Construction Completion Report

BCP Business Parks II & III Decommissioning of Former Coke Oven Gas Lines

Tecumseh Redevelopment Site
Lackawanna, New York

July 2016 0071-013-125

Prepared for:

Tecumseh Redevelopment, Inc.

Prepared by:

TurnKey Environmental Restoration, LLC

In Association with:

Benchmark Environmental Engineering & Science, PLLC

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CONSTRUCTION COMPLETION REPORT

FORMER COKE OVEN GAS LINES
BCP BUSINESS PARKS II & III

TECUMSEH REDEVELOPMENT INC.
LACKAWANNA, NEW YORK

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CERTIFICATION

I, Thomas H. Forbes, P.E., certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Interim Remedial Measures were implemented and that all construction activities were completed in substantial conformance with the DER-approved IRM Work Plan.

License No.: 070950-1

Date: 7-12-16

Registration State: New York

Seal:

CONSTRUCTION COMPLETION REPORT

FORMER COKE OVEN GAS LINES BCP Business Parks II & III

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1.0 INTRODUCTION

This document presents the details of an Interim Remedial Measure (IRM) undertaken to decommission and remediate abandoned, underground former coke oven gas lines located within the Business Parks II & III Brownfield Cleanup Program (BCP) area of the Tecumseh Redevelopment Site in Lackawanna, New York (see Figures 1 and 2).

1.1 Background

Primarily comprised of buried 30-inch diameter cast iron piping, the former coke oven gas line was identified in spring of 2013 during infrastructure improvements undertaken in support of redevelopment work by Welded Tube USA on BCP Business Park Site III-7 (BCP Site C915199G). The line was observed to contain a heel of impacted sludge with a naphthalene-type odor. Analysis of the sludge indicated that it did not exceed characteristic hazardous waste criteria per 40 CFR Part 261. In the summer of 2013, Welded Tube's remedial contractor, R.E. Lorenz Construction, removed the portion of the gas line that traversed BCP Site C915199G. In addition, an approximate 300-foot long section of the gas line was concurrently removed along the northern bank of the South Return Water Trench to the southern limit of a new potable water line crossing. The gas line removal work completed by Welded Tube USA is documented in the November 2013 Final Engineering Report for the Welded Tube parcel (Ref. 1).

Based on the presence of elevated (but non-hazardous) levels of naphthalene and benzene in condensate residuals within the former gas lines, the New York State Department of Environmental Conservation (NYSDEC) determined that the residuals represent "source material" per 6NYCRR Part 375-1.2 and, as such, needed to be removed from the remainder of the site to the extent feasible. Within the BCP-regulated areas of the property the gas line was determined to be located on portions of Sites C915198, C915198B, C915198C, C915198D, C915198E, C915199E, C915199I, and C915199J. Tecumseh therefore submitted an Interim Remedial Measure (IRM) Work Plan describing the planned measures to clean and remove the lines where feasible (Ref. 2); NYSDEC approved the Work Plan in a letter dated June 4, 2014.

1.2 Scope of Work

The proposed IRM activities, as presented in the NYSDEC-approved April 2014 IRM Work Plan (Ref. 2), included:

- Decommissioning of approximately 3,116 linear feet of pipe, with an estimated 2,300 linear feet of pipe designated for cleaning via flushing and vacuuming followed by excavation/removal, and 816 linear feet designated for in-place cleaning followed by decommissioning in place. (Quantities were estimated based upon scaled measurements from historical drawings; actual quantities were established during the IRM work as further described herein). Removed pipe was to be cleaned sufficiently to allow off-site recycling.
- Decommissioning of concrete vaults at various locations along the alignment of the gas line that were believed to be historically used as access points for coke gas condensate removal.
- Pre-treating generated wastewater via bag filters and granulated activated carbon (GAC) prior to discharging to a sanitary manhole along Highway 7 under a temporary discharge permit from Erie County Sewer District (ECSD) No. 6.
- Disposing dewatered solid residual from pipe cleaning off-site at a permitted solid waste disposal facility.
- Implementing community air monitoring during intrusive activities.
- Restoring the Site.

1.3 Purpose and Scope

This CCR includes a summary of IRM activities undertaken for decommissioning of the former coke oven gas lines in BCP Business Parks II & III and has been prepared to document details of the work as completed. The CCR has been prepared using guidance from Section 5.8 of DER-10 (Ref. 3) and includes:

- Text describing the pipe removal and decommissioning activities performed.
- A description of any problems encountered, deviations from the Work Plan, and associated corrective measures taken; and other pertinent information necessary to document that the activities were carried out in substantial conformance with the Work Plan identified in Section 2.2 of this report and any approved deviations thereto.
- A figure showing the area and extent of pipe removal and decommissioning.

- Copies of daily inspection reports and, if applicable, problem identification and corrective measure reports.
- A photographic log of the work.
- A certification by a licensed NYS Professional Engineer in accordance with Section 1.5 of DER-10.

2.0 DESCRIPTION OF IRM ACTIVITIES PERFORMED

The IRM activities were initiated in September 2014. Activities were temporarily halted in October 2014 due to approval delays from Erie County Sewer District No.6 for the temporary discharge of pre-treated water to an on-site sanitary manhole. Activities resumed in December 2015 and were substantially completed on March 1, 2016. Zoladz Construction Company of Alden, NY was retained under subcontract to TurnKey Environmental Restoration, LLC (TurnKey), in association with Benchmark Environmental Engineering & Science, PLLC (Benchmark), to provide pipe removal, decommissioning, and cleaning services. Environmental oversight and documentation of the former coke oven gas line decommissioning was performed by TurnKey and Benchmark personnel. Appendix B includes field notes prepared by TurnKey-Benchmark personnel during the work. Appendix C is a photographic log documenting various aspects of the project.

2.1 Remedial Objectives

Remedial objectives for the IRM work involved decommissioning concrete vaults, and cleaning/removal or closing in-place the former coke oven gas lines within BCP Business Parks II & III. These remedial objectives established were consistent with the April 2014 IRM Work Plan. As further detailed herein, certain NYSDEC-approved modifications from the planned remedial approach were undertaken to achieve the remedial objectives. These included removal and ex-situ mechanical cleaning of accessible piping in lieu of in-place flushing and vacuuming prior to removal; and treatment followed by direct discharge of groundwater in lieu of pretreatment followed by sanitary sewer discharge.

2.2 General Site and Nuisance Controls

Due to the relatively small areas of disturbance required to complete the IRM work and the permeable nature of the slag (which precludes surface water runoff), no specific nuisance controls were required. Zoladz Construction Company was prepared to implement dust control, if needed; however, the relatively minor nature of the intrusive work and favorable community air monitoring results (see Section 2.3) precluded the need for dust suppression.

2.3 Community Air Monitoring Results

Community air monitoring was performed during excavation of the coke oven gas piping and concrete vaults, excluding dates where precipitation mitigated emissions and precluded monitor setup. Appendix D includes the community air monitoring documentation; no exceedances of the Community Air Monitoring Plan (CAMP) action levels were recorded during the work.

2.4 Groundwater Removal & Treatment

Prior to removal and/or in-place cleaning of the coke gas piping, standing groundwater within the piping was evacuated via a vacuum truck and transferred to a steel water tank (i.e., frac tank) for on-site treatment. The groundwater was pumped from the tank through bag filters fitted with nominal 100-mesh oil absorbent bags, followed by dual (series) 500-lb granular activated carbon (GAC) vessels. The carbon-treated groundwater was directed to a receiving tank, where sodium hypochlorite was manually added to achieve slight (less than 0.5 ppm) residual chlorine, as determined by test strips, prior to discharge to ground surface a minimum of 100 feet from any surface water body.

2.5 Pipe Removal and Residuals Disposal

As shown on Figure 2, a total of 2,448 linear feet of sub-grade coke oven gas piping was excavated and removed. The excavated pipe was staged on a decontamination pad constructed with a BUD-approved slag berm and lined with poly sheeting. The pipe was mechanically cleaned using a steel push rod and disc to remove residual sediment. The sediment was taken off-site for disposal at the Chautauqua County Landfill located in Ellery, NY. A copy of the waste manifest and scale receipts is presented in Appendix F of this report.

Following cleaning, the pipe was loaded onto trucks and transported to a separate area of the Tecumseh Site where it was staged for off-site recycling.

Subgrade soil/fill overlying the piping was stockpiled and returned to the excavation following pipe removal.

