

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
NEM-6006 Flow Calibrator (Polysonics)
821/261191-99, 821/264157-00, 821/256463-99, 821/263668-00 Cal Date / Due Date: 4/26/2006 -- 4/27/2011

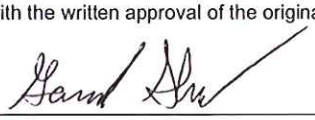
Gage Status: PASS **Due Date: 1/7/2012**

Northeast Metrology Corp. is accredited to ISO/IEC 17025:2005 for calibration and testing by ACLASS (Certificate# ACT-1116).
Dimensional calibration performed in NEM laboratory @ 68°F (±2.0°F) : (20°C (±1°C)) relative humidity less than 45%. Electronic & Mechanical calibration performed at ambient temperature.
ALL PERTINENT DATA AND READINGS CALIBRATED ARE AS FOUND OR AS LEFT UNLESS OTHERWISE DENOTED IN COMMENTS.
Calibration performed in accordance with one or more of the following specifications: ISO/IEC 17025:2005, ANSI/NCSL Z540-1-1994, Former MIL-STD 45662A, ISO 9001:2000, ISO 10012-1:1992(E).
Gage Blocks meet or exceed Federal Specifications for the grade and accuracy applicable to these items in accordance with Federal Specification GGG-G-15C.
Calibration meets or exceeds 4 : 1 ratio, with the exception of gage blocks stated above.
Calibration is performed on premises at Northeast Metrology Corp. unless otherwise denoted in Comments.
Note the recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under federal statutes.

Northeast Metrology Corp.
2601 Genesee Street
Buffalo, NY 14225
Tel: 716-827-3770 Fax: 716-827-3775
Website: www.vantek-nem.com e-mail: nem@nemcal.com

Calibration Certificate

Page #:	2 of 2	**Certificate #:**	1114898
Gage Desc:	Flow Transmitter / Sensor	**Control #:**	SFRB#80210142061
Manufacturer:	Georg Fischer Signet	**Model:**	8550 / 515
Location:		**Serial #:**	80210142061

Certified By: GS / GK Signature: 

This certificate is not valid unless all 2 page(s) are present.
Results of this certificate relate only to the item mentioned in document header.
END OF DOCUMENT

APPENDIX C

2011 COMPREHENSIVE ANNUAL GROUNDWATER MONITORING REPORT

(PROVIDED ELECTRONICALLY)

April 26, 2012

Mr. Maurice Moore
New York State Dept. of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Riverbend Site (formerly Steelfields) (V00619-9)
2011 Comprehensive Annual Groundwater Monitoring Report

Dear Mr. Moore:

On behalf of our client, Riverbend, LLC, TurnKey Environmental Restoration, LLC, has prepared this comprehensive letter report to transmit the results of the May 2011 groundwater monitoring event conducted at Area I (Former Steel Plant Parcel), Area II (Former Coke Plant Parcel), and Area III (Former Warehouse Parcel) of BUDC's Riverbend Site, Buffalo, NY (see Figure 1). This letter report also includes the results of the May and November 2011 Oxygen Release Compound (ORC) monitoring events for Area III. The current groundwater and ORC monitoring events were performed May 11-14, 2011 and Area III ORC November 28 through December 1, 2011. The LTGWM network wells are summarized in Table 1 and shown on Figure 1. A summary of field activities and findings for all three areas of the Site are presented below.

PURPOSE

The activities performed during the current site-wide groundwater monitoring event were performed in general accordance with the following documents:

- *Work Plan for Long-Term Groundwater Monitoring (LTGWM) of Area I* (revised September 2002);
- *Work Plan for LTGWM of Areas II and III* (October 2007) submitted as Attachment A4 of Appendix HH of the Final Engineering Report for Areas II and III (May 2008);
- May 5, 2008 Response to NYSDEC comment letter regarding Area III Site Management Plan (comment/responses 8, 9, and 10);
- May 5, 2008 Response to NYSDEC comment letter regarding Areas II and III Final Engineering Report (comment/responses 19 and 22);
- *ORC Maintenance and Monitoring Manual* (March 2008) submitted as Attachment A5 of Appendix HH of the Final Engineering Report for Areas II and III (May 2008); and
- May 5, 2011 NYSDEC Response to Modification Request Letter.

This annual report includes a tabular and/or graphical assessment and detailed discussion of groundwater quality trends on an Area by Area basis. Groundwater flow patterns, however, are

discussed on a site-wide basis. Groundwater samples were analyzed for the recently modified parameter list identified by Area in Table 2 and discussed in the next section.

PROGRAM MODIFICATIONS

On May 5, 2011, the NYSDEC approved a modification of the groundwater parameter lists and sample frequency for Areas I, II, and III. The modified monitoring program for all three Areas now follows a two-year monitoring cycle (e.g., bi-annual) as presented in Table 2. In general, this modification reduces the volatile organic compound and metals analysis frequency to once every other year for most wells while the collection of field parameters must be measured every year going forward.

GROUNDWATER ELEVATIONS & FLOW

Depth to water measurements and calculated groundwater elevations for the May 20, 2011 and August 27, 2011 monitoring periods are summarized in Tables 3 and 4, respectively. Area II well A2-MW-14 is damaged and was not sampled or sounded during either event. The Lake Erie elevation, presented in each table for reference, was obtained from the National Oceanic and Atmospheric Administration/National Ocean Service's (NOAA/NOS) Center for Operational Oceanographic Products and Services (CO-OPS) web page; Great Lakes Water Level Data Inventory for station number 9063020 Buffalo, Lake Erie, New York.

An isopotential map, presented as Figure 1, was prepared from the May 2011 groundwater elevations. For comparison, the baseline isopotential map prepared by Geomatrix from the June 1998 groundwater elevations representing groundwater flow conditions at the Site prior to the Area II Containment Cell construction is presented as Figure 2. Due to exceptional rain fall totals for the period of March through May 2011 (nearly 7 inches above normal), typical groundwater capture by the Area II collection system was not observed during the May 2011 event as shown in Figure 1. The August 2011 isopotential map presented as Figure 3, however, reflects groundwater conditions following a period of more typical precipitation from June through August 2011. As expected, the August isopotential map indicates a return of groundwater capture typically observed around the Area II collection system. Further examination of Figure 3 indicates significant lowering of the water table of between 2 to 4 feet throughout the containment cell from May 2011 and extending north and east beyond the Containment Cell as generally predicted in the selected remedial approach groundwater flow model (Geomatrix, December 1998) (see Attachment 1). The groundwater depression in June 1998 around the Terminal Basin was also no longer present during either event due to the discontinuation (in January 2009) of storm water management activities at the Site in that area (i.e., pumping from the basin to the sanitary sewer).

Based on the most recent (August) data, current groundwater flow is toward the collection trench from all directions. The groundwater flow, as depicted on Figure 3, also shows that potentially impacted groundwater from outside the Containment Cell to the north on the Former August Feine and Norfolk Southern parcels is being drawn back toward the collection system, as predicted by pre-design MODFLOW® modeling. Other than within the Terminal Basin, surface water ponding was not observed in August 2011.

GROUNDWATER COLLECTION SYSTEM EVALUATION

Evaluation of the slurry wall effectiveness has previously involved comparing groundwater elevations from monitoring well A2-MW-19, located outside the Containment Cell, and well A2-MW-7, located within the Cell (see Figure 3). Although hydraulic capture returned in August 2011, comparison of groundwater elevations in this well pair indicated a slight outward hydraulic gradient. As the groundwater collection system continues operating, this temporary condition is expected to reverse in the near term. This was likely a temporary condition attributable to the unusually high spring precipitation.

The May 2011 analytical data indicated no deviation from historical concentrations at any of the sample locations and that groundwater quality outside the Containment Cell was not affected by the temporary change in gradient.

Based upon the results of this evaluation and the August 2011 isopotential map discussed earlier, the groundwater collection/containment system is expected to improve and maintain hydraulic capture with no adverse effects to Site groundwater quality. The system also appears to be effectively collecting potentially impacted groundwater and controlling groundwater migration within the Area II Containment Cell, as well as to the east and north of the containment cell. Routine system monitoring and maintenance in conjunction with long-term groundwater monitoring of Areas I and II, as scheduled, is expected to be sufficient to continue to assess the long-term effectiveness of the Containment Cell.

AREA I FIELD ACTIVITIES & FINDINGS

Table 5 summarizes the Area I annual LTGWM event field-measured parameters and analytical results for wells A1-MW-1 through A1-MW-9, A1-MW-M2, and A1-P-4. Compounds detected above method detection limits are shown on the table with their associated concentration and NYSDEC Groundwater Quality Standard (NYSDEC TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values, June 1998) for comparison. Concentrations exceeding NYSDEC Groundwater Quality Standards (GWQSs) are shaded. With the exception of pH at well A1-MW-5 and arsenic at wells A1-MW-6 and A1-MW-8, all compounds were either reported as non-detect or at concentrations well below their respective GWQSs. A discussion of the moving average trend analysis for Area I groundwater is presented later in this report.

During the current monitoring event, field personnel also performed visual immiscible layer surveillance and observed no non-aqueous phase liquid (NAPL) in any of the Area I wells listed in Table 1, except well A1-MW-6. Not including the initial well development and sampling events, A1-MW-6 has been monitored since the February 2005 installation of the PetroTrap™ free product passive skimmer or more than 6 years. Since installation, a total of approximately seven gallons of recovered product has been removed (see Table 6). In accordance with the LTGWM Plan, all recovered product is temporarily stored in a 5-gallon container and staged within the on-site Groundwater Pre-Treatment System (GWPTS) building until a licensed used oil service contractor picks up the recovered product for proper recycling or disposal.

As indicated in Table 6, seasonal increases in product thickness and recovery are apparent during the typical late Fall and early Spring rainy periods. Based upon the progress to date,

monitoring of A1-MW-6 should continue in accordance with the Area I LTGWM Plan on a monthly basis.

AREA II FIELD ACTIVITIES & FINDINGS

Table 7 summarizes the Area II annual LTGWM event field-measured parameters and analytical results for wells A2-MW-3, A2-MW-4R, A2-MW-5, A2-MW-10R, and A2-MW-13, A2-MW-15, A2-MW-16, and A2-MW-17. Well A2-MW-14 was damaged and could not be sampled. Compounds detected above method detection limits are shown on the table with their associated concentration and GWQS for comparison. With the exception of pH at well A2-MW-15, all compounds were either reported as non-detect or at concentrations well below their respective GWQSs. A discussion of the moving average trend analysis for Area II groundwater is presented later in this report.

AREA III FIELD ACTIVITIES & FINDINGS

Table 8 summarizes the Area III LTGWM event field-measured parameters and analytical results for wells A3-MW-3, A3-MW-6, A3-MW-7, A3-MW-9, and A3-MW-10. Compounds detected above method detection limits are shown on the table with their associated concentration and GWQS for comparison. With the exception of pH and benzene at wells A3-MW-7, A3-MW-9, and A3-MW-10 as well as arsenic and cyanide at well A3-MW-3, all compounds were either reported as non-detect or at concentrations well below their respective GWQSs. A discussion of the moving average trend analysis for Area III groundwater is presented later in this report.

In accordance with NYSDEC-approved procedures, ORC wells A3-ORC-1 through A3-ORC-11 are to be purged until 10 well volumes are removed or to dryness for four consecutive days, whichever occurs first, in order to obtain representative groundwater samples within the ORC area of Area III. Tables 9 and 10 present a summary of the May and November Area III ORC event field-measured parameters, purge volumes, and analytical results, respectively. Compounds detected above method detection limits are shown on these tables with their associated concentration and GWQS for comparison; concentrations exceeding the GWQSs are shaded. Upon examination of Tables 9 and 10, benzene exceeded the GWQS for all eleven wells monitored for both events. For the May and November events, pH was measured below the GWQS lower limit of 6.5 at all of the ORC wells except A3-ORC-1, which was within the GWQS pH limits (6.5 to 8.5) in May and above the GWQS upper limit in November.

The ORC "socks," suspended in each of the ORC wells are to be replaced when depleted. During the current monitoring event, ORC socks were removed and checked; none of which required replacement.

MOVING AVERAGE TREND ANALYSIS (MATA)

In general accordance with the LTGWM Plan for each Area of the Site, any parameter exceeding the GWQS for two consecutive events is to be statistically evaluated for all monitoring wells listed in Table 1. Statistical evaluation for each parameter of interest involves the averaging of four sequential monitoring event concentrations and plotting the moving average. The Area by Area 4-year moving average trend analysis (MATA) as well as the

concentration versus time plots for those monitored locations and parameters requiring tracking (as defined above) are presented in Attachment 2 and summarized in Table 11. Some Area II and Area III plots are not included due to insufficient data; a minimum of three moving average data points are required to assess a trend in the data. As more data is collected, MATA assessments will be made for these monitoring locations, as necessary. Non-detect concentrations for tracked compounds are not presented on any of the plots.

As summarized in Table 11 and presented in Attachment 2, the MATA assessment indicates the following:

- The concentration versus time and MATA plots for the field measured pH at wells A1-MW-5 and A3-MW-7, although elevated above the GWQS, continue to indicate a decreasing trend since September 2004 and a neutral trend (neither increasing nor decreasing) since July 2007, respectively. Although field measured pH at well A2-MW-16 indicates a slight increasing trend, the field measured values continue to fluctuate above and below the GWQS pH low range of 6.5.
- The MATA plot for benzene at wells A2-MW-16 and A2-MW-17 indicates a decreasing trend. The concentrations versus time plots shown on the same charts indicate the benzene concentrations at both locations have also declined below the GWQS.
- The MATA plot for benzene at well A3-MW-7 at first glance indicates an increasing 4-year moving average trend; however upon closer inspection the trend is being influenced by an unusually high concentration reported in May 2011 of more than 10 times historic values (i.e., outlier).
- The MATA plot for n-butylbenzene and n-propylbenzene at well A1-MW-6 at first glance indicates an increasing 4-year moving average trend; however upon closer inspection the trend is being influenced by unusually high concentrations of these two analytes reported in August 2007 of more than 10 times historic values (i.e., outlier). The concentration versus time plot shown on the same charts, however, indicates a return to historic ranges from April 2008 through May 2011 as well as the start of a neutral or slightly decreasing trend.
- Similar to the above, the MATA plot of isopropylbenzene at well A1-MW-6 at first glance indicates an increasing 4-year moving average trend; however upon closer inspection the trend is being influenced by an outlier reported in May 2009 of more than 3 times historic concentrations. The concentration versus time plot shown on the same plot, however indicates that the trend is returning to historic concentrations with the May 2011 result being non-detect.
- Although the concentration versus time plot for total arsenic at well A1-MW-6 reveals a wide concentration range from a high 0.29 mg/L in December 2006 to non-detect in August 2007, the MATA plot clearly indicates a decreasing trend since August 2007.
- The concentration versus time plot for total arsenic at well A1-MW-8 indicates a period of moderation from December 2006 to April 2008 where the arsenic concentration actually began to decrease, however the data since then has indicated higher concentrations. The MATA plot does indicate an increasing trend and this compound will continue to be monitored at this location.

PLANNED ACTIVITIES

A schedule summarizing the past, present, and future monitoring events is presented in Table 1. The new NYSDEC-approved bi-annual analytical program is presented in Table 2. The next planned comprehensive monitoring event for Areas I, II, and III is tentatively scheduled for May 2012. Area III ORC well monitoring is tentatively scheduled for May and November 2012 (every six months).

Please contact us if you have any questions.

Sincerely,
TurnKey Environmental Restoration, LLC

Bryan C. Hann
Project Manager

Enclosures

ec: Peter Cammarata (BUDC)
David Stebbins (BUDC)
Paul Werthman (TurnKey)

File: 0171-006-500

TABLES

TABLE 1

GROUNDWATER MONITORING NETWORK AND SAMPLE FREQUENCY [1,2]

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Well Designation	Type of Well		Monitoring Event									
	New	Existing	Year 1		Year 2		Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
			1 SA	2SA	1 SA	2SA	Annual	Annual	Annual	Annual	Annual	Annual
AREA I												
A1-MW-1		x	Sep-04	Sep-05	Dec-06		Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-MW-2		x	Sep-04	Sep-05	Dec-06		Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-MW-3		x	Sep-04	Sep-05	Dec-06		Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-MW-4	x		Sep-04	Sep-05	May-06	Dec-06	Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-MW-5	x		Sep-04	Sep-05	May-06	Dec-06	Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-MW-6	x		Sep-04	Sep-05	May-06	Dec-06	Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-MW-7	x		*water level only*								**May-11**	●
A1-MW-8	x		Sep-04	Sep-05	May-06	Dec-06	Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-MW-9	x		Sep-04	Sep-05	May-06	Dec-06	Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-MW-M2		x	Sep-04	Sep-05	Dec-06		Aug-07	Apr-08	May-09	May-10	**May-11**	●
A1-P-4		x	Sep-04	Sep-05	Dec-06		Aug-07	Apr-08	May-09	May-10	**May-11**	●
AREA II												
A2-MW-3		x	Jul-07	Dec-07	Apr-08		May-09	May-10	**May-11**	●	●	●
A2-MW-4R		x	Jul-07	Dec-07	Apr-08		May-09	May-10	**May-11**	●	●	●
A2-MW-5		x	Jul-07	Dec-07	Apr-08		May-09	May-10	**May-11**	●	●	●
A2-MW-6		x	*water level only*									
A2-MW-7		x	*water level only*									
A2-MW-10		x	Dec-07	Apr-08	May-09		May-10	**May-11**	●	●	●	●
A2-MW-12		x	*water level only*									
A2-MW-13		x	Jul-07	Dec-07	Apr-08		May-09	May-10	**May-11**	●	●	●
A2-MW-14	x		Jul-07	Dec-07	Apr-08	May-09	May-10	**May-11**	●	●	●	●
A2-MW-15 [3]	x		Jul-07	Dec-07		May-09		**May-11**	●	●	●	●
A2-MW-16	x		Jul-07	Dec-07	Apr-08	May-09	May-10	**May-11**	●	●	●	●
A2-MW-17	x		Jul-07	Dec-07	Apr-08	May-09	May-10	**May-11**	●	●	●	●
A2-MW-18	x		*water level only*									
A2-MW-19	x		*water level only*									
A2-MW-20	x		*water level only*									
AREA III												
A3-MW-3		x	Oct-08	May-09	May-10		**May-11**	●	●	●	●	●
A3-MW-6		x	Oct-08	May-09	May-10		**May-11**	●	●	●	●	●
A3-MW-7		x	Jul-07	Dec-07	Apr-08		May-09	May-10	**May-11**	●	●	●
A3-MW-9	x		Oct-08	May-09	Oct-09	May-10	**May-11**	●	●	●	●	●
A3-MW-10	x		Oct-08	May-09	Oct-09	May-10	**May-11**	●	●	●	●	●
AREA III - ORC wells (every 6 months)												
A3-ORC-1		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-2		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-3		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-4		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-5		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-6		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-7		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-8		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-9		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-10		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●
A3-ORC-11		x	Jul-07	Dec-07	Apr-08	Nov-08	May-09	Nov-09	May-10	Nov-10	**May-11**	**Nov-11**	●

Notes:

1. Per the LTGWM Plan, newly installed monitoring wells require four consecutive semi-annual groundwater monitoring events, then annually thereafter.
2. Per the LTGWM Plan, existing monitoring wells require two consecutive semi-annual groundwater monitoring events, then annually thereafter.
3. Prior to May 2011, this monitoring well was sampled every two years. NYSDEC-approved modification requires annual sampling going forward.

May-11	= current and tentatively scheduled future monitoring event
x	= type of monitoring well
●	= to be monitored beyond the current contract year.

TABLE 2

ANALYTICAL PROGRAM SUMMARY

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Well Designation	Monitoring Event															
	2011								2012							
	Field	8021 VOCs	8021 Benzene Only	As	Cr	Pb	CN	Alk.	Field	8021 VOCs	8021 Benzene Only	As	Cr	Pb	CN	Alk.
AREA I																
A1-MW-1	x	x		x					x							
A1-MW-2	x	x							x							
A1-MW-3	x	x							x							
A1-MW-4	x	x							x							
A1-MW-5	x	x							x							
A1-MW-6	x	x		x					x	x		x				
A1-MW-7 [2]	x	x		x	x	x			x							
A1-MW-8	x	x		x					x			x				
A1-MW-9	x	x							x							
A1-MW-M2	x	x							x							
A1-P-4	x	x			x				x				x			
AREA II																
A2-MW-3	x	x							x							
A2-MW-4R	x	x							x							
A2-MW-5	x	x							x							
A2-MW-6	*water level only*								*water level only*							
A2-MW-7	*water level only*								*water level only*							
A2-MW-10R	x	x							x							
A2-MW-12	*water level only*								*water level only*							
A2-MW-13	x	x							x							
A2-MW-14	x	x			x				x				x			
A2-MW-15	x	x							x	x						
A2-MW-16	x	x		x	x	x			x	x		x	x	x		
A2-MW-17	x	x							x	x						
A2-MW-18	*water level only*								*water level only*							
A2-MW-19	*water level only*								*water level only*							
A2-MW-20	*water level only*								*water level only*							
AREA III																
A3-MW-3	x	x		x			x		x	x		x			x	
A3-MW-6	x	x		x			x		x	x		x			x	
A3-MW-7	x	x					x		x	x					x	
A3-MW-9	x	x				x			x	x				x		
A3-MW-10	x	x					x		x	x					x	
AREA III - ORC wells (every 6 months)																
A3-ORC-1	x		x					x	x		x					x
A3-ORC-2	x		x					x	x		x					x
A3-ORC-3	x		x					x	x		x					x
A3-ORC-4	x		x					x	x		x					x
A3-ORC-5	x		x					x	x		x					x
A3-ORC-6	x		x					x	x		x					x

TABLE 2

ANALYTICAL PROGRAM SUMMARY

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Well Designation	Monitoring Event															
	2011								2012							
	Field	8021 VOCs	8021 Benzene Only	As	Cr	Pb	CN	Alk.	Field	8021 VOCs	8021 Benzene Only	As	Cr	Pb	CN	Alk.
A3-ORC-7	x		x					x	x		x					x
A3-ORC-8	x		x					x	x		x					x
A3-ORC-9	x		x					x	x		x					x
A3-ORC-10	x		x					x	x		x					x
A3-ORC-11	x		x					x	x		x					x
Totals:	**36**	**25**	**11**	**7**	**4**	**3**	**4**	**11**	**36**	**9**	**11**	**5**	**3**	**2**	**4**	**11**

Notes:
1. Modified analytical plan as per NYSDEC approval letter dated May 5, 2011.
2. Per a NYSDEC request, A1-MW-7 was sampled for VOCs, arsenic, chromiuim, and lead in 2011; water level and field parameters annually thereafter.

TABLE 3

GROUNDWATER ELEVATION MEASUREMENTS
May 20, 2011

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Monitoring Location	TOR Elevation (fmsl)	DTP (fbTOR)	DTW (fbTOR)	Product Thickness (feet)	Groundwater Elevation (fmsl)	Corrected Groundwater Elevation [1] (fmsl)
Area I Monitoring Wells [2]						***11 Wells***
A1-MW-1	586.38	NP	9.56	NP	576.82	576.82
A1-MW-2	586.39	NP	5.84	NP	580.55	580.55
A1-MW-3	591.98	NP	17.91	NP	574.07	574.07
A1-MW-4	586.70	NP	5.90	NP	580.80	580.80
A1-MW-5	590.48	NP	3.98	NP	586.50	586.50
A1-MW-6	591.60	17.80	18.25	0.45	573.35	573.75
A1-MW-7	586.97	NP	9.23	NP	577.74	577.74
A1-MW-8	589.47	NP	10.38	NP	579.09	579.09
A1-MW-9	588.05	NP	11.81	NP	576.24	576.24
A1-MW-M2	587.85	NP	6.86	NP	580.99	580.99
A1-P-4	589.37	NP	11.20	NP	578.17	578.17
Area II Monitoring Wells [3]						***19 Wells***
A2-MW-3	588.95	NP	6.61	NP	582.34	582.34
A2-MW-4R	588.59	NP	6.17	NP	582.42	582.42
A2-MW-5	587.25	NP	4.71	NP	582.54	582.54
A2-MW-6	592.69	NP	5.54	NP	587.15	587.15
A2-MW-7	602.05	NP	16.59	NP	585.46	585.46
A2-MW-10R	593.59	NP	8.86	NP	584.73	584.73
A2-MW-11	590.11	NP	5.73	NP	584.38	584.38
A2-MW-12	604.12	NP	15.44	NP	588.68	588.68
A2-MW-13	597.90	NP	12.02	NP	585.88	585.88
A2-MW-14 [6]	593.02	*~ d e s t r o y e d ~*				
A2-MW-15	589.56	NP	3.37	NP	586.19	586.19
A2-MW-16	597.62	NP	11.87	NP	585.75	585.75
A2-MW-17	596.94	NP	12.09	NP	584.85	584.85
A2-MW-18	587.64	NP	1.80	NP	585.84	585.84
A2-MW-19	592.02	NP	7.81	NP	584.21	584.21
A2-MW-20	591.54	NP	3.61	NP	587.93	587.93
A2-PW-1	601.76	NP	16.24	NP	585.52	585.52
A2-PW-2	603.91	NP	16.81	NP	587.10	587.10
A2-PW-3	603.88	19.98	17.99	-1.99	585.89	584.14
Area III Monitoring Wells [3]						***5 Wells***
A3-MW-3	585.40	NP	1.86	NP	583.54	583.54
A3-MW-6	585.70	NP	2.25	NP	583.45	583.45
A3-MW-7	586.39	NP	3.91	NP	582.48	582.48
A3-MW-9	597.61	NP	13.98	NP	583.63	583.63
A3-MW-10	585.41	NP	5.00	NP	580.41	580.41

TABLE 3

GROUNDWATER ELEVATION MEASUREMENTS
May 20, 2011

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Monitoring Location	TOR Elevation (fmsl)	DTP (fbTOR)	DTW (fbTOR)	Product Thickness (feet)	Groundwater Elevation (fmsl)	Corrected Groundwater Elevation [1] (fmsl)
Area III ORC Monitoring Wells [3]						***11 Wells***
A3-ORC-1	587.17	NP	3.91	NP	583.26	583.26
A3-ORC-2	587.35	NP	4.13	NP	583.22	583.22
A3-ORC-3	587.55	NP	4.16	NP	583.39	583.39
A3-ORC-4	587.14	NP	3.91	NP	583.23	583.23
A3-ORC-5	587.77	NP	3.42	NP	584.35	584.35
A3-ORC-6	587.53	NP	4.55	NP	582.98	582.98
A3-ORC-7	587.16	NP	4.91	NP	582.25	582.25
A3-ORC-8	587.51	NP	4.92	NP	582.59	582.59
A3-ORC-9	585.15	NP	2.52	NP	582.63	582.63
A3-ORC-10	587.60	NP	4.87	NP	582.73	582.73
A3-ORC-11	587.70	NP	4.54	NP	583.16	583.16
Surface Water [4,5]						***3 Locations***
SG-01 (downstream)	585.07	NP	19.92	NP	565.15	565.15
SG-02 (upstream)	590.72	NP	11.20	NP	579.52	579.52
Lake Erie	NA	NA	NA	NA	NA	572.32

Notes:

1. Groundwater elevations are corrected if free product (i.e., LNAPL) is present.
2. Area I monitoring well reference point elevations (i.e., top of riser for wells and sheet pile for staff gauges) as surveyed by TurnKey on November 10, 2004.
3. Monitoring well elevations have been surveyed at various times by TurnKey or Steelfields.
4. Staff Gauge (SG) locations are located at the upstream and downstream locations indicated on Figure 1. Each staff gauge was surveyed on January 3, 2008 by Niagara Boundary personnel.
5. Source: NOAA Tides & Currents Web Page- Buffalo, NY Station ID 9063020; average daily elevation of Buffalo, New York Station #9063020.
6. During the May 2010 monitoring event, this well appeared to be vandalized and damaged beyond repair.

Definitions:

DTP = depth to product, if present
DTW = detph to water
fmsl = feet above mean sea level
fbTOR = feet below top of riser
NP = no measureable product was present
R = replacement well
TOR = top of riser

TABLE 4

GROUNDWATER ELEVATION MEASUREMENTS
August 27, 2011

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Monitoring Location	TOR Elevation (fmsl)	DTP (fbTOR)	DTW (fbTOR)	Product Thickness (feet)	Groundwater Elevation (fmsl)	Corrected Groundwater Elevation [1] (fmsl)
Area I Monitoring Wells [2]						***11 Wells***
A1-MW-1	586.38	NP	9.62	NP	576.76	576.76
A1-MW-2	586.39	NP	8.21	NP	578.18	578.18
A1-MW-3	591.98	NP	17.77	NP	574.21	574.21
A1-MW-4	586.70	NP	7.66	NP	579.04	579.04
A1-MW-5	590.48	NP	6.81	NP	583.67	583.67
A1-MW-6	591.60	18.36	19.18	0.82	572.42	573.14
A1-MW-7	586.97	NP	12.41	NP	574.56	574.56
A1-MW-8	589.47	NP	12.70	NP	576.77	576.77
A1-MW-9	588.05	NP	12.45	NP	575.60	575.60
A1-MW-M2	587.85	NP	7.42	NP	580.43	580.43
A1-P-4	589.37	NP	11.75	NP	577.62	577.62
Area II Monitoring Wells [3]						***19 Wells***
A2-MW-3	588.95	NP	7.68	NP	581.27	581.27
A2-MW-4R	588.59	NP	7.31	NP	581.28	581.28
A2-MW-5	587.25	NP	6.04	NP	581.21	581.21
A2-MW-6	592.69	NP	9.55	NP	583.14	583.14
A2-MW-7	602.05	NP	19.23	NP	582.82	582.82
A2-MW-10R	593.59	NP	11.23	NP	582.36	582.36
A2-MW-11	590.11	NP	8.22	NP	581.89	581.89
A2-MW-12	604.12	NP	17.25	NP	586.87	586.87
A2-MW-13	597.90	NP	14.50	NP	583.40	583.40
A2-MW-14 [6]	593.02	*~ d e s t r o y e d ~*				
A2-MW-15	589.56	NP	6.16	NP	583.40	583.40
A2-MW-16	597.62	NP	14.14	NP	583.48	583.48
A2-MW-17	596.94	NP	13.81	NP	583.13	583.13
A2-MW-18	587.64	NP	5.14	NP	582.50	582.50
A2-MW-19	592.02	NP	9.87	NP	582.15	582.15
A2-MW-20	591.54	NP	6.32	NP	585.22	585.22
A2-PW-1	601.76	*Note 7*	*Note 7*	*Note 7*	*Note 7*	*Note 7*
A2-PW-2	603.91	NP	17.31	NP	586.60	586.60
A2-PW-3	603.88	19.72	19.75	0.03	584.13	584.16
Area III Monitoring Wells [3]						***5 Wells***
A3-MW-3	585.40	NP	3.58	NP	581.82	581.82
A3-MW-6	585.70	NP	3.72	NP	581.98	581.98
A3-MW-7	586.39	NP	5.23	NP	581.16	581.16
A3-MW-9	597.61	NP	15.54	NP	582.07	582.07
A3-MW-10	585.41	NP	6.20	NP	579.21	579.21

TABLE 4

GROUNDWATER ELEVATION MEASUREMENTS
August 27, 2011

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Monitoring Location	TOR Elevation (fmsl)	DTP (fbTOR)	DTW (fbTOR)	Product Thickness (feet)	Groundwater Elevation (fmsl)	Corrected Groundwater Elevation [1] (fmsl)
Area III ORC Monitoring Wells [3]						***11 Wells***
A3-ORC-1	587.17	NP	6.71	NP	580.46	580.46
A3-ORC-2	587.35	NP	6.39	NP	580.96	580.96
A3-ORC-3	587.55	NP	6.42	NP	581.13	581.13
A3-ORC-4	587.14	NP	6.05	NP	581.09	581.09
A3-ORC-5	587.77	NP	6.34	NP	581.43	581.43
A3-ORC-6	587.53	NP	6.48	NP	581.05	581.05
A3-ORC-7	587.16	NP	6.90	NP	580.26	580.26
A3-ORC-8	587.51	NP	6.54	NP	580.97	580.97
A3-ORC-9	585.15	NP	4.22	NP	580.93	580.93
A3-ORC-10	587.60	NP	6.55	NP	581.05	581.05
A3-ORC-11	587.70	NP	6.32	NP	581.38	581.38
Surface Water [4,5]						***3 Locations***
SG-01 (downstream)	585.07	NP	11.47	NP	573.60	573.60
SG-02 (upstream)	590.72	NP	16.80	NP	573.92	573.92
Lake Erie	NA	NA	NA	NA	NA	571.85

Notes:

1. Groundwater elevations are corrected if free product (i.e., LNAPL) is present.
2. Area I monitoring well reference point elevations (i.e., top of riser for wells and sheet pile for staff gauges) as surveyed by TurnKey on November 10, 2004.
3. Monitoring well elevations have been surveyed at various times by TurnKey or Steelfields.
4. Staff Gauge (SG) locations are located at the upstream and downstream locations indicated on Figure 1. Each staff gauge was surveyed on January 3, 2008 by Niagara Boundary personnel.
5. Source: NOAA Tides & Currents Web Page- Buffalo, NY Station ID 9063020; average daily elevation of Buffalo, New York Station #9063020.
6. During the May 2010 monitoring event, this well appeared to be vandalized and damaged beyond repair.
7. Monitoring location could not be accessed due to bees.