2.6 Pipe Cleaning & Decommissioning In-Place

Due to infrastructure overlying portions of the coke oven gas piping (i.e., active & non-active rail lines & overhead powerlines), approximately 473 linear feet of pipe was exposed, cleaned, and abandoned in-place (see Figure 2). Residual pipe sediment was removed by opening the end sections of the pipe and mechanically pushing a steel rod and disc through the pipe. The sediment was taken off-site for disposal at the Chautauqua County Landfill located in Ellery, NY. A copy of the waste manifest and scale receipts is presented in Appendix F of this report. Following cleaning the open end sections of the pipe were sealed with concrete.

2.7 Concrete Vault Decommissioning

In addition to the pipe decommissioning, four concrete vaults were removed (see Figure 2). The four concrete vaults, historically designated as "Coke Gas Seal" Nos. 2, 3 and 9 through 12, originally served as access points for removal of gas condensate from the piping by maintenance personnel. Prior to demolition of the vaults, the standing water and sediments were evacuated from each vault via a vacuum truck. Sediments were combined with pipe residuals for offsite disposal. The piping was removed and cleaned for off-site recycling. The vaults were then demolished and the excavation was backfilled with BUD-approved slag to ground surface.

2.8 Site Restoration and Decommissioning

All excavated areas were backfilled with non-impacted excavation spoils and supplemented with BUD-approved slag/fill compacted to grade. Following the completion of Site restoration activities the piping/equipment decontamination pad was decommissioned and poly sheeting was transported off-site for disposal to the Chautauqua County Landfill.

2.9 Issues Encountered, Corrective Actions & Deviations from Work Plan

The following sections describe issues encountered and NYSDEC-approved corrective actions undertaken during implementation of the IRM.

2.9.1 Pipe Cleaning Method

In lieu of cleaning the pipe prior to removal via in-situ flushing and vacuuming as initially proposed in the IRM Work Plan, the accessible pipe was removed and mechanically cleaned ex-situ using a steel push rod and disc. The method of cleaning was modified to limit the amount of water requiring treatment and discharge. As discussed below, issues with high chlorine demand at the ECSD No. 6 Lackawanna Wastewater Treatment Plant (WWTP) necessitated an alternate approach to water management.

2.9.2 Groundwater Treatment and Discharge

The IRM Work Plan called for on-site pretreatment of generated flush water via mechanical filtration and granular activated carbon (GAC) treatment. Pretreated waters were to be discharged to the sanitary sewer system under a temporary discharge permit issued by ECSD No. 6. Prior to undertaking work activities, the pretreatment system was operated by TurnKey/Benchmark personnel for approximately four hours and a sample was collected of the pretreated water for ECSD No. 6 to analyze for priority pollutants. The data indicated no concerns and, as such, TurnKey-Benchmark was given approval by ECSD No. 6 to discharge on a full-scale basis.

Approximately 24 hours after initiating discharge, TurnKey-Benchmark was informed that the ECSD's Lackawanna WWTP experienced a significant chlorine demand during the overnight/early morning hours. ECSD No. 6 ordered TurnKey-Benchmark to stop discharging while they analyzed the effluent for typical chlorine-demanding substances (i.e., nitrites, sulfites, and cyanide). ECSD No. 6 ultimately determined that elevated levels of thiocyanate in the pretreated effluent were attributable to the high chlorine demand at the Lackawanna WWTP.

ECSD No. 6 indicated that in order to resume discharging, TurnKey-Benchmark would be required to submit a plan for on-site thiocyanate pretreatment while assuring that no adverse byproducts would be formed. In addition ECSD stipulated that the pretreated effluent would need to be held, tested, and discharged in batch only after its approval was issued. Based on the delays associated with this approach and the anticipated large volumes of groundwater that would need to be held in storage while awaiting disposal approval, it was determined that indirect discharge to the sanitary sewer would significantly delay completion of the work and potentially render the water

handling approach infeasible. Accordingly, TurnKey-Benchmark elected to revise the pretreatment process and pursue approval from NYSDEC for on-site direct discharge to the ground surface.

The pretreatment process was redesigned to include an additional water (frac) tank for settling, a second GAC unit (in series) for polishing, and an effluent tank for sodium hypochlorite addition (to remove residual thiocyanate). TurnKey-Benchmark performed a pilot test of the treatment system and analyzed samples collected before and after treatment. As shown on Table 1, site-specific compounds of concern were removed below NYSDEC Groundwater Quality Standards. Appendix E includes the analytical data package. On August 11, 2015, TurnKey-Benchmark provided the NYSDEC information on the redesigned treatment train; pre- and post-treatment analytical data; and field testing results. TurnKey-Benchmark requested approval from NYSDEC to alter the full-scale treatment approach and direct discharge the pretreated water to ground surface provided that the discharge was directed 100 feet or greater from any surface water body.

Appendix A includes a copy of the August 25, 2015 NYSDEC approval letter for direct discharge of treated water to ground surface. Per NYSDEC's approval, the GAC treated water was further treated with sodium hypochlorite to remove thiocyante and a treated water sample was analyzed prior to discharge. All results were below NYSDEC Class GA Groundwater Quality Standards/Guidance Values (GWQS/GVs), and residual chlorine was confirmed during discharge using water quality test strips. Appendix E includes the analytical data package. The treated water was discharged to ground surface a minimum of 100 feet from any surface water body.

2.9.3 Linear Feet of Decommissioned Pipe

The IRM Work Plan called for the decommissioning of approximately 3116 linear feet of pipe, which was estimated based on linear footage measurements scaled from historical design drawings. The actual quantity pipe decommissioned was 2,921 linear feet. In addition, a greater percentage of the piping was found to be accessible than originally thought, which allowed for its removal and ex-situ cleaning. This reduced the amount of piping cleaned and abandoned in place from the original estimate of 816 feet to the field-measured quantity of 473 feet.

3.0 REFERENCES

1. Benchmark Environmental Engineering & Science, PLLC. *Brownfield Cleanup Program Final Engineering Report for Tecumseh Phase III-7 Business Park Site, NYSDEC Site Number C915199G, Lackawanna, New York*. November 2013.
2. TurnKey Environmental Restoration, LLC., in association with Benchmark Environmental Engineering & Science, PLLC *Interim Remedial Measures (IRM) Work Plan for Former Coke Oven Gas Lines, Business Parks II & III Tecumseh Redevelopment Site, Lackawanna, New York*. April 2014.
3. New York State Department of Environmental Conservation. *DER-10/Technical Guidance for Site Investigation and Remediation*. May 2010.

TABLES

TABLE 1

Former Coke Oven Gas Line Water Treatment Pilot Test

Tecumseh Redevelopment Inc.
Lackawanna, New York

Parameter [1]	GWQS [2]	Coke Oven Gas Line Water	
		Pre-Carbon	Post-Carbon
Volatile Organic Compounds (ug/L) CP-51 via Method 8260:			
Benzene	1	**440**	ND
Toluene	5	**72**	ND
Xylenes, Total	5	**27.9 J**	ND
Semi-Volatile Organic Compounds (ug/L) via Method 8270:			
Acenaphthylene	20*	0.44	ND
Anthracene	50*	0.05 J	ND
Acetophenone	--	640	ND
Benzo(a)anthracene	0.002*	0.02 J	ND
Fluoranthene	50*	0.05 J	ND
Naphthalene	10*	ND	0.2
Phenanthrene	50*	0.08 J	0.02 J
Polychlorinated Biphenyls (ug/L):			
PCBs, Total	0.09	ND	ND

Notes:

1. Only those parameters detected above the method detection limit at a minimum of one sample location.
2. NYSDEC Class "GA" Groundwater Quality Standards/GuIdance Values (GWQS/GV) per 6 NYCRR Part 703.

Definitions:

J = Estimated value; above method detection limit but below reporting limit.
ND = Parameter not detected above method detection limit.
" * " = Guidance Value used where a Standard has not been established.

BOLD = value exceeds GWQS/GV

FIGURES

F:\CAD\TurnKey\Tecumseh Redevelopment\Coke Oven Gas Lines\IRM work plan for BP II and III\Figure 1; Site Location and Vicinity New.dwg

FIGURE 1

LEGEND:

TECUMSEH PROPERTY BOUNDARY

CMS AREA

TURNKEY ENVIRONMENTAL RESTORATION, LLC

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

PROJECT NO.: 0071-013-125

DATE: JUNE 2016

DRAFTED BY: KRR

SITE LOCATION AND VICINITY MAP

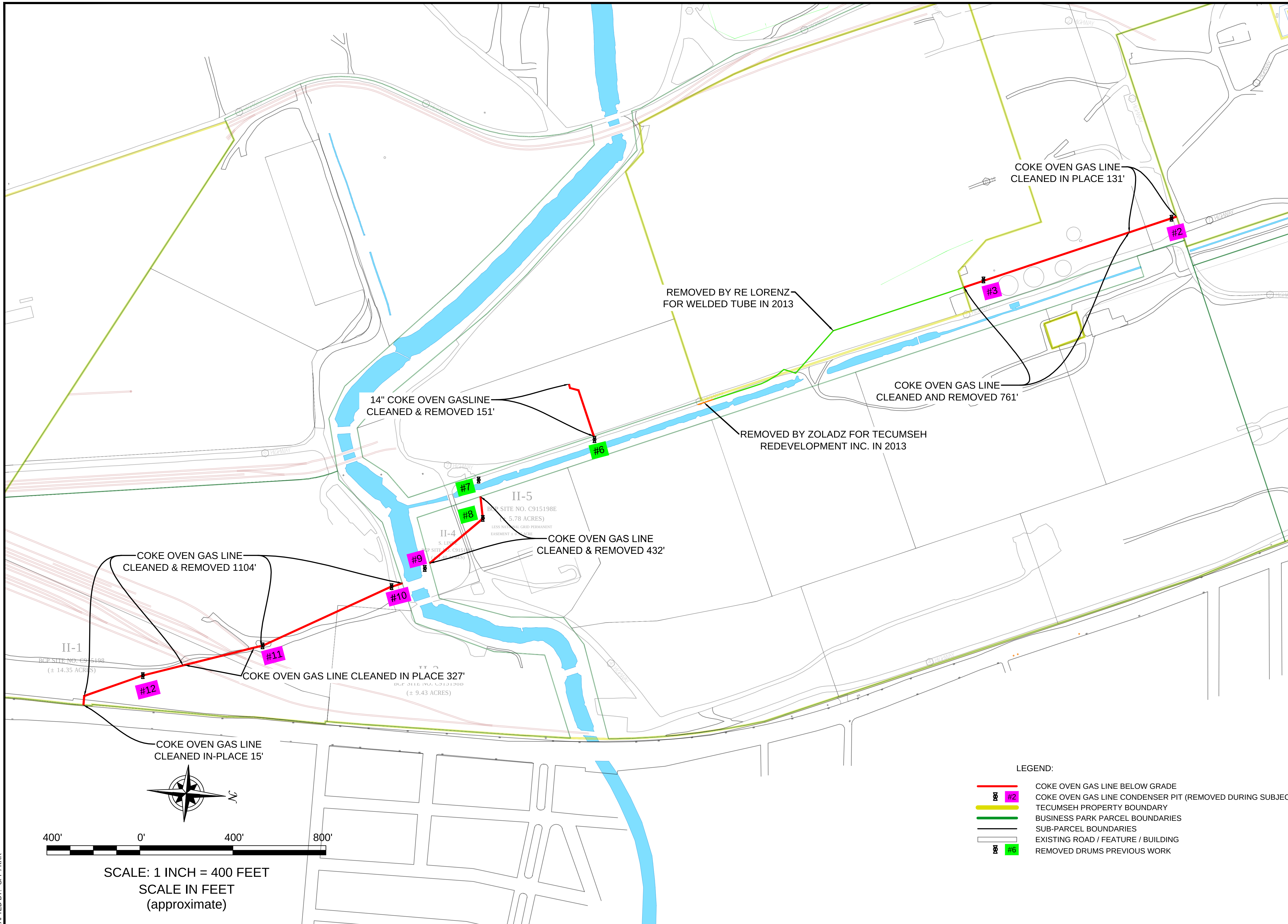
CONSTRUCTION COMPLETION REPORT

TECUMSEH - BCP AREA SITE

LACKAWANNA, NEW YORK

PREPARED FOR

TECUMSEH REDEVELOPMENT INC.


COKE OVEN GAS LINE
CLEANED IN PLACE 131'
#2
#3
REMOVED BY RE LORENZ
FOR WELDED TUBE IN 2013
COKE OVEN GAS LINE
CLEANED AND REMOVED 761'
14" COKE OVEN GASLINE
CLEANED & REMOVED 151'
#6
REMOVED BY ZOLADZ FOR TECUMSEH
REDEVELOPMENT INC. IN 2013
#7
#8
II-5
COKE OVEN GAS LINE
CLEANED & REMOVED 432'
#9
COKE OVEN GAS LINE
CLEANED & REMOVED 1104'
#10
#11
II-1
COKE OVEN GAS LINE CLEANED IN PLACE 327'
#12
COKE OVEN GAS LINE
CLEANED IN-PLACE 15'
N
400'
0'
400'
800'
SCALE: 1 INCH = 400 FEET
SCALE IN FEET
(approximate)
LEGEND:
COKE OVEN GAS LINE BELOW GRADE
#2 COKE OVEN GAS LINE CONDENSER PIT (REMOVED DURING SUBJECT I
TECUMSEH PROPERTY BOUNDARY
BUSINESS PARK PARCEL BOUNDARIES
SUB-PARCEL BOUNDARIES
EXISTING ROAD / FEATURE / BUILDING
#6 REMOVED DRUMS PREVIOUS WORK

F:\CAD\TurnKey\Tecumseh Redevelopment\Coke Oven Gas Lines\IRM work plan for BP II and III\Figure 2: IRM Work Completed for BCP BP II & III.dwg

DATE: MAY 2016
DRAFTED BY: SPF / KRR

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

JOB NO.: JOB 0071-013-125

IRM WORK COMPLETED FOR BCP BP II & III

CONSTRUCTION COMPLETION REPORT

TECUMSEH - BCP AREA SITE

LACKAWANNA, NEW YORK

PREPARED FOR

TECUMSEH REDEVELOPMENT INC.

FIGURE 2

APPENDIX A

NYSDEC CORRESPONDENCE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, NY 14203-2915
P: (716) 851-7220 I F: (716) 851-7226
www.dec.ny.gov

August 25, 2015

Mr. Thomas Forbes, P.E.
TurnKey Environmental Restoration, L.L.C.
2558 Hamburg Turnpike, Suite 300
Buffalo, New York 14218

Dear Mr. Forbes:

Tecumseh Phase II & III Business Park Site(s),
Site #C915198 - C915199
Lackawanna (C), Erie County

The Department has reviewed your request for direct discharge of accumulated groundwater from the excavation of the 30" Coke Gas line which extends through portions of both Business Park Phase II & Phase III.

It is understood that this water from the excavation is considered a short-term duration discharge. The accumulated water will be treated by filtration and carbon adsorption with batch discharge. The batch discharge will allow for pre-discharge sampling.

Pre- and post-treatment sampling from the proposed system affirms the ability to treat the accumulated groundwater allowing for surface discharge. However, it is also noted that there is a presence of the compound thiocyanate. Thiocyanate is not a regulated compound with a listed discharge limitation. Thiocyanate is a compound that requires special testing completed at few select laboratories. Discussion with the laboratory notes that it is impossible for the compound thiocyanate to co-exist in the presence of free residual chlorine. Your plan for treatment includes the addition of sodium hypochloride to a concentration of just detected. With the presence of the free chlorine, thiocyanate will not exist and the analysis for thiocyanate is rendered moot. Therefore, direct sampling for free chlorine will be required.

Your proposal for direct discharge is accepted. Enclosed is the memorandum which includes the Generic Effluent Criteria for Groundwater Discharges. Please note the requirement of discharge to the ground no less than 100 feet from any surface water body. Please allow the Department a five-day notice to inspect your treatment system. Acceptance of discharge will only be allowed following submittal of sampling results from the first treatment batch. Thank you for your attention to this matter.

If you have any questions, please contact me at (716) 851-7220 or at maurice.moore@dec.ny.gov.

Sincerely,

Maurice F. Moore
Engineering Geologist 1

MFM:sz

ec: Mr. Jeffrey Konsella, NYSDEC
Mr. Chad Staniszewski, NYSDEC
Mr. Stanley Radon, NYSDEC

APPENDIX B

PROJECT FIELD NOTES

Location Tecumseh Date

Project / Client 30" Coke Gas Line

Cloudy -54°F NE winds 5-10mph

9/12/14 - Contractor staged 2 21,000 gal FRAC Tanks near "Blue Garage".
- Contractor used VAC Truck to remove water within 30" pipe at Coke Oven Seal #12.
- No other work performed.