Definitions:

DTP = depth to product, if present
DTW = detph to water
fmsl = feet above mean sea level
fbTOR = feet below top of riser
NP = no measureable product was present
R = replacement well
TOR = top of riser

TABLE 5

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Area I: Former Steel Plant Parcel

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Parameter	Monitoring Location and Date of Sample Collection											GWQS/GV [1]
	A1-MW-1	A1-MW-2	A1-MW-3	A1-MW-4	A1-MW-5	A1-MW-6	A1-MW-7	A1-MW-8	A1-MW-9	A1-MW-M2	A1-P-4	
	05/19/11	05/20/11	05/20/11	05/18/11	05/18/11	05/17/11	05/23/11	05/20/11	05/18/11	05/20/11	05/20/11	
Field Measurements (units as indicated) [2]												
pH (units)	8.78	7.40	6.93	6.73	**9.83**	6.51	6.59	6.95	7.54	7.68	7.66	**6.5 - 8.5**
Temperature (degrees C)	9.0	12.6	11.2	10.3	13.8	11.0	9.6	10.5	12.2	8.9	10.1	**NA**
Specific Conductance (uS)	475.5	556.2	826.5	743.2	626.1	1163	707.8	1949	669.5	450.8	488.6	**NA**
Turbidity (NTU)	6.47	8.47	12	4.95	1.84	25.5	5.48	7.9	0.91	1.38	9.05	**NA**
Dissolved Oxygen (mg/L)	1.64	1.73	2.17	1.70	1.43	NA	5.68	1.09	1.42	2.11	6.81	**NA**
Eh (mV)	- 227	- 30	- 60	- 42	- 127	- 100	52	- 128	- 110	- 98	- 28	**NA**
Visual Observation	sl. turbid	clear	sl. orange	clear	clear	sheen	clear	orange	clear	clear	clear	**NA**
Olfactory Observation	none	sl. odor	none	none	none	petro-like odor	none	none	none	none	none	**NA**
Volatile Organic Compounds (ug/L)												
Benzene	0.089 BJ	0.026 BJ	0.039 BJ	ND	0.052 J	0.24	ND	0.31 BJ	ND	ND	ND	**1**
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
p-Cymene (4-Isopropyltoluene)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Methyl tert butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Xylenes, Total	0.085 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**15**
Total VOCs	***0.174***	***0.026***	***0.039***	***0***	***0.052***	***0.24***	***0***	***0.31***	***0***	***0***	***0***	**10**
Total Inorganics (mg/L)												
Total Arsenic	0.016	--	--	--	--	**0.055**	ND	**0.12**	--	--	--	**0.025**
Total Chromium	--	--	--	--	--	--	ND	--	--	--	0.041	**0.05**
Total Lead	--	--	--	--	--	--	ND	--	--	--	--	**0.025**

Notes:

1. NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value 6NYCRR Part 703 (effective June 1998)
2. Field measurements were collected immediately before and after groundwater sample collection.
3. Light non-aqueous phase liquid (LNAPL) detected; approximately 2.39 feet in thickness.
4. " NA " = Not Applicable, a GWQS/GV has not been established for this parameter.
5. " ND " = the sample location was analyzed for this parameter, but reported at a concentration less than the method detection limit.
6. " -- " = compound is not analyzed at this location

= Shaded values represent exceedances of the NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value.

TURNKEY ENVIRONMENTAL RESTORATION, LLC

TABLE 6

SUMMARY OF LNAPL THICKNESS / REMOVAL IN A1-MW-6
Area I: Former Republic (LTV) Steel Plant Parcel

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Date	Days Since Last Visit	LNAPL Measurement			Quantity Removed [1] (oz.)	Height of Petro-Trap (fbTOR)	Comments
		Top (fbTOR)	Bottom (fbTOR)	Thickness (feet)			
09/21/04	0	18.10	18.40	0.30	NA	--	well development
09/23/04	2	18.10	18.40	0.30	NA	--	Fall 2004 groundwater monitoring event
02/01/05	**131**	**17.50**	**20.85**	**3.35**	**NA**	**16.0**	**installed PetroTrap passive skimmer**
02/08/05	7	17.94	19.89	1.95	16	16.0	first LNAPL removal from Petro Trap
02/11/05	3	17.89	19.75	1.86	20	16.0	ok
02/15/05	4	18.10	18.52	0.42	20	16.0	ok
02/18/05	3	17.59	17.91	0.32	12	16.0	ok
02/25/05	7	18.02	18.51	0.49	2	16.0	Petro Trap tubing was tangled
03/04/05	7	18.13	18.63	0.50	6	16.0	Petro Trap tubing was tangled
03/18/05	14	18.00	18.74	0.74	3.5	16.0	checked Petro Trap for leaks, none located
04/08/05	21	17.37	18.20	0.83	24	15.0	ok; raised Petro Trap approximately 1-foot
04/14/05	6	17.65	17.81	0.16	22	15.0	ok
04/28/05	14	16.23	16.25	0.02	25.6	15.0	ok
05/17/05	19	17.62	17.80	0.18	14	14.0	~14 oz. of water in Petro Trap; raised approx. 1-foot
06/21/05	35	17.68	17.71	0.03	14	14.0	ok
07/18/05	27	18.03	18.11	0.08	12	15.0	ok, lowered approx. 1-foot
09/09/05	53	18.34	18.42	0.08	8	15.0	ok
09/20/05	11	18.33	18.38	0.05	22	15.0	ok; Area I LTGWM Event
10/31/05	41	18.50	18.52	0.02	24	15.0	ok
11/23/05	23	18.95	18.96	0.01	22	15.0	ok
12/28/05	35	19.35	19.36	0.01	22	15.0	ok
01/30/06	33	18.43	18.44	0.01	24	15.0	ok
02/27/06	28	18.38	19.06	0.68	24	15.0	ok
03/28/06	29	18.44	19.31	0.87	24	15.0	ok
04/27/06	30	18.39	19.17	0.78	24	15.0	ok
05/18/06	21	18.41	19.05	0.64	8	15.0	ok; Area I LTGWM Event
06/30/06	43	17.82	18.35	0.53	8	15.0	ok
07/31/06	31	17.95	18.64	0.69	16	15.0	ok
12/01/06	123	19.41	21.65	2.24	16	15.0	ok; Area I LTGWM Event, removed oily water.
06/30/07	211	17.98	20.51	2.53	8	15.0	ok
07/31/07	31	18.31	21.40	3.09	22	14.0	~12oz. Water in Trap; raised PetroTrap approx. 1'
08/22/07	22	18.50	20.11	1.61	4	14.0	ok
09/29/07	38	18.86	21.72	2.86	4	14.0	ok
10/30/07	31	19.10	21.04	1.94	3	14.0	ok
11/28/07	29	19.47	20.52	1.05	2	14.0	checked Petro Trap for leaks, none located
12/28/07	30	18.93	20.42	1.49	14	15.0	~12oz. Water in Trap; lowered PetroTrap approx. 1'
08/12/08	228	17.98	19.60	1.62	30	15.0	ok, bailed down product removed ~1.0 gal. TK took over monito
09/10/08	29	18.61	20.10	1.49	4	15.0	Needs to be ajusted and claened
10/08/08	28	18.90	20.46	1.56	8	17.5	Lowered trap to 17.41 fbgs, cleaned off filter.
11/11/08	34	18.79	21.00	2.21	11	17.5	ok
12/16/08	35	18.64	20.86	2.22	1	17.5	ok
01/07/09	22	18.28	21.20	2.92	1	17.0	raised trap to 17.0 fbgs
02/11/09	35	18.52	21.22	2.70	64	17.0	17 oz in trap, bailed 47 oz
03/10/09	27	17.50	19.63	2.13	2	17.0	ok
04/01/09	22	18.12	19.08	0.96	48	17.0	Bailed ~40oz, ~8 was removed from trap
05/06/09	35	17.61	19.81	2.20	3	17.0	ok
05/12/09	6	17.65	17.96	0.31	18	17.0	ok
06/02/09	21	17.64	18.17	0.53	2	17.0	ok
07/08/09	36	17.96	18.17	0.21	20	17.0	ok
08/06/09	29	18.05	19.75	1.70	1.5	17.0	ok
09/01/09	26	18.11	19.20	1.09	3	17.0	ok
10/06/09	35	17.84	19.62	1.78	6	17.0	ok
11/03/09	28	17.82	19.11	1.29	10	17.0	ok
12/01/09	28	18.07	18.50	0.43	20	17.0	ok

TABLE 6

SUMMARY OF LNAPL THICKNESS / REMOVAL IN A1-MW-6
Area I: Former Republic (LTV) Steel Plant Parcel

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Date	Days Since Last Visit	LNAPL Measurement			Quantity Removed [1] (oz.)	Height of Petro-Trap (fbTOR)	Comments
		Top (fbTOR)	Bottom (fbTOR)	Thickness (feet)			
01/13/10	43	18.22	18.75	0.53	5	17.0	ok
02/10/10	28	18.03	19.00	0.97	4	17.0	ok
03/05/10	23	19.31	20.81	1.50	3	17.0	ok
04/06/10	32	18.61	20.41	1.80	4	17.0	ok
05/05/10	29	18.41	20.20	1.79	1	17.0	ok
05/17/10	12	18.03	20.42	2.39	1	17.0	ok
06/04/10	18	17.83	19.88	2.05	3	17.0	ok
07/14/10	40	17.95	19.70	1.75	16	17.0	ok
08/06/10	23	18.00	20.17	2.17	1	17.0	ok
09/10/10	35	18.64	20.90	2.26	2	17.0	ok
10/15/10	35	18.82	20.61	1.79	2	17.0	ok
11/02/10	18	19.25	19.60	0.35	24	17.0	Less 0.5oz was removed via petro trap, bailed 24oz
12/14/10	42	18.30	19.48	1.18	1	17.0	ok
01/20/11	37	19.03	20.34	1.31	10	17.0	ok
02/18/11	29	18.84	19.83	0.99	18	17.0	Bailed ~15 oz of product
04/27/11	68	17.15	18.00	0.85	1	17.0	TOP was over petro-trap.
05/23/11	26	17.82	19.91	2.09	16	17.0	4 oz. removed from trap, bailed 12 oz.
Total Quantity Removed To Date:					**854.6 oz.**	**or 6.67 gal.**	

Notes:
1. The PetroTrap canister used has a capacity of 25.6 oz. (0.2 gal).
2. Data from January 1, 2007 through July 31, 2008 was collected by EnSol, Inc.; data before and after this time has been collected by TurnKey Environmmental Restoration, LLC.

TABLE 7

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Area II: Former Coke Plant Parcel

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Parameter	Monitoring Location and Date of Sample Collection									GWQS/GV [1]
	A2-MW-3	A2-MW-4R	A2-MW-5	A2-MW-10R	A2-MW-13	A2-MW-14	A2-MW-15	A2-MW-16	A2-MW-17	
	05/23/11	05/23/11	05/23/11	05/23/11	05/23/11	NS	05/20/11	05/23/11	05/23/11	
Field Measurements (units as indicated) [2]										
pH (units)	7.40	7.26	7.00	7.95	7.33	NS	**6.49**	7.93	6.93	**6.5 - 8.5**
Temperature (degrees C)	11.9	13.3	12.6	11.1	12.8	NS	9.20	13.0	11.5	**NA**
Specific Conductance (uS)	679.5	754.1	716.4	1827	2219	NS	1278	781	1928	**NA**
Turbidity (NTU)	1.68	4.7	6.58	2.1	6.87	NS	3.14	7.55	1.55	**NA**
Dissolved Oxygen (mg/L)	1.89	2.11	1.48	6.02	1.62	NS	1.67	1.64	NA	**NA**
Eh (mV)	- 24	- 90	- 95	- 173	- 132	NS	NS	+ 20	- 115	**NA**
Visual Observation	clear	clear	clear	clear	clear	NS	clear	clear	clear	**NA**
Olfactory Observation	no odor	no odor	sl. odor	sl. odor	no odor	NS	none	none	none	**NA**
Volatile Organic Compounds (ug/L)										
Benzene	ND	0.028 BJ	0.074 BJ	0.11 BJ	0.28 B	NS	0.046 J	0.07 J	0.26	**1**
n-Butylbenzene	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
sec-Butylbenzene	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
tert-Butylbenzene	ND	ND	ND	ND	ND	NS	ND	ND	0.68	**5**
p-Cymene (4-Isopropyltoluene)	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
Ethylbenzene	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
Isopropylbenzene	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
Methyl tert butyl ether	ND	ND	ND	ND	ND	NS	ND	ND	ND	**10**
n-Propylbenzene	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
Toluene	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5**
Xylenes, Total	ND	ND	ND	ND	ND	NS	ND	ND	ND	**15**
Total VOCs	***0***	***0.028***	***0.074***	***0.11***	***0.28***	***0***	***0.046***	***0.07***	***0.94***	**10**
Inorganics (mg/L)										
Total Arsenic	--	--	--	--	--	--	--	0.011	--	**0.025**
Total Chromium	--	--	--	--	--	NS	--	ND	--	**0.05**
Total Lead	--	--	--	--	--	--	--	ND	--	**0.025**

Notes:
1. NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value 6NYCRR Part 703 (effective June 1998)
2. Field measurements were collected immediately before and after groundwater sample collection.
3. " NA " = Not Applicable, a GWQS/GV has not been established for this parameter.
4. " ND " = the sample location was analyzed for this parameter, but reported at a concentration less than the method detection limit.
5. " NS " = this monitoring location was damaged and was not sampled
6. " -- " = This parameter was not analyzed.

= Shaded values represent exceedances of the NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value.

TABLE 8

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Area III: Former Warehouse Parcel

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Parameter	Monitoring Location and Date of Sample Collection					GWQS/GV [1]
	A3-MW-3	A3-MW-6	A3-MW-7	A3-MW-9	A3-MW-10	
	05/23/11	05/23/11	05/23/11	05/23/11	05/23/11	
Field Measurements (units as indicated) [2]						
pH (units)	7.30	7.83	**10.24**	**11.48**	**5.62**	**6.5 - 8.5**
Temperature (degrees C)	17.6	13.9	13.2	12.6	11.2	**NA**
Specific Conductance (uS)	1717	1251	720.4	6600	5636	**NA**
Turbidity (NTU)	79.7	7.69	1.43	1.45	46.4	**NA**
Dissolved Oxygen (mg/L)	NA	1.42	1.66	1.02	1.05	**NA**
Eh (mV)	- 125	- 162	- 224	- 176	- 15	**NA**
Visual Observation	clear	clear	clear	clear	clear	**NA**
Olfactory Observation	none	none	sl. odor	sl. odor	none	**NA**
Volatile Organic Compounds (ug/L)						
Benzene	0.46	0.12 J	**2300 B**	**3.9**	**25**	**1**
n-Butylbenzene	ND	ND	ND	ND	ND	**5**
sec-Butylbenzene	ND	ND	0.038 J	0.15 J	ND	**5**
tert-Butylbenzene	ND	ND	0.54	ND	ND	**5**
p-Cymene (4-Isopropyltoluene)	ND	ND	ND	ND	ND	**5**
Ethylbenzene	ND	ND	ND	ND	ND	**5**
Isopropylbenzene	ND	ND	4.3	ND	ND	**5**
Methyl tert butyl ether	ND	ND	ND	ND	ND	**10**
n-Propylbenzene	ND	ND	ND	ND	ND	**5**
Toluene	0.048 J	ND	0.9	0.81	1.2	**5**
1,2,4-Trimethylbenzene	ND	ND	0.32	0.14 J	0.3	**5**
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	**5**
Xylenes, Total	0.096 J	ND	1.5	0.33 J	0.92	**15**
Total VOCs	***0.604***	***0.12***	***2307.598***	***5.33***	***27***	**10**
Inorganics (mg/L)						
Total Arsenic	**0.057**	ND	--	--	--	**0.025**
Total Lead	--	--	--	ND	--	**0.025**
Wet Chemistry (mg/L)						
Cyanide	**2.9**	0.032	0.19	--	0.14	**0.2**

Notes:
1. NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value 6NYCRR Part 703 (effective June 1998)
2. Field measurements were collected immediately before and after groundwater sample collection.
3. " B " = Analyte found in the associated blank, as well as the sample.
4. " D " = analyzed at the secondary dilution factor.
5. " J " = Estimated Value
6. " NA " = Not Applicable, a GWQS/GV has not been established for this parameter.
7. " ND " = the sample location was analyzed for this parameter, but reported at a concentration less than the method detection limit.
8. " NM " = insufficient water for field analysis; parameter was not measured.