- Erie County Sewer Authority personal onsite to Inspect Carbon Filtration System -

9/15/14 Sunny -55°F Am 65°F pm
winds -SW 5-10mph

- Continue to remove water from Coke Seal #12 vault with VAC Truck. Remove Approx 18,000 gal of water. Water stored in FRAC Tank for Filtration prior to Sewer Discharge.

- No other work performed today.
- * NYSOEC onsite - Maurice Mary.

Location Tecumseh Date

Project / Client 30" Coke Gas Line

9/16/14 Cloudy - Am Rain -55°F winds NW 5-10mph
- Setup Camp monitors near Coke Gas Seal Vault #12.

- Contractor used JD Excavator to Locate 30" Coke Line South of Coke Gas Seal #12 to property Line.

- Exposed 258 Lf of Pipe from Coke Seal #12 towards PT 5. Approx 27 Lf from property line was not Exposed.
- Pipe is pitched towards PT-5 & contains water.

- Pipe is Approx Ft Below grade pipe is setting on grey clay soils non Impacted. Excavation Trench is Dry.

Location Jerusalem Date

Project / Client 30" coke gas line

Sunny 65°F winds SW 5-10mph

9/17/14

- Contractor cleaning Dewatering box for removal off site.
- Begin pumping water from FAC Tank through GAC & Discharged to Sanitary Sewer.
- Contractor beginning to expose 30" coke pipe from coke seal #12 & proceeding north towards R.R. crossing.
- Set up CAMP monitors.
* MyDEC onsite - Marty Foster / Maurice Moore observed pipe with Excavator. Explaining to DEC that we would like to terminate coke gas pipe approx 27' from property line, due to additional pipe located at property line - i.e. sanitary sewer.
- During Excavation to expose pipe, ca 20'x20'x15'Ft AREA of brick/slag Impacted with TAR was observed.

Location Date

Project / Client

9/17/14

The Impacted material was placed on poly sheeting. DEC onsite to observe Impacts.

9/18/14 Sunny 60°F winds NE. 0-5 mph

- Contractor pumping water from within coke seal #12.
- Approx 145' of pipe exposed from coke seal #12 north towards tracks
- Approx 380' of pipe will remain buried from coke seal #11 south under R.R. tracks
- Erie County Sewer Authority onsite today to collect sample from Sewer Discharge. County Sewer plant Rep - Laura Sroka onsite.
- Cannot Discharge until county reports Analysis of Sample collection. County Stated that a high chlorine Demand at the pump was detected last nite.

Location ______ Date ______

Project / Client ______

9/18/14 - County wants to determine that our Discharge is not causing an upset at WWTP

Pumping water from coke oven seal #11 water pumped into Frac Tank
No other work performed.

9/19/14 Sunny - 45°F Am 65°F pm
winds - EAST - 0-10 mph

- 0730 / 10:00
- contractor performing maintenance on vacuum truck.
- continue to pump water from coke seal #11.
pumped water from coke seal #11.
Begin exposing pipe from coke seal #11 towards coke seal #10 (north)

- setup camp monitors During pipe exposure.
- Erie county sewer informed ~~[illegible]~~ Turnkey: not to pump or Discharge to sewer until additional sample results are confirmed with WWTP.

Location ______ Date ______

Project / Client ______

9/22/14 Cloudy 50°F Am
winds SW - 15 mph
- no work performed today.
-

9/29/14 Sunny / 73°F winds calm
- No Intrusive work performed today
- ~~[illegible]~~ pumping ~~[illegible]~~ water from 1st Frac tank through carbon filter, then into 3rd Frac tank. This water will be used for flushing all pipe
- Still cannot ~~[illegible]~~ Discharge treated water to sewer at this time
- Erie county Sewer Authority onsite Friday to collect Discharge sample. Sample will be Analyzed for Thiocyanate. ~~Results are scheduled~~ ~~[illegible]~~

ation 30" COKE GAS LINE Date 12/10/15 59

ject / Client Tecumseh - Brown Fields AREA

:00 - meet w/ contractor (ZOLLER)
Jeff L., Jamie, & Steve (superintendent)

perform site walk over to review
work that is required within the
Brown Field parcels.

As discussed, contractor will
setup Decon PAD near Fleming
Storage Building Beginning Thursday 12/11.

Pipe work will begin At coke seal vault
#8 And proceed to coke seal vault #9.

60

Location 30" coke gas line Date 12/17/15

Project / Client

27 RAN Showers 45°F - west winds 10-15 mph

Contractor onsite setting up Decon PAD near Electrical Storage Bldg.

12.30 - Begin pipe removal starting at coke vault seal #8 and proceeding to coke SEAL #9.

Removed Approx 165 LF of pipe TODAY.

12/18/15 27 RAN Showers 35-40°F west winds 10-15 mph

Charlotte Clark onsite From 0730-10:00.

Contractor Removing pipeing to coke seal #9.

Removed 267 LF of pipe TODAY.

Removed Coke Seal #9.

Pipe is Being Cleaned on Decon PAD For Disposal.

Contractor using 50 Dozer, JD Excavator CAT Excavator & OFF Road DT also using Fork Truck

Location

Project / C

Sunn

0830

ge

to

and

SSB

Appro

follo

@ N

Location _____ Date 12/21/15

Project / Client 30" coke gas Line - Brownfields AREA

Cloudy 45°F winds west 10-15 mph

Contractor setting up for pipe removal from coke gas seal #2 to coke gas seal #3.

Located coke gas seal #3.

Continue to clean pipe at Decon pad.

- Staged frac tanks & carbon units near "Blue Garage".

No Invasive work performed today.

12/22/15 30" coke gas Line - Brownfields AREA
Lt rain 35-45°F winds 10-15 mph.
No camp monitors setup due to rain.

Excavating & removing pipe from south of coke seal #2.
- pumping water from pipe at coke seal #3
water placed in frac tank.

Location _____ Date 12/22/15

Project / Client _____

- staging removed pipe at Decon pad for cleaning.

~~Removed Approx~~

12/23/15 - Charlotte Clark onsite
See ~~Note~~
Contractor removed Approx 245 LF of pipe from 12/22 to 12/23/15.

12/28/15 ~~Contractor cleaning~~ pipe
LT ~~rain~~ snow showers 20°F
East wind 15-20mph

- Contractor cleaning staged pipe
- Removed Approx 50' of pipe today in area of former pre treatment facility.
Equip used - JD Dozer, JD Excavator, CAT Excavator, off road dump

Location 30" Coke Gasline Date 12/29/15

Project / Client Tecumseh - Brownfields Area

Rain 40°F winds west/SW 10-15 mph

Removing pipe from area of former Bethlehem pre treatment facility.

Removed 280 LF of pipe. Water within pipe & excavation was pumped into a VAC truck & transferred to FRAC tank.

- Began to pre filter water from FRAC/settling tank, through oil absorbent bag filter to 2nd FRAC. (pumped approx 2000 GAL.

Location 30" Coke Gasline Date 1/4/16

Project / Client Tecumseh - Brownfields Area

2" snow - 13°F

0730 onsite, contractor setting up to clean onsite pipe from coke vault stn #2 - south.
Approx 131 FT of pipe will be cleaned in-place

- Also need to clean in-place & seal remaining pipe under transformer building, south of former pre treatment plant. - Approx 15 LF to remain in-place. North of transformer Bld's plus 34 LF left in-place under RR's.

* 224 LF removed from on 12/30/15
John Dern onsite to observe pipe removal.

Location Tecumseh Date 1/5/16

Project / Client 30" Coke Gasline - Brownfields AREA

Am- 0°F
Pm- 12°F = winds calm - south.

0700 onsite.
- contractor removing pipe on roadway just south of smokes creek pipe crossing.

No water pumping/treating due to cold weather conditions.

- setup camp monitor north of work area.

- Removed 660 LF of pipe from coke seal # 10 to # 11. Pipe was removed on 1/5/16 & 1/6/16.

Tom Berhardt w/ Turnkey onsite During 1/6/16.

Location Tecumseh Date 1/7/16

Project / Client 30" Coke Gasline - Brownfields AREA

Am- 22°F
Pm- 38°F = winds - calm.

0730 onsite. pumping water from settling frac tank to BAS filter into 2nd frac tank for pH treatment.

Contractor cleaning in-place piping from coke seal # 2 - approx 131 south. Contractor using pipe cleaning disc w/ cable to remove sediment in pipe.

14:00 - concrete truck onsite - concrete plug placed on ends of pipe from coke seal 2 south 131'.

Coke pipe also plugged with concrete at location of transformer building, south of coke seal # 3.