= Shaded values represent exceedances of the NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value.

TURNKEY ENVIRONMENTAL RESTORATION, LLC

TABLE 9

SUMMARY OF ORC ANALYTICAL RESULTS
Area III: Former Warehouse Parcel

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

PARAMETER	A3-ORC-1	A3-ORC-2	A3-ORC-3	A3-ORC-4	A3-ORC-5	A3-ORC-6	A3-ORC-7	A3-ORC-8	A3-ORC-9	A3-ORC-10	A3-ORC-11	GWQS [2]
Field Measurements During Purge (units as shown) [1]												
Static Depth to Water (fbTOR)	3.91	4.13	4.19	3.91	3.42	5.16	4.91	4.91	2.91	4.87	4.54	--
Total Depth (fbTOR)	14.08	14.45	14.38	14.38	14.03	14.36	14.36	14.63	14.03	14.55	14.57	--
One Casing Volume (gallons)	6.60	6.70	6.60	6.80	6.90	6.00	6.10	6.30	7.20	6.30	6.50	--
Number of Volumes Purged	11.0	10.1	6.1	4.9	10.7	9.7	8.9	7.8	10.6	7.9	10.0	--
Sample Determination [3]	volume	volume	4-days	4-days	volume	4-days	4-days	4-days	volume	4-days	volume	--
Purge: Day 1 (05/17/11) (gallons)	20.0	34.0	10.0	9.0	18.0	16.2	20.0	10.0		17.0	39.0	--
Purge: Day 2 (05/18/11) (gallons)	19.0	24.0	10.0	9.0	19.0	14.0	11.0	15.0		14.0	26.0	--
Purge: Day 3 (05/19/11) (gallons)	17.8	10.0	10.0	8.0	19.0	14.0	14.0	14.0	76.0	10.0		--
Purge: Day 4 (05/20/11) (gallons)	16.0		10.0	7.5	17.5	14.0	9.0	10.0		9.0		--
Sample Collection (date indicated)	05/20/11	05/19/11	05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	05/19/11	05/20/11	05/18/11	--
Cumulative Volume Purged (gallons)	72.8	68.0	40.0	33.5	73.5	58.2	54.0	49.0	76.0	50.0	65.0	--
Field Measurements During Sample Collection (units as shown) [3]												
pH (units)	6.88	**4.73**	**4.75**	**5.81**	**4.14**	**4.61**	**5.38**	**3.76**	**2.99**	**3.83**	**5.33**	6.5 - 8.5
Temperature (deg C)	8.9	12.4	9.1	9.0	10.0	9.7	10.4	9.9	12.2	10.4	12.8	--
Specific Conductance (uS)	3043	7427	7069	8565	5435	11.77	10.04	14.13	12.52	9623	6456	--
Turbidity (NTU)	36.4	63.9	207	56.8	38.3	92.8	98.9	59.4	63.9	134	29.2	--
Dissolved Oxygen (ppm)	1	2.03	1.94	1.82	1.68	2.63	2.72	1.2	1.48	1.49	1.91	--
ORP (mV)	- 81	+ 137	+ 139	- 10	+ 203	+ 126	+ 17	+ 210	+ 262	+ 209	+ 36	--
Visual Observation	black sed	sl. orange	sl. orange	sl. orange	clear	sl. orange	clear	clear	yellow	yellow	black sed	--
Volatile Organic Compounds (mg/L):												
Benzene	**1.9 B**	**5.4 B**	**4.5 B**	**0.0043 B**	**24**	**5.9 B**	**0.88 B**	**31 D**	**180 B**	**57 B**	**0.0022 B**	0.001
Wet Chemistry (mg/L):												
Alkalinity	71.5	ND	ND	293 B	ND	ND	ND	ND	ND	ND	33.2	--

Notes:

1. Field measurements were collected immediately before groundwater sample collection.
2. NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value 6NYCRR Part 703 (effective June 1998).
3. NYSDEC requirement: purge 10 well volumes or to dryness for 4 consecutive days, then sample. "Volume" indicates that 10 well volumes were purged prior to sample collection and "4-days" indicates that the well was purged to dryness 4 consecutive days prior to sample collection.
4. "B" = Analyte is found in the associated blank, as well as the sample.
5. " D " = Analysis performed at the secondary dilution factor.
6. " ND " indicates parameter was not detected above laboratory reporting limit and is reported herein as not detected (ND).

= Shaded values represent exceedances of the NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value.

TABLE 10

SUMMARY OF NOVEMBER 2011 ORC ANALYTICAL RESULTS
Area III: Former Warehouse Parcel

2011 Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

PARAMETER	A3-ORC-1	A3-ORC-2	A3-ORC-3	A3-ORC-4	A3-ORC-5	A3-ORC-6	A3-ORC-7	A3-ORC-8	A3-ORC-9	A3-ORC-10	A3-ORC-11	GWQS [2]
Field Measurements During Purge (units as shown) [1]												
Static Depth to Water (fbTOR)	4.56	4.91	5.27	4.71	4.96	5.25	5.83	5.94	3.08	5.73	5.19	--
Total Depth (fbTOR)	14.08	14.43	14.38	14.38	14.03	14.36	14.36	14.68	14.03	14.55	14.57	--
One Casing Volume (gallons)	6.20	6.20	5.90	6.30	5.90	5.90	5.50	5.70	7.10	5.70	6.10	--
Number of Volumes Purged	7.5	9.0	5.3	4.8	7.3	5.3	5.9	5.8	10.1	5.6	10.1	--
Sample Determination [3]	4-days	4-days	4-days	4-days	4-days	4-days	4-days	4-days	volume	4-days	volume	--
Purge: Day 1 (11/28/11) (gallons)	11.0	14.0	7.0	7.0	10.0	7.5	8.0	8.0		8.0	15.0	--
Purge: Day 2 (11/29/11) (gallons)	12.0	15.0	8.0	7.5	12.0	8.0	8.0	8.0		8.0	15.0	--
Purge: Day 3 (11/30/11) (gallons)	11.5	14.0	8.0	7.5	11.0	8.0	8.5	8.5	71.5	8.5	15.0	--
Purge: Day 4 (12/1/11) (gallons)	12.0	13.0	8.0	8.0	10.0	8.0	8.0	8.5		7.5	16.5	--
Sample Collection (date indicated)	12./1/11	12./1/11	12./1/11	12./1/11	12./1/11	12./1/11	12./1/11	12./1/11	11/30/11	12./1/11	12./1/11	--
Cumulative Volume Purged (gallons)	46.5	56.0	31.0	30.0	43.0	31.5	32.5	33.0	71.5	32.0	61.5	--
Field Measurements During Sample Collection (units as shown) [3]												
pH (units)	**9.62**	**4.98**	**4.71**	**5.74**	**4.13**	**4.50**	**5.50**	**3.68**	**2.93**	**3.75**	**5.53**	6.5 - 8.5
Temperature (deg C)	8.8	9.8	9.2	9.4	9.1	10.1	9.1	9.9	10.3	9.9	10.9	--
Specific Conductance (uS)	1660	7450	7303	9247	8743	12.12	9938	14.7	12	9750	6680	--
Turbidity (NTU)	102	27.5	82.7	161	77.3	166	303	357	224	84.1	96.1	--
Dissolved Oxygen (ppm)	0.18	3.12	1.91	2.35	1.75	1.71	2.33	1.71	2.03	1.96	1.95	--
ORP (mV)	- 112	+ 10	+ 59	+ 14	+ 67	+ 55	+ 26	+ 78	+ 205	+ 57	- 38	--
Visual Observation	black sed	sl. orange	sl. Yellow	sl. Yellow	Orange Tint	sl. orange	orange	Orange	yellow	yellow	Sli orange	--
Volatile Organic Compounds (mg/L):												
Benzene	**1.8**	**9.1**	**4.2**	**0.0066**	**35**	**5.9**	**0.67**	**46**	**180**	**73**	**0.0028**	0.001
Wet Chemistry (mg/L):												
Alkalinity	165	ND	ND	69.6	ND	38.4	44.9	ND	ND	ND	186	--

Notes:

1. Field measurements were collected immediately before groundwater sample collection.
2. NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value 6NYCRR Part 703 (effective June 1998).
3. NYSDEC requirement: purge 10 well volumes or to dryness for 4 consecutive days, then sample. "Volume" indicates that 10 well volumes were purged prior to sample collection and "4-days" indicates that the well was purged to dryness 4 consecutive days prior to sample collection.
4. "B" = Analyte is found in the associated blank, as well as the sample.
5. " D " = Analysis performed at the secondary dilution factor.
6. " ND " indicates parameter was not detected above laboratory reporting limit and is reported herein as not detected (ND).

= Shaded values represent exceedances of the NYSDEC Class "GA" Groundwater Quality Standard/Guidance Value.

TURNKEY ENVIRONMENTAL RESTORATION, LLC

TABLE 11

AREA-BY-AREA MOVING AVERAGE TREND ANALYSIS (MATA) SUMMARY

Comprehensive Groundwater Monitoring Report
Riverbend, LLC
Buffalo, New York

Location	No. of Data Pts.	MATA Pts.	Moving Average Trend [1] [increasing (I), decreasing (D), neutral (N)]						
			pH	Benzene	n-Butylbenzene	Isopropylbezene	n-Propylbenzene	Total Arsenic	Cyanide
Area I Monitoring Wells									
A1-MW-1	**8**	**5**	NA	NA	NA	NA	NA	NA	--
A1-MW-2	**8**	**5**	NA	NA	NA	NA	NA	NA	--
A1-MW-3	**8**	**5**	NA	NA	NA	NA	NA	NA	--
A1-MW-4	**9**	**6**	NA	NA	NA	NA	NA	NA	--
A1-MW-5	**9**	**6**	**N**	NA	NA	NA	NA	NA	--
A1-MW-6	**9**	**6**	NA	NA	**N**	**N**	**N**	**D**	--
A1-MW-8	**9**	**6**	NA	NA	NA	NA	NA	**I**	--
A1-MW-9	**9**	**6**	NA	NA	NA	NA	NA	NA	--
A1-MW-M2	**8**	**5**	NA	NA	NA	NA	NA	NA	--
A1-P-4	**8**	**5**	NA	NA	NA	NA	NA	NA	--
Area II Monitoring Wells									
A2-MW-3	**6**	**3**	NA	NA	NA	NA	NA	NA	--
A2-MW-4R	**6**	**3**	NA	NA	NA	NA	NA	NA	--
A2-MW-5	**6**	**3**	NA	NA	NA	NA	NA	NA	--
A2-MW-10	**5**	**2**	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	--
A2-MW-13	**6**	**3**	NA	NA	NA	NA	NA	NA	--
A2-MW-14	**5**	**2**	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	--
A2-MW-15	**5**	**2**	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	--
A2-MW-16	**6**	**3**	**I**	**D**	NA	NA	NA	NA	--
A2-MW-17	**6**	**3**	NA	**D**	NA	NA	NA	NA	--
Area III Monitoring Wells									
A3-MW-3	**4**	**1**	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*
A3-MW-6	**4**	**1**	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*
A3-MW-7	**6**	**3**	**N**	**I**	NA	NA	NA	NA	**D**
A3-MW-9	**5**	**2**	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*
A3-MW-10	**5**	**2**	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*

Notes:

1. In general accordance with the LTGWM Plan for each Area and based upon the groundwater results to date any parameter exceeding the groundwater quality standard for two (2) consecutive events will be statistically evaluated.
2. TBD = to be determined; insufficient data exists to make a trend determination.
3. " -- " = not analyzed for this parameter.
4. NA = indicates there have not been two consecutive exceedances of the GWQS/GV at this location and trending is "not applicable".

= Concentration versus time and 4-year moving average plots are provided in Attachment 2.

FIGURES

LEGEND:

- A1-MW-2 — RIVERBEND MONITORING WELL
- SG-01 — BUFFALO RIVER STAFF GAUGE LOCATION
- A4-MW-5R — OFF-SITE MONITORING WELL
- A3-ORC-1 — ORC SOCK WELL
- PS2 or MH2 — GROUNDWATER COLLECTION SYSTEM PUMP STATION (PS) OR MANHOLE (MH)]
- APPROX. TAR & BLUE SOIL/FILL EXCAVATION LIMITS
- 579 — GROUNDWATER CONTOUR (MAJOR)
- GROUNDWATER CONTOUR (MINOR)
- GROUNDWATER FLOW DIRECTION

Notes:
1. Groundwater elevations for the Riverbend Site - Areas I, II, and III monitoring/ORC wells were obtained by TurnKey personnel on May 20, 2011.
2. "NM" indicates water level was not measured at this location.

BUFFALO RIVER

SOUTH PARK AVE.

BERM AREA

O'CONNER ST.

BARKER ST.

MYSTIC ST.

ABBY ST.

BELL AVE.

TIFFT ST.

A1-MW-7 577.7

A2-MW-17 584.8

A2-MW-16 585.7

A2-MW-13 586.9

A2-MW-14 destroyed

A2-MW-12 588.7

A2-PW-3 584.1

MH5 (inv. 579.9)

MH6 (inv. 580.2)

MH7 (inv. 580.4)

PS3 (inv. 578.6)

A2-MW-15 586.2

MH4 (inv. 580.9)

A2-MW-18 585.8

A1-MW-8 579.1

A1-P-4 578.2

A1-P-3 NM

REPUTED NORFOLK SOUTHERN (2011 ACRES)

RIVERBEND (FMR. AUGUST FEINE & SONS, INC PROPERTY) (4.77 ACRES)

RIVERBEND AREA I (89.39 ACRES)

A1-MW-5 586.5

A2-MW-20 587.9

A2-PW-2 587.1

A2-MW-10R 584.7

MH3 (inv. 579.5)

SLURRY WALL (purple)

A2-MW-11 584.4

A2-MW-19 584.2

PS2 (inv. 577.7)

A2-MW-7 585.5

MH2 (inv. 573.0)

AREA II CONTAINMENT CELL

AREA II (46.71 ACRES)

A1-MW-3 574.1

SG-02 579.5

A1-MW-1 576.8

A1-MW-2 580.5

A1-P-2 NM

A1-MW-9 576.2

A1-MW-6 573.7

A2-MW-6 587.1

A2-PW-1 585.5

MH1 (inv. 578.4)

PS1 (inv. 578.7)

TERMINAL BASIN

DETENTION POND

A2-MW-5 582.5

A2-MW-4R 582.4

A1-MW-M2 581.0

SG-01 565.1

A1-MW-4 580.8

A2-MW-3 583.5

A3-MW-9 583.6

A3-MW-3 582.3

A3-MW-6 583.4

A3-MW-7 582.5

A3-ORC-1 583.3

A3-ORC-2 583.2

A3-ORC-3 583.4

A3-ORC-4 583.2

A3-ORC-5 584.3

A3-ORC-6 583.0

A3-ORC-7 582.2

A3-ORC-8 582.6

A3-ORC-9 582.6

A3-ORC-10 582.7

A3-ORC-11 583.2

A3-MW-10 580.4

RIVERBEND AREA III (42.41 ACRES)

A4-MW-5R

40 SPACES

PLANT AREA 140,000 S.F.

20' WIDE ACCESS ROAD

FUTURE EXPANSION 100,000 S.F.

A4-MW-9

A4-MW-10

HYDRO-AIR (FORMERLY STEELFIELDS) AREA IV (30.91 ACRES)

A4-MW-1

A4-MW-1A

A4-MW-7R

A4-MW-8R

575 577 579 581 583 585 587

200' 0' 200' 400'

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

TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

JOB NO.: 0171-006-500

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

DRAWN BY: BCH
DATE: AUGUST 2011
CHECKED BY:
APPROVED BY:

SITE PLAN & ISOPOTENTIAL MAP - MAY 20, 2011

GROUNDWATER / ORC MONITORING EVENT
FORMER STEEL MANUFACTURING SITE
BUFFALO, NEW YORK

PREPARED FOR
RIVERBEND, LLC

FIGURE 1

EXPLANATION

A1-P-4 PIEZOMETER

A1-MW-F2 MONITORING WELL

FILL THICKNESS (ft)

7/582 BASE OF FILL ELEVATION (ft msl)

142 HYDRAULIC CONDUCTIVITY (ft/day)

584 GROUNDWATER ELEVATION CONTOUR IN FEET (DASHED WHERE INFERRED)

BUILDING FOUNDATION

REMEDIATION ZONE

A1-P-4 4/583

A1-MW-F2

A1-P-3 9/580.5 312

A1-MW-A2 14.7/<575

A1-MW-K2 8.3/<579 82

A1-MW-2 >11/<573 425

A1-MW-1 5.5/578.5 133

A1-P-1 11.5/574.2 595

A1-P-2 7.5/578 122

A1-MW-M2 6.5/<580

A2-MW-13 14/581 74

A2-MW-12 9/579 5

A2-OW-7 A2-PW-3 8/581 57

A2-PW-8 A2-OW-9

A2-MW-11 7.5/580 167

A2-MW-10 11/580 266

A2-OW-5 A2-PW-2 9/580

A2-OW-5 9/580

A2-MW-9 7/582 142

A2-OW-4

A2-MW-7 8/581

A2-MW-8 9.5/579 43

A2-MW-6 8/578 1077

A2-OW-2 A2-PW-1 A2-OW-1 9/579 255

A2-OW-3

A2-MW-5 7/578 312

A2-MW-4 8/578 91

A2-MW-3 6/580 963

A3-MW-3

A3-MW-6 17/572.4 12

A3-MW-7 5/578 283

A3-GW-4

A4-MW-6

A4-MW-5

A4-MW-4

A4-MW-3

A4-MW-3A

A4-MW-2

A4-MW-2A

A4-MW-8 8/577

A4-MW-7 7/576

A4-MW-1

A4-MW-1A 28

TERMINAL BASIN SUMP

BUFFALO RIVER

AREA 1

AREA 2

AREA 3

N

200' 0' 200' 400'

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

Note: Original drawing prepared by Geomatrix Consultants, Inc., June 1998.

TurnKey Environmental Restoration LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

JOB NO.: 0171-006-500

REVISIONS

NO.	BY	DATE	REMARKS

DRAWN BY: BCH

DATE: AUGUST 2011

CHECKED BY:

APPROVED BY:

SEAL

ISOPOTENTIAL MAP - JUNE 1998

GROUNDWATER / ORC MONITORING EVENT

FORMER STEEL MANUFACTURING SITE

BUFFALO, NEW YORK

PREPARED FOR

RIVERBEND, LLC

FIGURE 2

LEGEND:

- A1-MW-2 — RIVERBEND MONITORING WELL
- SG-01 — BUFFALO RIVER STAFF GAUGE LOCATION
- A4-MW-5R — OFF-SITE MONITORING WELL
- A3-ORC-1 — ORC SOCK WELL
- PS2 or MH2 — GROUNDWATER COLLECTION SYSTEM PUMP STATION (PS) OR MANHOLE (MH)]
- APPROX. TAR & BLUE SOIL/FILL EXCAVATION LIMITS
- 579 — GROUNDWATER CONTOUR (MAJOR)
- GROUNDWATER CONTOUR (MINOR)
- GROUNDWATER FLOW DIRECTION

Notes:
1. Groundwater elevations for the Riverbend Site - Areas I, II, and III monitoring/ORC wells were obtained by TurnKey personnel on August 27, 2011.
2. "NM" indicates water level was not measured at this location.

BUFFALO RIVER

SOUTH PARK AVE.

O'CONNER ST.

BARKER ST.

MYSTIC ST.

ABBY ST.

BELL AVE.

TIFFT ST.

BERM AREA

A1-MW-7 574.6

A1-MW-8 576.8

A1-P-4 577.6

A1-P-3 NM

A1-MW-3 574.2

SG-02 573.9

A1-MW-2 578.2

A1-MW-6 573.1

A1-MW-1 576.8

A1-P-2 NM

A1-MW-9 575.6

A1-MW-5 586.5

A1-MW-M2 580.4

SG-01 573.6

A1-MW-4 579.0

A2-MW-17 583.1

A2-MW-16 583.5

A2-MW-13 583.4

A2-MW-14 destroyed

A2-MW-12 586.9

A2-PW-3 584.2

A2-MW-15 583.4

A2-MW-18 582.5

A2-PW-2 586.6

A2-MW-20 585.2

A2-MW-10R 582.4

A2-MW-19 582.2

A2-MW-7 582.8

A2-MW-6 583.1

A2-PW-1 585.5

A2-MW-5 581.2

A2-MW-4R 581.3

A2-MW-11 581.9

A2-MW-3 581.3

A3-MW-9 582.1

A3-MW-3 581.8

A3-MW-6 582.0

A3-MW-7 581.2

A3-ORC-1 580.5

A3-ORC-2 581.0

A3-ORC-3 581.1

A3-ORC-4 581.1

A3-ORC-5 581.4

A3-ORC-6 581.1

A3-ORC7 580.3

A3-ORC-8 581.0

A3-ORC-9 580.9

A3-ORC-10 581.1

A3-ORC-11 581.4

A3-MW-10 579.2

MH1 (inv. 578.4)
MH2 (inv. 579.6)
MH3 (inv. 579.5)
MH4 (inv. 580.9)
MH5 (inv. 579.9)
MH6 (inv. 580.2)
MH7 (inv. 580.4)
PS1 (inv. 578.7)
PS2 (inv. 577.7)
PS3 (inv. 578.6)

REPUTED NORFOLK SOUTHERN PROPERTY

RIVERBEND AREA I (89.89 ACRES)

RIVERBEND (FMR. AUGUST FEINE & SONS, INC PROPERTY) (4.77 ACRES)

RIVERBEND AREA III (6.[illegible] ACRES)

AREA II (46.71 ACRES)

AREA II CONTAINMENT CELL

SLURRY WALL (purple)

TERMINAL BASIN

DETENTION POND

HYDRO-AIR (FORMERLY STEELFIELDS) AREA IV (30.91 ACRES)

A4-MW-5R

A4-MW-9

A4-MW-10

A4-MW-1

A4-MW-1A

A4-MW-7R

A4-MW-8R

PLANT AREA 140,000 S.F.

40 SPACES

12 SPACES

10 SPACES

15 SPACES

15 SPACE EXPANSION

20' WIDE ACCESS ROAD

FUTURE EXPANSION 100,000 S.F.

573 575 577 579 581 583 585

200' 0' 200' 400'

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

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JOB NO.: 0171-006-500

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

DRAWN BY: BCH
DATE: AUGUST 2011
CHECKED BY:
APPROVED BY:

ISOPOTENTIAL MAP AUGUST 27, 2011

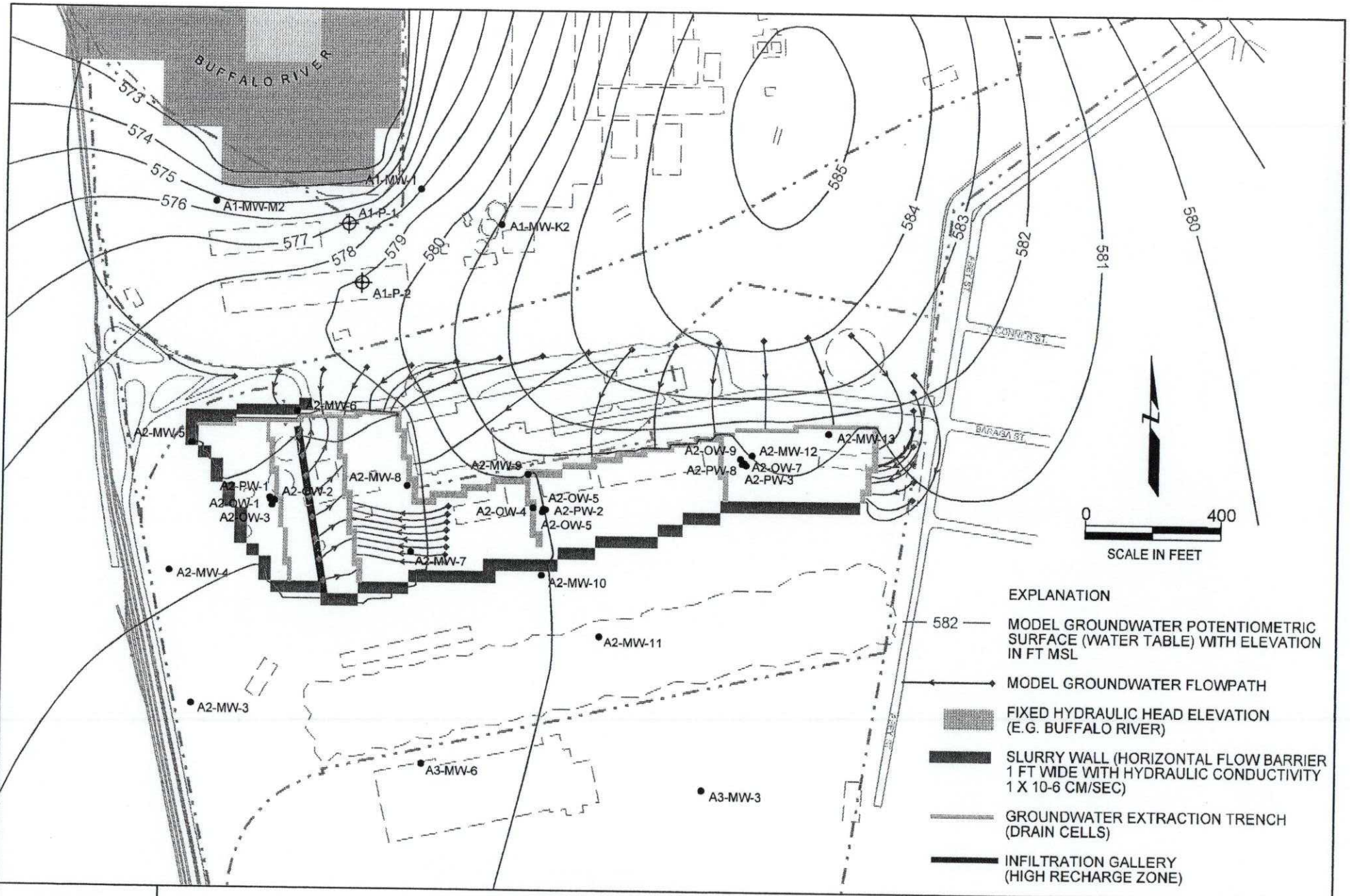
GROUNDWATER / ORC MONITORING EVENT
FORMER STEEL MANUFACTURING SITE
BUFFALO, NEW YORK

PREPARED FOR
RIVERBEND, LLC

FIGURE 3

ATTACHMENT 1

GROUNDWATER FLOW MODEL (GEOMATRIX, DECEMBER 1998)



GEOMATRIX

SIMULATED GROUNDWATER CONTOURS AND FLOWPATHS
REMEDIAL ALTERNATIVE 2
LTV Steel
Buffalo, New York

Figure 11

Project No. B4991

MAP_WT3X.pen

CHECKED:_____ \\SFPRNT2\Splash Hold Job-Name\matrix.ctb

q:\buffalo\b4991\gfm_981f_fig_11.dgn

ATTACHMENT 2

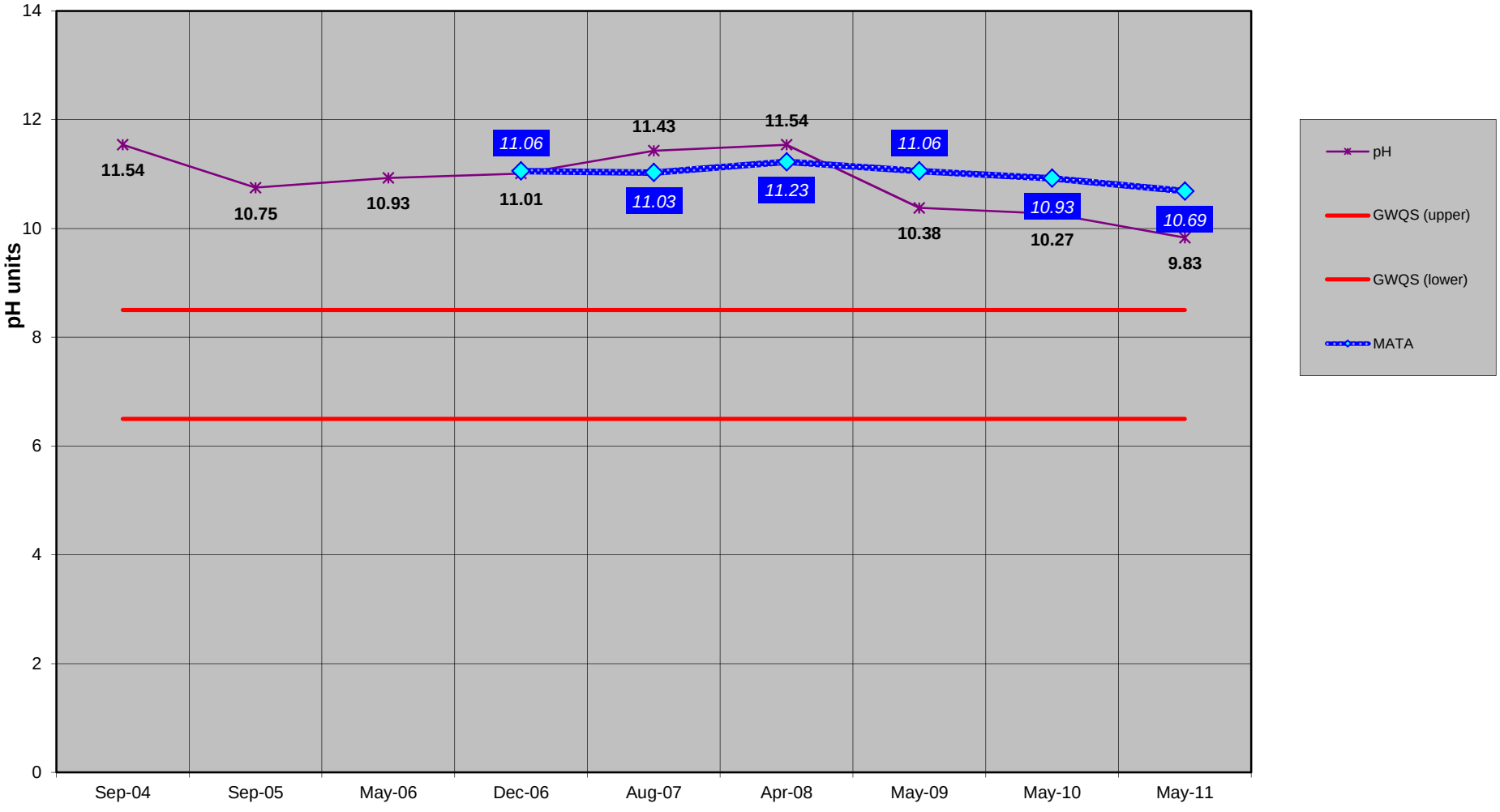
CONCENTRATION VERSUS TIME & MOVING AVERAGE TREND ANALYSIS (MATA) PLOTS

TURNKEY ENVIRONMENTAL RESTORATION, LLC

ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A1-MW-5
pH

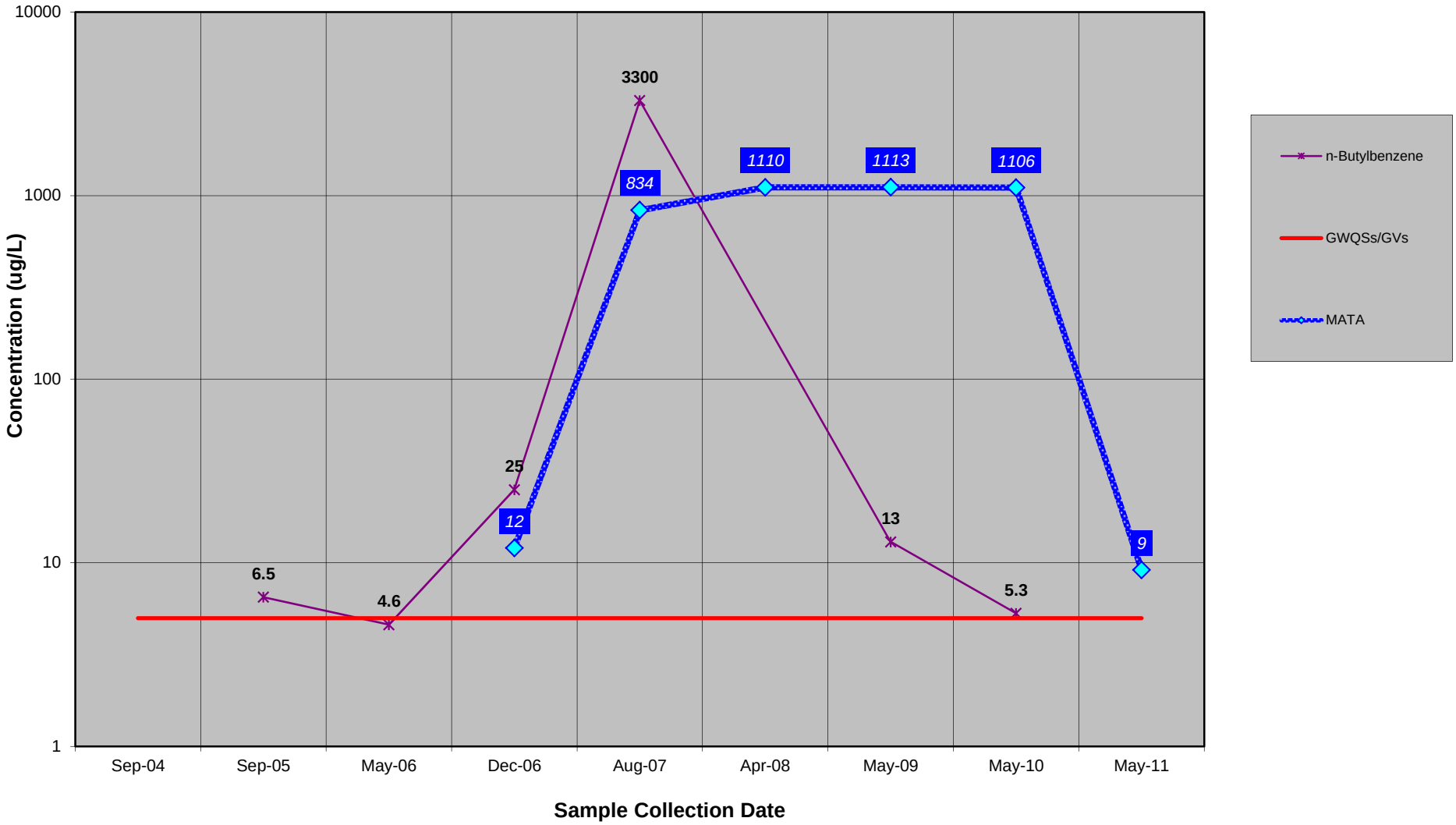
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A1-MW-6
n-BUTYLBENZENE