Location Teamsters Date 2/23/16

Project / Client Coke Gas Line Removal
Bus Park II

- Construction Outside, Begin removing ground water in Ditch & pumping to VAC Truck. Work performed on South East Area of Business Park II

- Water from VAC Truck - transferred to FRAC Tank at Bus Park III

No other work performed today.

Location Teamsters Date 2/24/16

Project / Client Coke Gas Line Removal Bus Park II

- Continue to pump water near Coke Gas piping in Bus Park II, & Transfer to FRAC TANKS.

- pumping water from 1st FRAC Settling Tank, through a BAG FILTER to 2nd FRAC TANK.

No other work performed today.

Location Teumseh Date 2/25/16

Project / Client BUS Park II

Coke GAS Line Removal

- Contractor Removing Coke GAS Seal #12 & Associated pipws. - Excavation BACK FILLED with Bed SAS & Excavated Soil/Rock/SAS from Hole.

- ~~Begin~~ Begin Removal of coke GAS pipws in BUS Park ~~II~~ II From Coke Seal # 12 - North.

- Pipws Removed WAS placed Decon pad near Electrical Storage Building.

- Pipws WAS cleaned with Steel Disc pulled through Inside OF pipe to Remove Sediment/Debris.

Location Teumseh Date 2/26/16

Project / Client BUS Park II

Coke GAS Line Removal

- No work performed today with Removing piping ~~to~~ due to Equip Breakdowns.

- Contacted - NYSDEC - Maurice Moore, Regarding In-place pipe cleaning & obstructions.

2/29/16 - Teumseh - BUS Park II Coke GAS line pipe Removal.

- Contractor Removing Remaining pipws in BUS Park II, From Coke #11 to #12

Approx 444 Linear feet OF pipe Removed

287' ~~Linear~~ Feet Remained in-place.

- Pipe Left In-place observed to be cleaned, ~~Pipe~~ with no Sediment. The pipe was originally cleaned in October 2014 ~~by~~ by Jetting water through the pipe.

- No other work performed today.

Location Tecumseh Date 3/1/16

Project / Client Bus Park II
Coke Gas Line Removal

- Removing Remaining pipe From coke seal # 12 South. - ~~Pipe was per~~
Pipe Removal Stopped Approx 30' west of Fence Along Bus Park ~~2~~ II.

- Concrete Truck onsite to Seal OFF ends of pipe which remains in-place under R.R. Tracks, and terminated Section near Fence.

- no other work Performed today.

Location Tecumseh Date 3/2/16

Project / Client Bus Park II Coke Gas Line
Removal

- Contractor BACKFilling Excavation at locations where pipe was SEAL OFF with Concrete.

- Continue to Clean pipe at Derrick STAGING PAD AREA.

- no other work performed today

TurnKey Environmental Restoration, LLC

DAILY LOG	DATE	12	23	15
	NO.	1		1
	SHEET		OF	

FIELD ACTIVITY DAILY LOG

Tecumseh

PROJECT NAME: ~~30" Coke Line Removal~~	PROJECT NO. 0071-013-125
PROJECT LOCATION: Tecumseh Bethlehem Steel	CLIENT:
FIELD ACTIVITY: 30" Coke Line Removal	

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION
7 45	Pack up at office
8 00	On site
8 30	Vacced up some GW that was had pooled around the coke line just south of blue garage.
12 30	Took fence down near blue garage to remove coke line that ~~was~~ ran underneath.
13 00	Backfilled removed coke line trench.
14 40	Concrete delivered, two vults filled
15 30	Fence repaired
16 15	CMC off site.

VISITORS ON SITE: Kevin Glazer (DEC)	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
WEATHER CONDITIONS: A.M.: 46°F, ESE wind 8 mph P.M.: 59°F, SE wind 12 mph	IMPORTANT TELEPHONE CALLS:
PERSONNEL ON SITE: CMC	
SIGNATURE Charlotte Clark	DATE: 12/23/15

APPENDIX C

PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
1	Sept 2014

Direction Photo Taken:
South

Description:
Exposing coke gas line in BCP-Business Park II

Photo No.	Date
2	Sept 2014

Direction Photo Taken:
North

Description:
Exposing coke gas line in BCP-Business Park II

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
3	Sept 2014

Direction Photo Taken:
Southeast

Description:
Exposing coke gas line in BCP-Business Park II

Photo No.	Date
4	Sept 2014

Direction Photo Taken:
North

Description:
Exposing coke gas line in BCP-Business Park II

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
5	December 2015

Direction Photo Taken:
Southeast

Description:
Coke gas line pipe removal in BCP-Business Park II

Photo No.	Date
6	December 2015

Direction Photo Taken:
West

Description:
Coke gas line pipe removal in BCP-Business Park II

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
7	December 2015

Direction Photo Taken:
Southwest

Description:
Coke gas line pipe removal in BCP-Business Park II

Photo No.	Date
8	December 2015

Direction Photo Taken:
West

Description:
Coke gas line pipe removal in BCP-Business Park II

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
7A	February 2016

Direction Photo Taken:
North

Description:
Groundwater removal from ditch along 30-inch coke gas piping

Photo No.	Date
8A	February 2016

Direction Photo Taken:
South

Description:
Coke gas line pipe removal in BCP-Business Park II

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
7B	February 2016

Direction Photo Taken:
South

Description:
Removal coke gas seal/vault #11.

Photo No.	Date
8B	February 2016

Direction Photo Taken:
South

Description:
Inside of cleaned pipe remaining in-place under rail road tracks in Business Park II.

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
7C	February 2016

Direction Photo Taken:
South

Description:
Concrete sealing of coke gas piping remaining in-place under rail road tracks in Business Park II.

Photo No.	Date
8C	February 2016

Direction Photo Taken:
North

Description:
Concrete sealing of coke gas piping remaining in-place under rail road tracks in Business Park II.

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
9	December 2015

Direction Photo Taken:
West

Description:
Staging removed pipe sections for cleaning on decon pad.

Photo No.	Date
10	December 2015

Direction Photo Taken:
West

Description:
Cleaning removed pipe sections on decon pad.

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
11	December 2015

Direction Photo Taken:
West

Description:
Cleaned pipe section on decon pad.

Photo No.	Date
12	December 2015

Direction Photo Taken:
West

Description:
Cleaned pipe sections on decon pad.

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
13	December 2015

Direction Photo Taken:
Southwest

Description:
Coke gas line pipe removal in BCP Business Park III

Photo No.	Date
14	December 2015

Direction Photo Taken:
Northwest

Description:
Coke gas line pipe removal in BCP Business Park III

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
15	January 2016

Direction Photo Taken:
North

Description:
In-place cleaning of coke gas line piping in BCP Business Park III

Photo No.	Date
16	January 2016

Direction Photo Taken:
Northwest

Description:
In-place cleaning of coke gas line piping in BCP Business Park III

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
17	January 2016

Direction Photo Taken:
North

Description:
In-place concrete sealing of coke gas line piping in BCP Business Park III

Photo No.	Date
18	January 2016

Direction Photo Taken:
South

Description:
In-place concrete sealing of coke gas line piping in BCP Business Park III

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
19	January 2016

Direction Photo Taken:
North

Description:
In-place concrete sealing of coke gas line piping in BCP Business Park III

Photo No.	Date
20	January 2016

Direction Photo Taken:
South

Description:
In-place concrete sealing of coke gas line piping in BCP Business Park III

Prepared By: *RLD*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment, Inc	BCP Business Parks II & III Lackawanna, NY.	0071-013-125

Photo No.	Date
21	May 2016

Direction Photo Taken:
North

Description:
Off-site Disposal pipe sediments/ decon pad to Chautauqua County Landfill.

Photo No.	Date
22	May 2016

Direction Photo Taken:
South

Description:
Off-site Disposal pipe sediments/ decon pad to Chautauqua County Landfill.