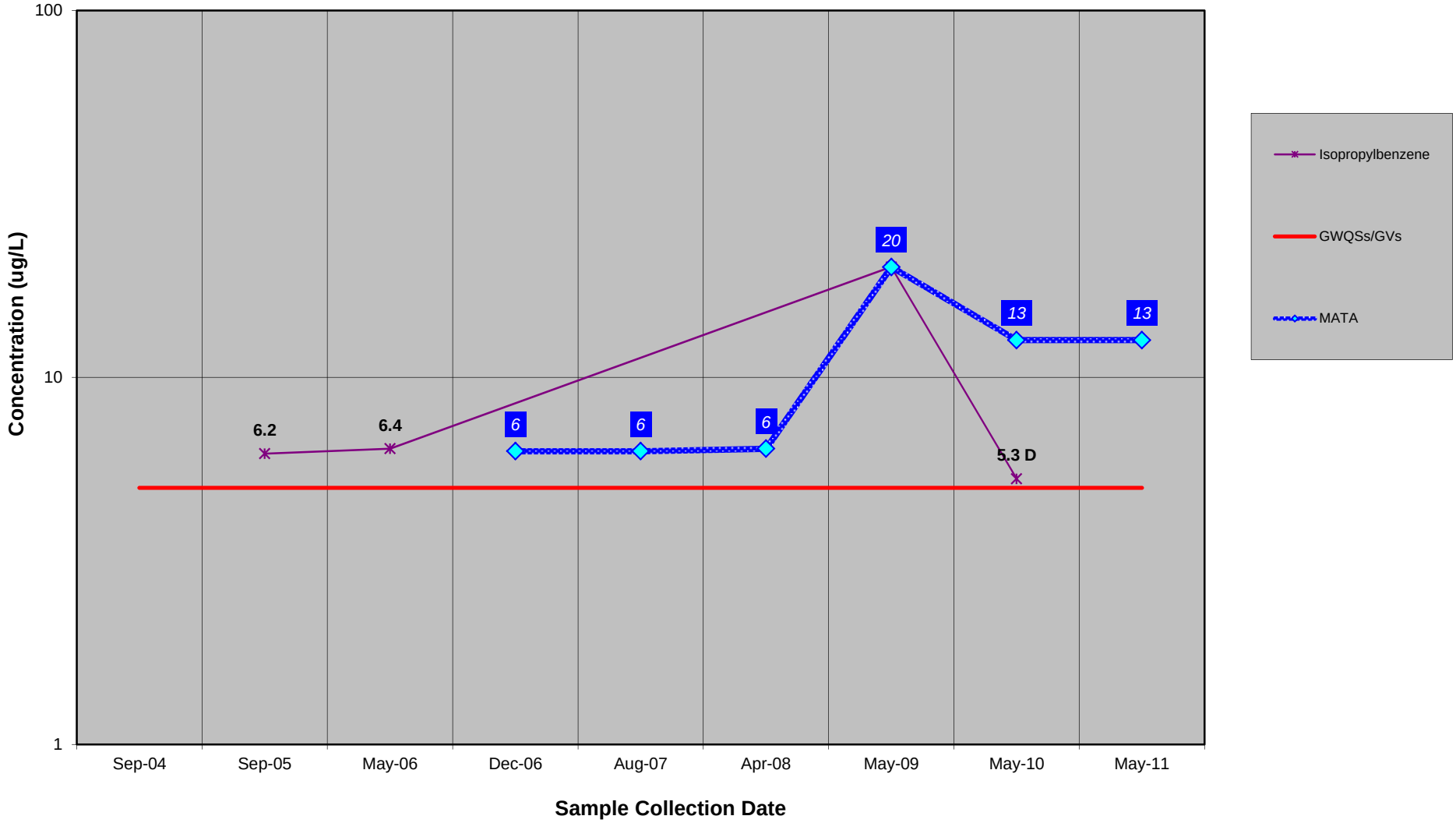
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A1-MW-6
ISOPROPYLBENZENE

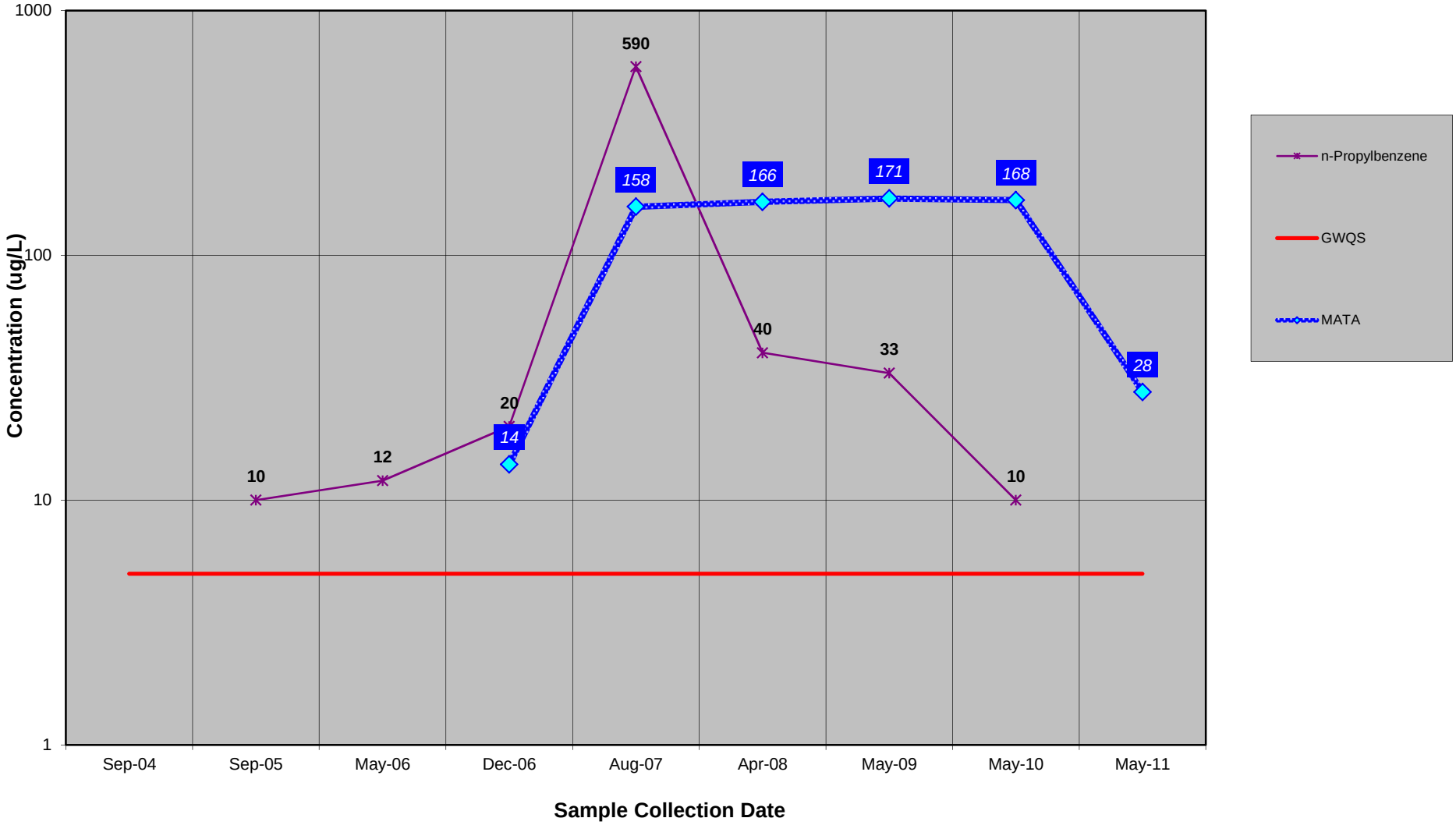
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A1-MW-6
n-PROPYLBENZENE

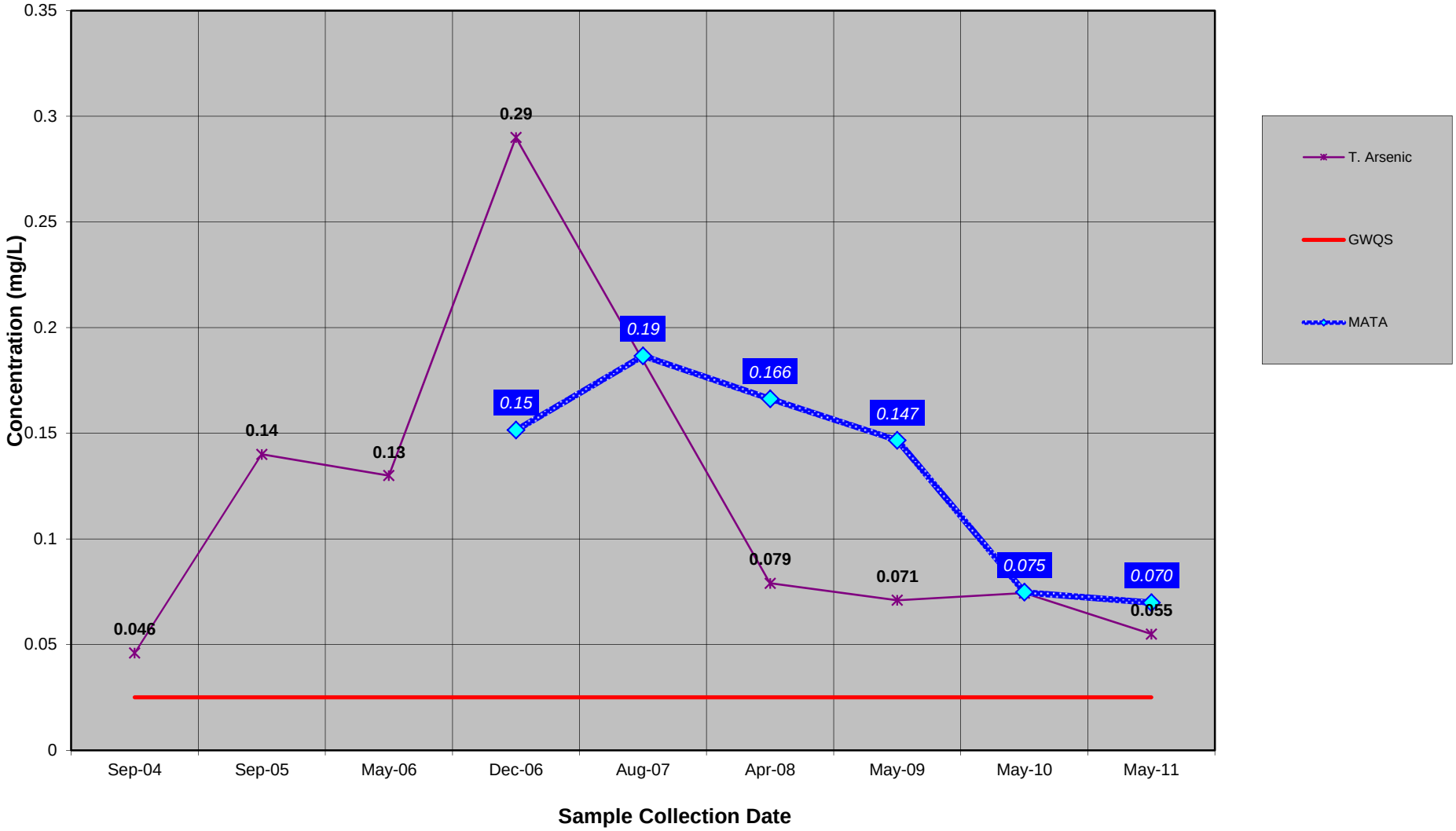
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A1-MW-6
TOTAL ARSENIC

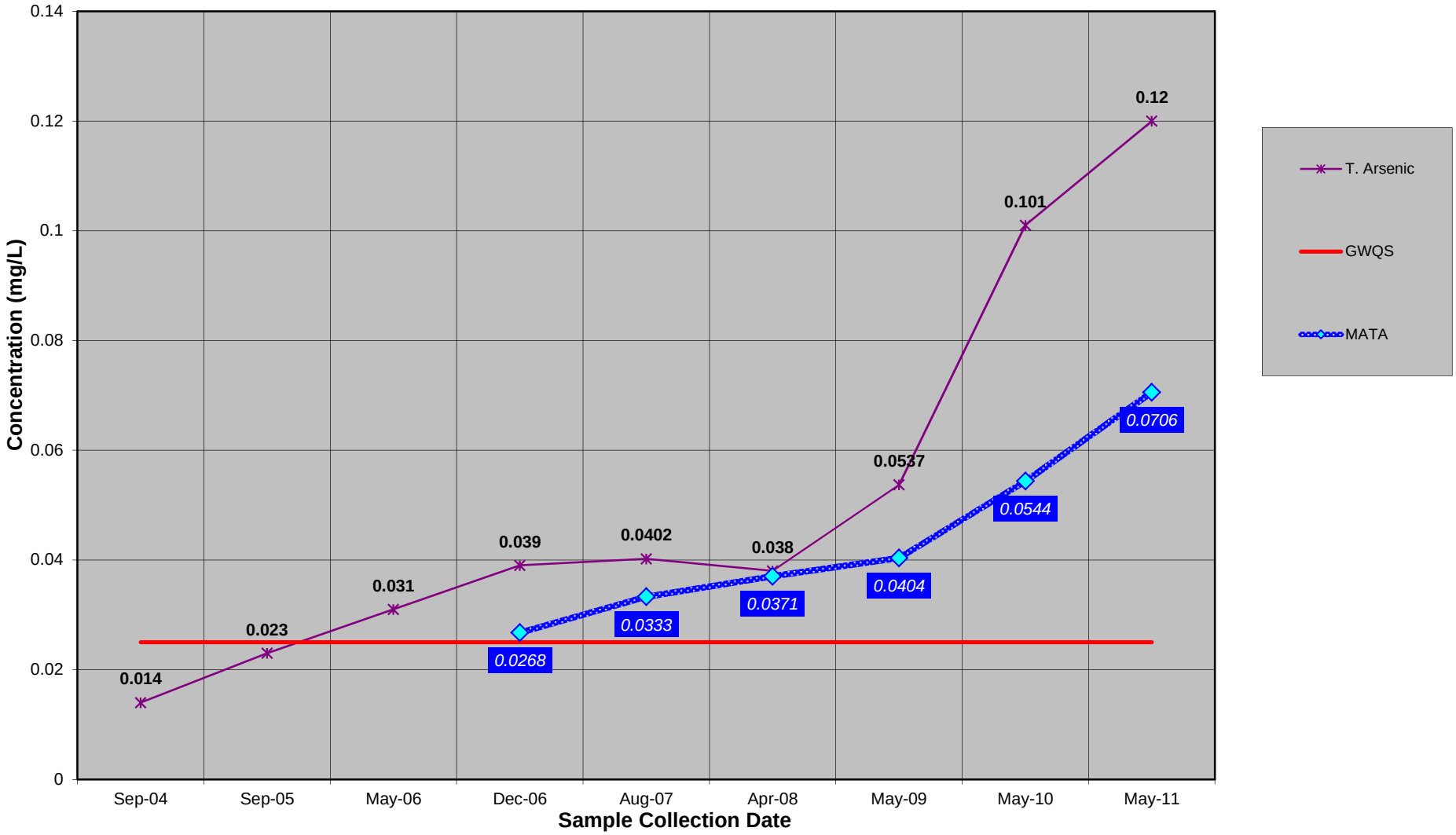
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A1-MW-8
TOTAL ARSENIC

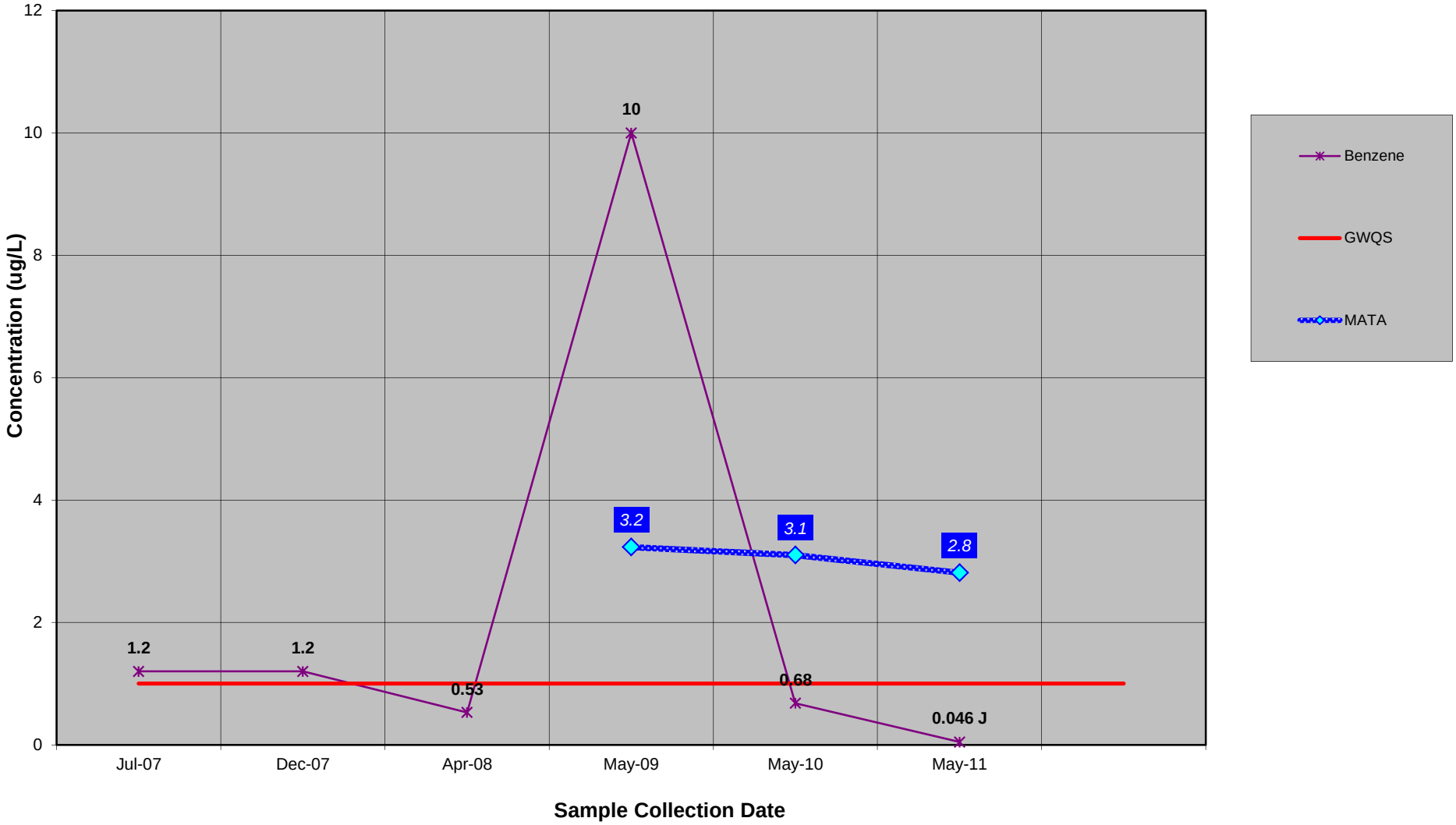
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A2-MW-16
BENZENE

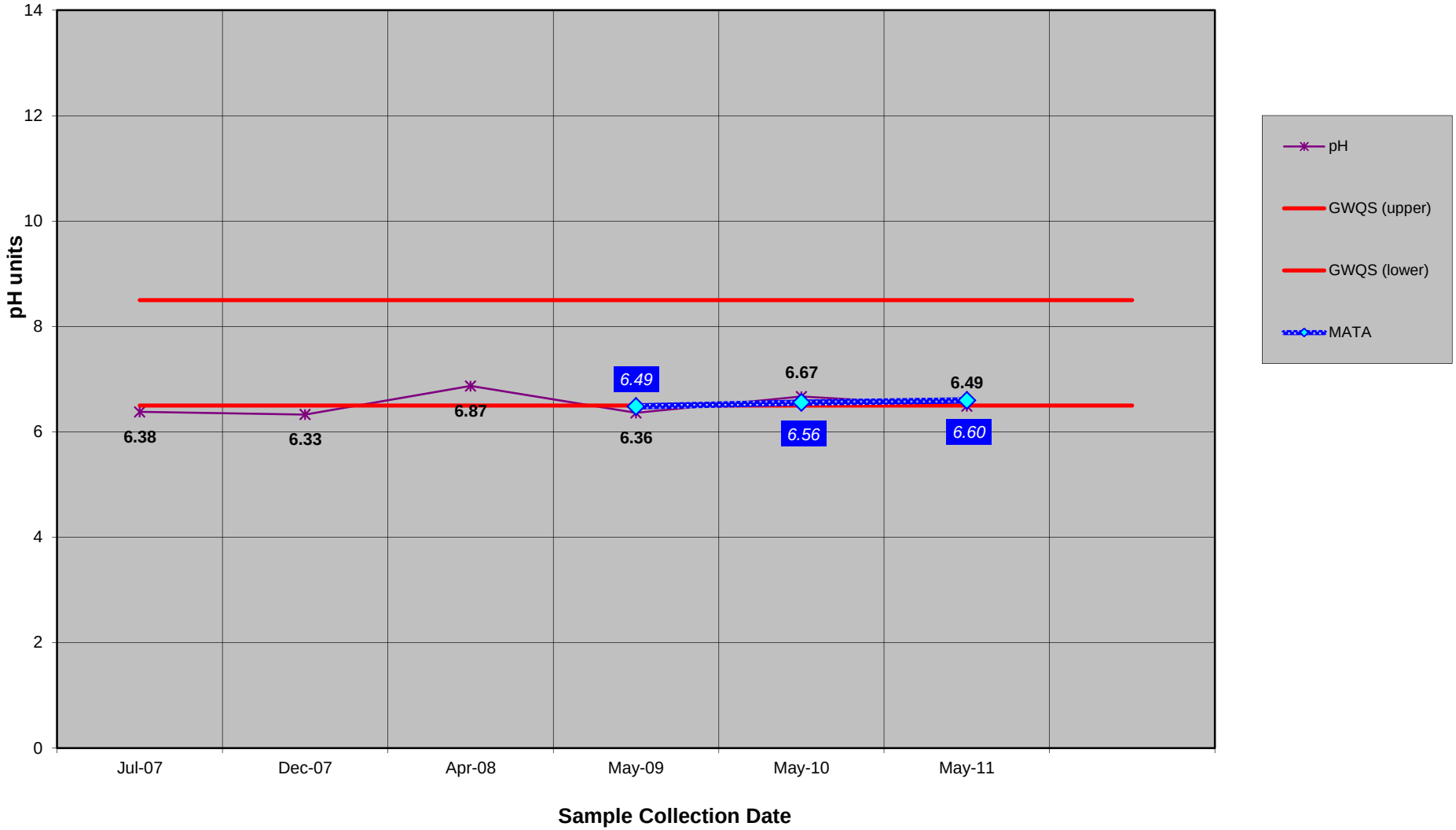
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A2-MW-16
pH

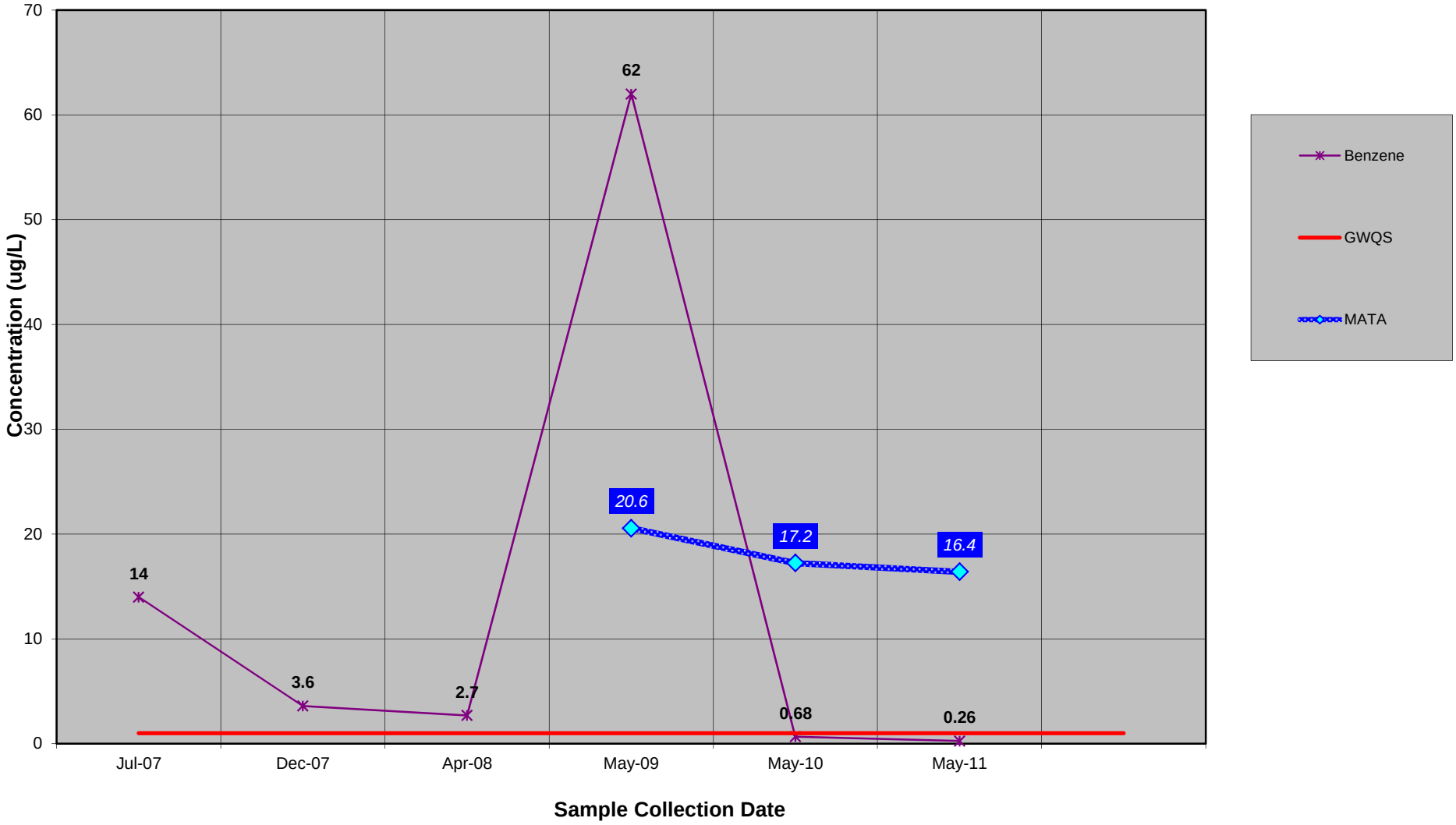
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A2-MW-17
BENZENE

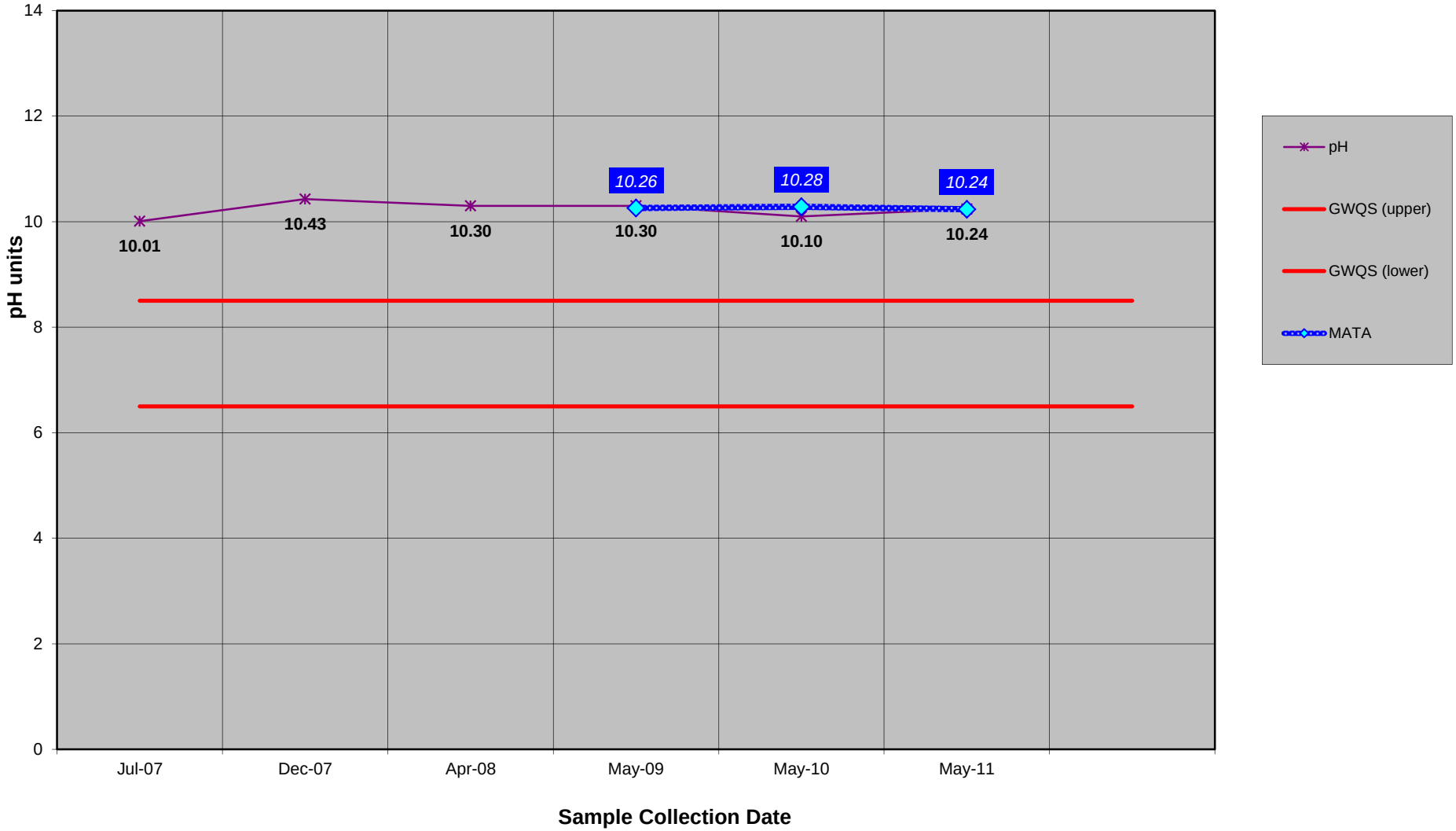
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A3-MW-7
pH