Prepared By: *RLD*

APPENDIX D

CAMP FIELD DATA SHEETS & AIR MONITORING DATA

COMMUNITY AIR MONITORING DAILY LOG

Date: 9/16/14
Project: Coke oven GAS Line
Job No.: 0211-013 -125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: Coke GAS line Removal

WEATHER CONDITIONS:		
Time of Day:	0800 A.M.	1630 P.M.
Ambient Air Temp.:	55°F	55°F
Wind Direction:	NW	NW
Wind Speed:	5-10mph	5-10mph
Precipitation:	none	none

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLD Date: 9/16/14
Checked By: Date:

"Model Number", "DataRAM 4 ", 106
"Serial no. ", "D836 ! "
"Device no. ", 1
"Tag Number ", 9
"Start Time ", 00:07:42
"Start Date ", 16-Sept-2014
"Log Period ", 00:16:00
"Number ", 16
"CalFactor ", 1.000000
"Unit ", 0
"Unit Name ", "(MASS)ug/m3"
"SIZE_CORRECT", "ENABLED"
"TEMPUNITS ", F
"Max MASS ", 57.544010
"Max MASS @ ", 2 ,00:39:42 ,16-Sept-2014
"Avg MASS ", 17.526450
"Max Diam ", 0.272876
"Max Diam @ ", 13 ,03:35:42 ,16-Sept-2014
"Avg Diam ", 0.188452
"ALARM ", "DISABLED"
"ALARM_LEVEL ", 0.0
"AUTO_ZERO ", "DISABLED"
"AZ INTERVAL ", 1
"Errors ", 0001

record	"(MASS)ug/m3"	Temp	RHumidity	Diameter		
1,	54.2,	69.3,	48,	0.0890	,00:23:42	,16-Feb-2014
2,	57.5,	66.4,	52,	0.0811	,00:39:42	,16-Feb-2014
3,	39.0,	64.3,	55,	0.0970	,00:55:42	,16-Feb-2014
4,	45.4,	63.3,	58,	0.0889	,01:11:42	,16-Feb-2014
5,	29.0,	64.1,	59,	0.1132	,01:27:42	,16-Feb-2014
6,	12.7,	66.5,	55,	0.1526	,01:43:42	,16-Feb-2014
7,	6.9,	68.1,	51,	0.1908	,01:59:42	,16-Feb-2014
8,	6.1,	70.5,	47,	0.2063	,02:15:42	,16-Feb-2014
9,	7.4,	72.5,	42,	0.2018	,02:31:42	,16-Feb-2014
10,	5.0,	74.2,	41,	0.2177	,02:47:42	,16-Feb-2014
11,	3.9,	76.6,	37,	0.2457	,03:03:42	,16-Feb-2014
12,	3.3,	79.2,	35,	0.2621	,03:19:42	,16-Feb-2014
13,	2.4,	81.4,	32,	0.2729	,03:35:42	,16-Feb-2014
14,	2.3,	82.3,	29,	0.2705	,03:51:42	,16-Feb-2014
15,	2.7,	82.1,	27,	0.2606	,04:07:42	,16-Feb-2014
16,	2.7,	82.4,	28,	0.2650	,04:23:42	,16-Feb-2014

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 012776
User ID: 00000001 Site ID: 00000449
Data Points: 509 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 09/04/2014 09:25
Start At: 09/16/2014 09:06 End At: 09/16/2014 17:34

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100.0	100.0	100.0
Low Alarm Levels:	50.0	50.0	50.0
STEL Alarm Levels:	9025.0	9025.0	9025.0
TWA Alarm Levels:	10.0	10.0	10.0

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
Peak Data Value:	-----	3.1	3.6
Min Data Value:	-----	0.0	0.0
TWA Data Value:	-----	0.2	0.3
AVG Data Value:	-----	0.2	0.3

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 012776
User ID: 00000001 Site ID: 00000449
Data Points: 509 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 09/04/2014 09:25

Measurement Type:	Min(ppm)			Avg(ppm)			Max(ppm)		
Alarm Type:	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
Alarm Levels:	9025.0	10.0		9025.0	10.0		9025.0	10.0	

			Min(ppm)			Avg(ppm)			Max(ppm)		
Line#	Date	Time	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
1	09/16/2014	09:06	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
2	09/16/2014	09:07	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
3	09/16/2014	09:08	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
4	09/16/2014	09:09	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
5	09/16/2014	09:10	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
6	09/16/2014	09:11	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
7	09/16/2014	09:12	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
8	09/16/2014	09:13	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
9	09/16/2014	09:14	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
10	09/16/2014	09:15	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
11	09/16/2014	09:16	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
12	09/16/2014	09:17	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
13	09/16/2014	09:18	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
14	09/16/2014	09:19	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
15	09/16/2014	09:20	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
16	09/16/2014	09:21	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
17	09/16/2014	09:22	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
18	09/16/2014	09:23	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
19	09/16/2014	09:24	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
20	09/16/2014	09:25	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
21	09/16/2014	09:26	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
22	09/16/2014	09:27	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
23	09/16/2014	09:28	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
24	09/16/2014	09:29	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
25	09/16/2014	09:30	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
26	09/16/2014	09:31	-----	-----	-----	0.0	0.0	0.0	0.1	0.0	0.0
27	09/16/2014	09:32	-----	-----	-----	0.1	0.0	0.0	0.1	0.0	0.1
28	09/16/2014	09:33	-----	-----	-----	0.1	0.0	0.1	0.2	0.0	0.1
29	09/16/2014	09:34	-----	-----	-----	0.2	0.0	0.1	0.3	0.0	0.1
30	09/16/2014	09:35	-----	-----	-----	0.2	0.0	0.1	0.3	0.0	0.2
31	09/16/2014	09:36	-----	-----	-----	0.3	0.0	0.1	0.4	0.0	0.2
32	09/16/2014	09:37	-----	-----	-----	0.4	0.0	0.2	0.5	0.0	0.2
33	09/16/2014	09:38	-----	-----	-----	0.4	0.0	0.2	0.5	0.0	0.2
34	09/16/2014	09:39	-----	-----	-----	0.5	0.0	0.2	0.6	0.0	0.3
35	09/16/2014	09:40	-----	-----	-----	0.6	0.0	0.2	0.7	0.0	0.3
36	09/16/2014	09:41	-----	-----	-----	0.6	0.0	0.3	0.8	0.0	0.3
37	09/16/2014	09:42	-----	-----	-----	0.7	0.0	0.3	0.9	0.0	0.4
38	09/16/2014	09:43	-----	-----	-----	0.8	0.0	0.3	1.0	0.0	0.4
39	09/16/2014	09:44	-----	-----	-----	0.9	0.0	0.3	1.1	0.0	0.4
40	09/16/2014	09:45	-----	-----	-----	1.0	0.0	0.4	1.1	0.0	0.4
41	09/16/2014	09:46	-----	-----	-----	1.0	0.0	0.4	1.2	0.0	0.5
42	09/16/2014	09:47	-----	-----	-----	1.1	0.0	0.4	1.3	0.0	0.5
43	09/16/2014	09:48	-----	-----	-----	1.2	0.0	0.5	1.4	0.0	0.6
44	09/16/2014	09:49	-----	-----	-----	1.3	0.0	0.5	1.5	0.1	0.6
45	09/16/2014	09:50	-----	-----	-----	1.3	0.0	0.5	1.6	0.1	0.6
46	09/16/2014	09:51	-----	-----	-----	1.5	0.1	0.6	1.7	0.1	0.7
47	09/16/2014	09:52	-----	-----	-----	1.5	0.1	0.6	1.8	0.1	0.7
48	09/16/2014	09:53	-----	-----	-----	1.6	0.1	0.6	1.9	0.1	0.8
49	09/16/2014	09:54	-----	-----	-----	1.7	0.1	0.7	2.0	0.1	0.8
50	09/16/2014	09:55	-----	-----	-----	1.8	0.1	0.7	2.1	0.1	0.8
51	09/16/2014	09:56	-----	-----	-----	1.8	0.1	0.7	2.1	0.1	0.9
52	09/16/2014	09:57	-----	-----	-----	1.9	0.1	0.8	2.2	0.1	0.9
53	09/16/2014	09:58	-----	-----	-----	2.0	0.1	0.8	2.3	0.1	0.9
54	09/16/2014	09:59	-----	-----	-----	2.0	0.1	0.8	2.4	0.1	1.0
55	09/16/2014	10:00	-----	-----	-----	2.1	0.1	0.8	2.5	0.1	1.0
56	09/16/2014	10:01	-----	-----	-----	2.2	0.1	0.9	2.5	0.1	1.0