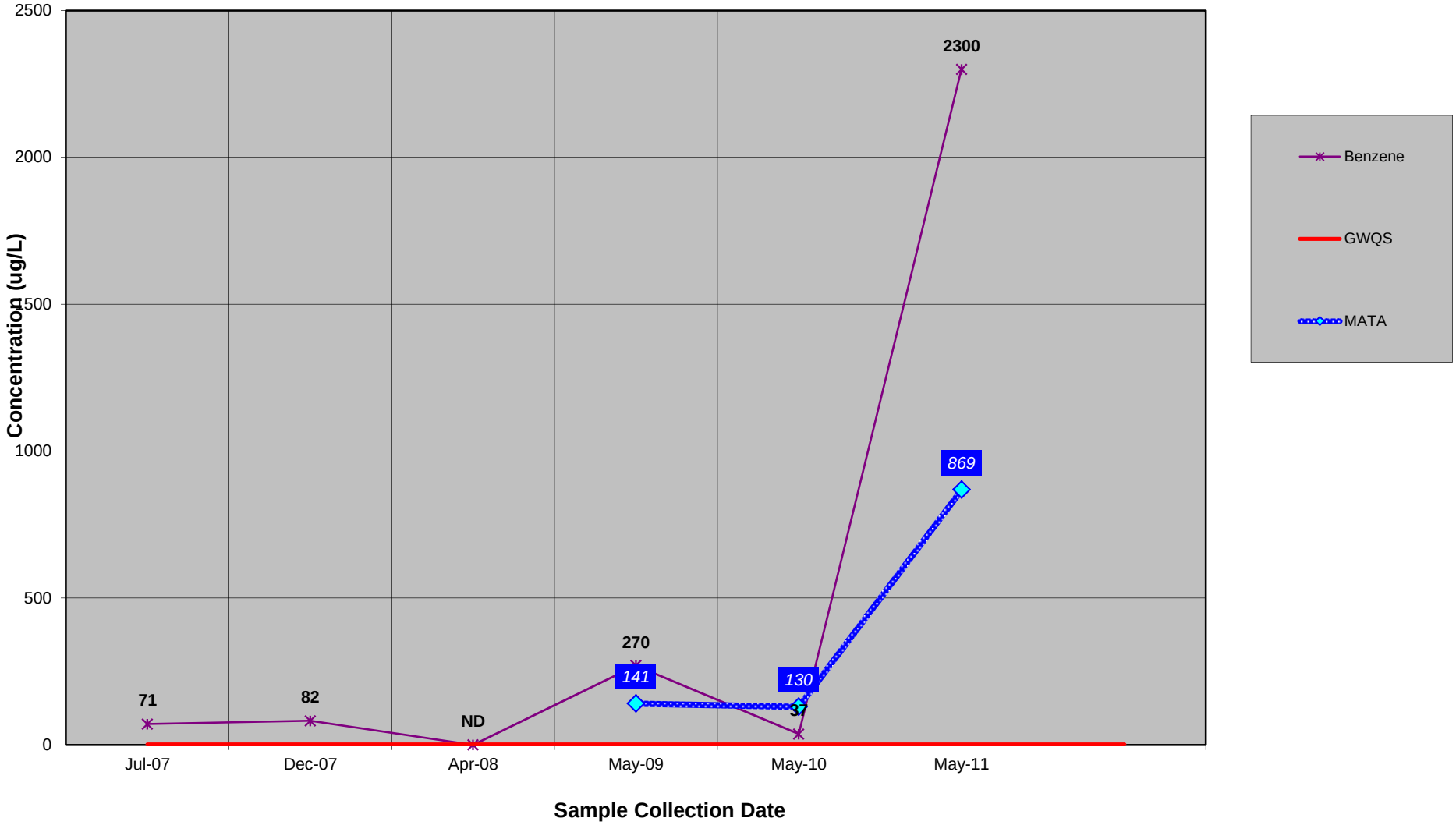
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A3-MW-7
BENZENE

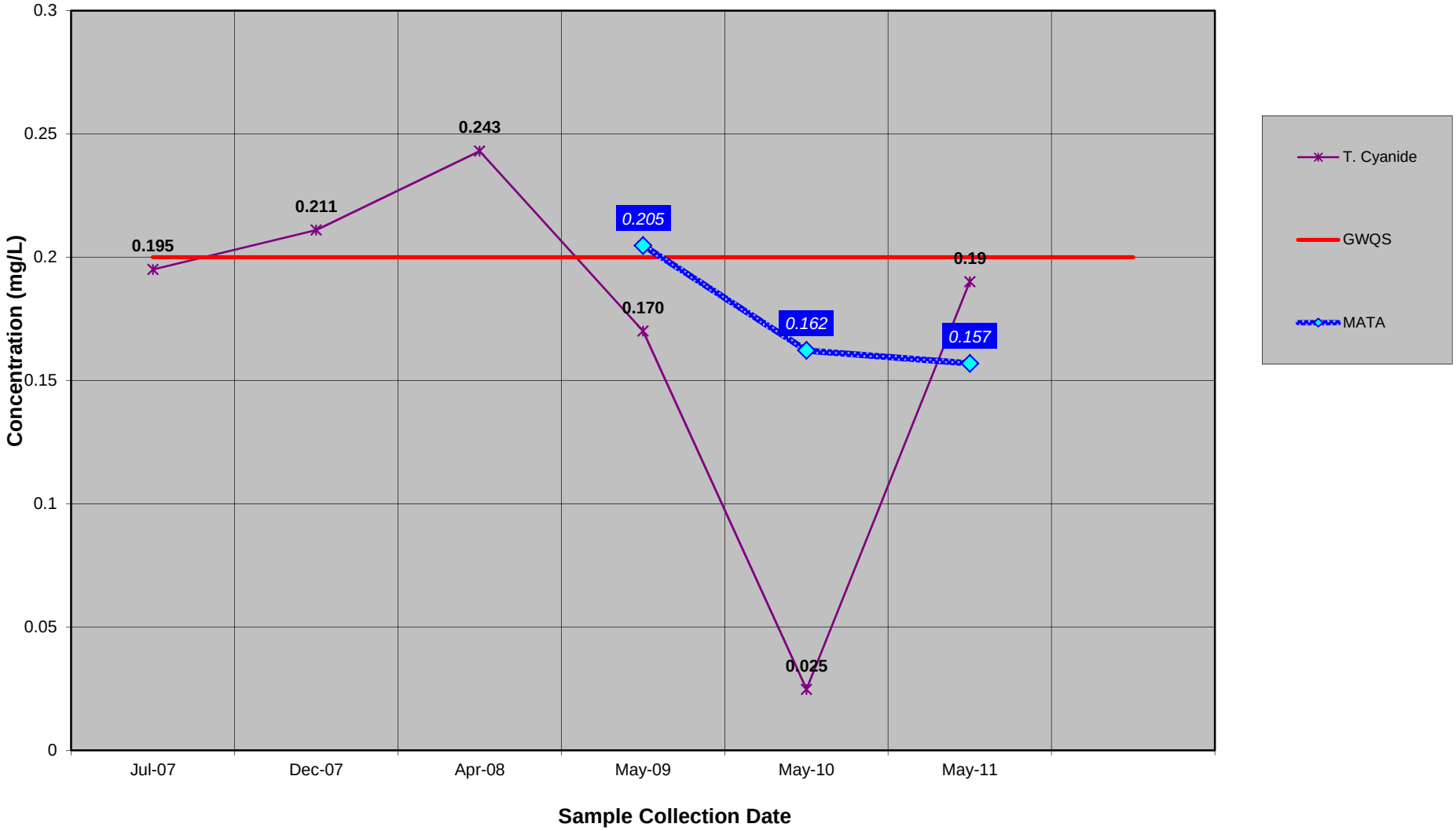
Riverbend Area I LTGWM
Buffalo, New York



ATTACHMENT 2

MOVING AVERAGE TREND ANALYSIS
A3-MW-7
TOTAL CYANIDE

Riverbend Area I LTGWM
Buffalo, New York



APPENDIX D

AREA III – ORC ANNUAL INSPECTION FORMS
MAY AND NOVEMBER 2011

ORC WELL ANNUAL INSPECTION FORM

Project Name: LTGWM | Project No.: 0171-003-600

Project Location: Area III | Client: Riverbend, LLC

Preparer's Name: Brock Greene | Date/Time: 5-20-11

sample location:	A3-ORC-1	A3-ORC-2	A3-ORC-3	A3-ORC-4	A3-ORC-5	A3-ORC-6
purge start:	5-17-11	5-17-11	5-17-11	5-17-11	5-17-11	5-17-11
purge end:	5-20-11	5-19-11	5-20-11	5-20-11	5-20-11	5-20-11
total volumes purged:	10	10	6	4.9	11.7	10
sampling dates:	5-20-11	5-19-11	5-20-11	5-20-11	5-20-11	5-20-11

Field groundwater quality measurements:

	A3-ORC-1	A3-ORC-2	A3-ORC-3	A3-ORC-4	A3-ORC-5	A3-ORC-6
Water Level (Static)	3.91	4.13	4.19	3.91	3.92	4.55
Bottom Depth	14.08	14.43	14.38	14.38	14.03	14.36
pH (At time of sample)	6.88	4.73	4.75	5.81	4.18	4.61
Temperature (At time of sample)	8.9	12.4	9.1	9.0	10.0	9.7
DO (At time of sample)	1.00	2.03	1.94	1.82	1.68	2.63
ORP (At time of sample)	-81	137	139	-10	203	126

Well Integrity:

	A3-ORC-1	A3-ORC-2	A3-ORC-3	A3-ORC-4	A3-ORC-5	A3-ORC-6
Cement seal	OK	OK	OK	OK	OK	OK
Pro-Casing condition	cracked	cracked	cracked	cracked	cracked	cracked
Lock condition	None	None	None	None	None	None
J-plug condition	ok	ok	ok	ok	ok	ok
	OK	OK	OK	OK	OK	OK

Refer to Site Plan for well locations

ORC Sock's:

Have any Socks been replaced ? ☐ yes ☒ no

If replaced on what date and why.

Are socks fully submerged in well screens. ☒ yes ☐ no

If no explain why.

Are all ORC wells being sampled and maintained according to the site management plan ☒ yes ☐ no

If no please state why.

Initial: Brock Greene Date: 5-20-11

ORC WELL ANNUAL INSPECTION FORM

Project Name: LTGWM
Project No.: 0171-003-600
Project Location: Area III
Client: Riverbend, LLC
Preparer's Name: Brock Greene
Date/Time: 5-20-11

sample location:	A3-ORC-7	A3-ORC-8	A3-ORC-9	A3-ORC-10	A3-ORC-11	
purge start:	5-17-11	5-17-11	5-19-11	5-17-11	5-17-11	
purge end:	5-20-11	5-20-11	5-19-11	5-20-11	5-18-11	
total volumes purged:	8.8	7.7	10	8.4	10	
sampling dates:	5-20-11	5-20-11	5-19-11	5-20-11	5-18-11	

Field groundwater quality measurements:

Water Level (static)	4.91	4.91	2.44	4.87	4.54	
Bottom Depth	14.36	14.63	14.03	14.55	14.57	
pH (At time of Sample)	5.38	3.76	2.99	3.83	5.33	
Temperature (At time of Sample)	10.4	9.9	12.2	10.4	12.8	
DO (At time of Sample)	2.72	1.20	1.48	1.49	1.91	
ORP (At time of Sample)	17	210	262	209	36	

Well Integrity:

Cement seal	OK	OK	OK	OK	OK ~~Cracked~~	
Pro-Casing condition	cracked	cracked	unknown grass	unknown grass	cracked ~~None~~	
Lock condition	None	None	None	None	~~OK~~ None	
J-plug condition	OK	OK	OK	OK	OK	
	OK	OK	OK	OK	OK	

Refer to Site Plan for well locations

ORC Sock's:

Have any Socks been replaced ? ☐ yes ☒ no

If replaced on what date and why.

Are socks fully submerged in well screens. ☒ yes ☐ no

If no explain why.

Are all ORC wells being sampled and maintained according to the site management plan ☒ yes ☐ no

If no please state why.

Initial: Brock Greene Date: 5-20-11

ORC WELL ANNUAL INSPECTION FORM

Project Name: LTGWM | Project No.: 0171-00

Project Location: Area III | Client: Riverbend, LLC

Preparer's Name: Tom Belsundt | Date/Time: 12/1/4

sample location:	A3-ORC-1	A3-ORC-2	A3-ORC-3	A3-ORC-4	A3-ORC-5	A3-ORC-6
purge start:	11/28/11	11/28/11	11/28/11	11/28/11	11/28/11	11/28/11
purge end:	12/1/11	12/1/11	12/1/11	12/1/11	12/1/11	12/1/11
total volumes purged:	7.5	9.0	5.3	4.8	7.3	5.3
sampling dates:	12/1/11	12/1/11	12/1/11	12/1/11	12/1/11	12/1/11
Field groundwater quality measurements:						
Water Level	4.68	5.07	5.54	4.86	5.07	5.92
Bottom Depth	14.08	14.43	14.38	14.38	14.03	14.36
pH	9.62	4.58	4.71	5.74	4.13	4.50
Temperature	8.8	9.8	9.2	9.4	9.1	10.1
DO	.18	3.12	1.93	2.35	1.75	1.71
ORP	-112	+10	+59	+14	+67	+55
Well Integrity:	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked
Cement seal						
Pro-Casing condition	NA	NA	NA	NA	NA	NA
Lock condition	good	good	good	good	good	good
J-plug condition	good	good	good	good	good	good

Refer to Site Plan for well locations

ORC Sock's:

Have any Socks been replaced ? ☐ yes ☒ no

If replaced on what date and why.

Are socks fully submerged in well screens. ☒ yes ☐ no

If no explain why.

Are all ORC wells being sampled and maintained according to the site management plan ☒ yes ☐ no

If no please state why.

Initial: TAB Date: 12/1/11

ORC WELL ANNUAL INSPECTION FORM

Project Name: LTGWM Project No.: 0171-00

Project Location: Area III Client: Riverbend, LLC

Preparer's Name: Tom Blewett Date/Time: 12/1/11

sample location:	A3-ORC-7	A3-ORC-8	A3-ORC-9	A3-ORC-10	A3-ORC-11	
purge start:	11/28/11	11/28/11	11/28/11	11/28/11	11/28/11	
purge end:	12/1/11	12/1/11	12/1/11	12/1/11	12/1/11	
total volumes purged:	32.5	33.0	71.5	32.0	61.5	
sampling dates:	12/1/11	12/1/11	12/1/11	12/1/11	12/1/11	~~12/1/11~~

Field groundwater quality measurements:

Water Level	6.03	6.20	4.90	5.86	7.21	
Bottom Depth	14.36	14.64	14.03	14.55	14.57	
pH	5.50	3.68	2.93	3.75	5.53	
Temperature	~~10~~ 9.1	9.9	10.3	9.9	10.9	
DO	2.33	1.71	2.03	1.96	1.95	
ORP	+26	+78	+205	57	-38	

Well Integrity:

Cement seal	Cracked	Cracked	Cracked	Cracked	Cracked	Cracked
Pro-Casing condition	NA	NA	NA	NA	NA	NA
Lock condition	good	good	good	good	good	good
J-plug condition	good	good	good	good	good	good

Refer to Site Plan for well locations

ORC Sock's:

Have any Socks been replaced ? ☐ yes ☒ no

If replaced on what date and why.

Are socks fully submerged in well screens. ☒ yes ☐ no

If no explain why.

Are all ORC wells being sampled and maintained according to the site management plan ☒ yes ☐ no

If no please state why.

Initial: TMB Date: 12/1/11

APPENDIX E

SITE PHOTOGRAPH LOG

SITE PHOTOGRAPHS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1: Area I - Site Conditions (looking northwest)

Photo 2: Area I – Site Conditions (looking northwest)

Photo 3: Abbey Street Berm & Drain Area - Site Conditions (looking south)

Photo 4: Abbey Street Berm & Drain Area - Site Conditions (looking north); discharge manhole to sanitary sewer in foreground

SITE PHOTOGRAPHS

Photo 5:

Photo 6:

Photo 7:

Photo 8:

Photo 5: Abbey Street Berm & Drain Area - Site Conditions (looking south); discharge manhole to sanitary sewer in foreground

Photo 6: Abbey Street Berm & Drain Area – Baraga/Abbey Street manhole showing unobstructed flow

Photo 7: Area II – Baraga Street entrance gate

Photo 8: Area II – Containment Cell Final Cover north side (looking west)

SITE PHOTOGRAPHS

Photo 9:

Photo 10:

Photo 11:

Photo 12:

Photo 9: Area II – Exterior of GWTS building along Baraga Street (looking northwest)

Photo 10: Area II – Interior of GWTS building showing carbon vessels and day tank

Photo 11: Area II - Interior of GWTS building showing tar-separator tank

Photo 12: Area II – Containment Cell Final Cover south side (looking west)

SITE PHOTOGRAPHS

Photo 13:

Photo 14:

Photo 15:

Photo 16:

Photo 13: Area II – Containment Cell Detention Pond (dry) (looking south)

Photo 14: Area II – Containment Cell Detention Pond storm water feature

Photo 15: Area II – Terminal Basin (looking west)

Photo 16: Area II – Pump Station PS-3 (looking west)

SITE PHOTOGRAPHS

Photo 17:

Photo 18:

Photo 19:

Photo 20:

Photo 17: Area III - Site Conditions (looking southwest)

Photo 18: Area III - Site Conditions (looking west)

Photo 19: Area III – southern perimeter fence following mowing activities

Photo 20: Area II – western perimeter fence following mowing activities