57	09/16/2014 10:02	-----	-----	-----	2.2	0.1	0.9	2.5	0.1	1.0
58	09/16/2014 10:03	-----	-----	-----	2.2	0.1	0.9	2.6	0.1	1.1
59	09/16/2014 10:04	-----	-----	-----	2.2	0.1	0.9	2.6	0.1	1.1
60	09/16/2014 10:05	-----	-----	-----	2.2	0.1	1.0	2.6	0.1	1.1
61	09/16/2014 10:06	-----	-----	-----	2.2	0.1	1.0	2.6	0.1	1.2
62	09/16/2014 10:07	-----	-----	-----	2.2	0.1	1.0	2.7	0.2	1.2
63	09/16/2014 10:08	-----	-----	-----	2.3	0.1	1.0	2.7	0.2	1.2
64	09/16/2014 10:09	-----	-----	-----	2.3	0.1	1.1	2.7	0.2	1.3
65	09/16/2014 10:10	-----	-----	-----	2.3	0.1	1.1	2.7	0.2	1.3
66	09/16/2014 10:11	-----	-----	-----	2.3	0.1	1.1	2.8	0.2	1.3
67	09/16/2014 10:12	-----	-----	-----	2.3	0.2	1.1	2.8	0.2	1.3
68	09/16/2014 10:13	-----	-----	-----	2.3	0.2	1.1	2.8	0.2	1.3
69	09/16/2014 10:14	-----	-----	-----	2.3	0.2	1.1	2.8	0.2	1.4
70	09/16/2014 10:15	-----	-----	-----	2.3	0.2	1.2	2.9	0.2	1.4
71	09/16/2014 10:16	-----	-----	-----	2.3	0.2	1.2	2.9	0.2	1.4
72	09/16/2014 10:17	-----	-----	-----	2.4	0.2	1.2	2.9	0.2	1.4
73	09/16/2014 10:18	-----	-----	-----	2.4	0.2	1.2	3.0	0.2	1.5
74	09/16/2014 10:19	-----	-----	-----	2.4	0.2	1.2	3.0	0.2	1.5
75	09/16/2014 10:20	-----	-----	-----	2.4	0.2	1.3	3.0	0.2	1.5
76	09/16/2014 10:21	-----	-----	-----	2.4	0.2	1.3	3.0	0.2	1.5
77	09/16/2014 10:22	-----	-----	-----	2.4	0.2	1.3	2.9	0.2	1.5
78	09/16/2014 10:23	-----	-----	-----	2.3	0.2	1.3	2.8	0.3	1.5
79	09/16/2014 10:24	-----	-----	-----	2.2	0.2	1.3	2.8	0.3	1.5
80	09/16/2014 10:25	-----	-----	-----	2.2	0.2	1.3	2.7	0.3	1.5
81	09/16/2014 10:26	-----	-----	-----	2.1	0.2	1.3	2.6	0.3	1.5
82	09/16/2014 10:27	-----	-----	-----	2.0	0.2	1.3	2.5	0.3	1.5
83	09/16/2014 10:28	-----	-----	-----	1.8	0.2	1.3	2.4	0.3	1.5
84	09/16/2014 10:29	-----	-----	-----	1.7	0.2	1.2	2.2	0.3	1.5
85	09/16/2014 10:30	-----	-----	-----	1.6	0.2	1.2	2.1	0.3	1.5
86	09/16/2014 10:31	-----	-----	-----	1.5	0.2	1.2	2.0	0.3	1.5
87	09/16/2014 10:32	-----	-----	-----	1.4	0.2	1.2	1.8	0.3	1.5
88	09/16/2014 10:33	-----	-----	-----	1.2	0.2	1.2	1.6	0.3	1.5
89	09/16/2014 10:34	-----	-----	-----	1.0	0.2	1.2	1.5	0.3	1.5
90	09/16/2014 10:35	-----	-----	-----	0.9	0.2	1.2	1.3	0.3	1.5
91	09/16/2014 10:36	-----	-----	-----	0.8	0.2	1.2	1.2	0.3	1.5
92	09/16/2014 10:37	-----	-----	-----	0.7	0.2	1.2	1.1	0.3	1.5
93	09/16/2014 10:38	-----	-----	-----	0.6	0.2	1.2	0.9	0.3	1.4
94	09/16/2014 10:39	-----	-----	-----	0.6	0.2	1.2	0.9	0.3	1.4
95	09/16/2014 10:40	-----	-----	-----	0.5	0.2	1.1	0.7	0.3	1.4
96	09/16/2014 10:41	-----	-----	-----	0.4	0.2	1.1	0.7	0.3	1.4
97	09/16/2014 10:42	-----	-----	-----	0.4	0.2	1.1	0.6	0.3	1.4
98	09/16/2014 10:43	-----	-----	-----	0.3	0.2	1.1	0.6	0.3	1.4
99	09/16/2014 10:44	-----	-----	-----	0.3	0.2	1.1	0.6	0.3	1.4
100	09/16/2014 10:45	-----	-----	-----	0.3	0.2	1.1	0.5	0.3	1.4
101	09/16/2014 10:46	-----	-----	-----	0.2	0.2	1.1	0.5	0.3	1.4
102	09/16/2014 10:47	-----	-----	-----	0.2	0.2	1.1	0.4	0.3	1.3
103	09/16/2014 10:48	-----	-----	-----	0.1	0.2	1.1	0.3	0.3	1.3
104	09/16/2014 10:49	-----	-----	-----	0.1	0.2	1.0	0.3	0.3	1.3
105	09/16/2014 10:50	-----	-----	-----	0.1	0.2	1.0	0.3	0.3	1.3
106	09/16/2014 10:51	-----	-----	-----	0.1	0.2	1.0	0.3	0.3	1.3
107	09/16/2014 10:52	-----	-----	-----	0.1	0.2	1.0	0.2	0.3	1.3
108	09/16/2014 10:53	-----	-----	-----	0.0	0.2	1.0	0.2	0.3	1.3
109	09/16/2014 10:54	-----	-----	-----	0.0	0.2	1.0	0.2	0.3	1.3
110	09/16/2014 10:55	-----	-----	-----	0.0	0.2	1.0	0.1	0.3	1.2
111	09/16/2014 10:56	-----	-----	-----	0.0	0.2	1.0	0.1	0.3	1.2
112	09/16/2014 10:57	-----	-----	-----	0.0	0.2	1.0	0.1	0.3	1.2
113	09/16/2014 10:58	-----	-----	-----	0.0	0.2	1.0	0.1	0.3	1.2
114	09/16/2014 10:59	-----	-----	-----	0.0	0.2	1.0	0.1	0.3	1.2
115	09/16/2014 11:00	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.2
116	09/16/2014 11:01	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.2
117	09/16/2014 11:02	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.2
118	09/16/2014 11:03	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.2
119	09/16/2014 11:04	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.2
120	09/16/2014 11:05	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1
121	09/16/2014 11:06	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1
122	09/16/2014 11:07	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1
123	09/16/2014 11:08	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1
124	09/16/2014 11:09	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1
125	09/16/2014 11:10	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1

126	09/16/2014	11:11	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1
127	09/16/2014	11:12	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1
128	09/16/2014	11:13	-----	-----	-----	0.0	0.2	0.9	0.0	0.3	1.1
129	09/16/2014	11:14	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.1
130	09/16/2014	11:15	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.1
131	09/16/2014	11:16	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
132	09/16/2014	11:17	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
133	09/16/2014	11:18	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
134	09/16/2014	11:19	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
135	09/16/2014	11:20	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
136	09/16/2014	11:21	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
137	09/16/2014	11:22	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
138	09/16/2014	11:23	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
139	09/16/2014	11:24	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
140	09/16/2014	11:25	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
141	09/16/2014	11:26	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
142	09/16/2014	11:27	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
143	09/16/2014	11:28	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
144	09/16/2014	11:29	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	1.0
145	09/16/2014	11:30	-----	-----	-----	0.0	0.2	0.8	0.0	0.3	0.9
146	09/16/2014	11:31	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
147	09/16/2014	11:32	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
148	09/16/2014	11:33	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
149	09/16/2014	11:34	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
150	09/16/2014	11:35	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
151	09/16/2014	11:36	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
152	09/16/2014	11:37	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
153	09/16/2014	11:38	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
154	09/16/2014	11:39	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
155	09/16/2014	11:40	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
156	09/16/2014	11:41	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
157	09/16/2014	11:42	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
158	09/16/2014	11:43	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
159	09/16/2014	11:44	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
160	09/16/2014	11:45	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
161	09/16/2014	11:46	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.9
162	09/16/2014	11:47	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.8
163	09/16/2014	11:48	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.8
164	09/16/2014	11:49	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.8
165	09/16/2014	11:50	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.8
166	09/16/2014	11:51	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.8
167	09/16/2014	11:52	-----	-----	-----	0.0	0.2	0.7	0.0	0.3	0.8
168	09/16/2014	11:53	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
169	09/16/2014	11:54	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
170	09/16/2014	11:55	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
171	09/16/2014	11:56	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
172	09/16/2014	11:57	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
173	09/16/2014	11:58	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
174	09/16/2014	11:59	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
175	09/16/2014	12:00	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
176	09/16/2014	12:01	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
177	09/16/2014	12:02	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
178	09/16/2014	12:03	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
179	09/16/2014	12:04	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
180	09/16/2014	12:05	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
181	09/16/2014	12:06	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
182	09/16/2014	12:07	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
183	09/16/2014	12:08	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.8
184	09/16/2014	12:09	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
185	09/16/2014	12:10	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
186	09/16/2014	12:11	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
187	09/16/2014	12:12	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
188	09/16/2014	12:13	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
189	09/16/2014	12:14	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
190	09/16/2014	12:15	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
191	09/16/2014	12:16	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
192	09/16/2014	12:17	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
193	09/16/2014	12:18	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
194	09/16/2014	12:19	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7

195	09/16/2014	12:20	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
196	09/16/2014	12:21	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
197	09/16/2014	12:22	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
198	09/16/2014	12:23	-----	-----	-----	0.0	0.2	0.6	0.0	0.3	0.7
199	09/16/2014	12:24	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
200	09/16/2014	12:25	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
201	09/16/2014	12:26	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
202	09/16/2014	12:27	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
203	09/16/2014	12:28	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
204	09/16/2014	12:29	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
205	09/16/2014	12:30	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
206	09/16/2014	12:31	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
207	09/16/2014	12:32	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
208	09/16/2014	12:33	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
209	09/16/2014	12:34	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
210	09/16/2014	12:35	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
211	09/16/2014	12:36	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.7
212	09/16/2014	12:37	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
213	09/16/2014	12:38	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
214	09/16/2014	12:39	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
215	09/16/2014	12:40	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
216	09/16/2014	12:41	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
217	09/16/2014	12:42	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
218	09/16/2014	12:43	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
219	09/16/2014	12:44	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
220	09/16/2014	12:45	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
221	09/16/2014	12:46	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
222	09/16/2014	12:47	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
223	09/16/2014	12:48	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
224	09/16/2014	12:49	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
225	09/16/2014	12:50	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
226	09/16/2014	12:51	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
227	09/16/2014	12:52	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
228	09/16/2014	12:53	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
229	09/16/2014	12:54	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
230	09/16/2014	12:55	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
231	09/16/2014	12:56	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
232	09/16/2014	12:57	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
233	09/16/2014	12:58	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
234	09/16/2014	12:59	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
235	09/16/2014	13:00	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
236	09/16/2014	13:01	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
237	09/16/2014	13:02	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
238	09/16/2014	13:03	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
239	09/16/2014	13:04	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
240	09/16/2014	13:05	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
241	09/16/2014	13:06	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
242	09/16/2014	13:07	-----	-----	-----	0.0	0.2	0.5	0.0	0.3	0.6
243	09/16/2014	13:08	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.6
244	09/16/2014	13:09	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.6
245	09/16/2014	13:10	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.6
246	09/16/2014	13:11	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.6
247	09/16/2014	13:12	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.6
248	09/16/2014	13:13	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.6
249	09/16/2014	13:14	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.6
250	09/16/2014	13:15	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.6
251	09/16/2014	13:16	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
252	09/16/2014	13:17	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
253	09/16/2014	13:18	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
254	09/16/2014	13:19	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
255	09/16/2014	13:20	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
256	09/16/2014	13:21	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
257	09/16/2014	13:22	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
258	09/16/2014	13:23	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
259	09/16/2014	13:24	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
260	09/16/2014	13:25	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
261	09/16/2014	13:26	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
262	09/16/2014	13:27	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
263	09/16/2014	13:28	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5

264	09/16/2014	13:29	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
265	09/16/2014	13:30	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
266	09/16/2014	13:31	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
267	09/16/2014	13:32	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
268	09/16/2014	13:33	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
269	09/16/2014	13:34	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
270	09/16/2014	13:35	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
271	09/16/2014	13:36	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
272	09/16/2014	13:37	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
273	09/16/2014	13:38	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
274	09/16/2014	13:39	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
275	09/16/2014	13:40	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
276	09/16/2014	13:41	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
277	09/16/2014	13:42	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
278	09/16/2014	13:43	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
279	09/16/2014	13:44	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
280	09/16/2014	13:45	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
281	09/16/2014	13:46	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
282	09/16/2014	13:47	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
283	09/16/2014	13:48	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
284	09/16/2014	13:49	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
285	09/16/2014	13:50	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
286	09/16/2014	13:51	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
287	09/16/2014	13:52	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
288	09/16/2014	13:53	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
289	09/16/2014	13:54	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
290	09/16/2014	13:55	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
291	09/16/2014	13:56	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
292	09/16/2014	13:57	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
293	09/16/2014	13:58	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
294	09/16/2014	13:59	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
295	09/16/2014	14:00	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
296	09/16/2014	14:01	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
297	09/16/2014	14:02	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
298	09/16/2014	14:03	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
299	09/16/2014	14:04	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
300	09/16/2014	14:05	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
301	09/16/2014	14:06	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
302	09/16/2014	14:07	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
303	09/16/2014	14:08	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
304	09/16/2014	14:09	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
305	09/16/2014	14:10	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.5
306	09/16/2014	14:11	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.4
307	09/16/2014	14:12	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.4
308	09/16/2014	14:13	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.4
309	09/16/2014	14:14	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.4
310	09/16/2014	14:15	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.4
311	09/16/2014	14:16	-----	-----	-----	0.0	0.2	0.4	0.0	0.3	0.4
312	09/16/2014	14:17	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
313	09/16/2014	14:18	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
314	09/16/2014	14:19	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
315	09/16/2014	14:20	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
316	09/16/2014	14:21	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
317	09/16/2014	14:22	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
318	09/16/2014	14:23	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
319	09/16/2014	14:24	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
320	09/16/2014	14:25	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
321	09/16/2014	14:26	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
322	09/16/2014	14:27	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
323	09/16/2014	14:28	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
324	09/16/2014	14:29	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
325	09/16/2014	14:30	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
326	09/16/2014	14:31	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
327	09/16/2014	14:32	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
328	09/16/2014	14:33	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
329	09/16/2014	14:34	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
330	09/16/2014	14:35	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
331	09/16/2014	14:36	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
332	09/16/2014	14:37	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4

333	09/16/2014 14:38	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
334	09/16/2014 14:39	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
335	09/16/2014 14:40	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
336	09/16/2014 14:41	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
337	09/16/2014 14:42	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
338	09/16/2014 14:43	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
339	09/16/2014 14:44	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
340	09/16/2014 14:45	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
341	09/16/2014 14:46	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
342	09/16/2014 14:47	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
343	09/16/2014 14:48	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
344	09/16/2014 14:49	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
345	09/16/2014 14:50	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
346	09/16/2014 14:51	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
347	09/16/2014 14:52	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
348	09/16/2014 14:53	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
349	09/16/2014 14:54	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
350	09/16/2014 14:55	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
351	09/16/2014 14:56	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
352	09/16/2014 14:57	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
353	09/16/2014 14:58	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
354	09/16/2014 14:59	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
355	09/16/2014 15:00	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
356	09/16/2014 15:01	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
357	09/16/2014 15:02	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
358	09/16/2014 15:03	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
359	09/16/2014 15:04	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
360	09/16/2014 15:05	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
361	09/16/2014 15:06	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
362	09/16/2014 15:07	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
363	09/16/2014 15:08	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
364	09/16/2014 15:09	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
365	09/16/2014 15:10	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
366	09/16/2014 15:11	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
367	09/16/2014 15:12	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
368	09/16/2014 15:13	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
369	09/16/2014 15:14	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
370	09/16/2014 15:15	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
371	09/16/2014 15:16	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
372	09/16/2014 15:17	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
373	09/16/2014 15:18	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
374	09/16/2014 15:19	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
375	09/16/2014 15:20	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
376	09/16/2014 15:21	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
377	09/16/2014 15:22	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
378	09/16/2014 15:23	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
379	09/16/2014 15:24	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
380	09/16/2014 15:25	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
381	09/16/2014 15:26	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
382	09/16/2014 15:27	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
383	09/16/2014 15:28	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
384	09/16/2014 15:29	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
385	09/16/2014 15:30	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
386	09/16/2014 15:31	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
387	09/16/2014 15:32	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
388	09/16/2014 15:33	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
389	09/16/2014 15:34	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
390	09/16/2014 15:35	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
391	09/16/2014 15:36	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
392	09/16/2014 15:37	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
393	09/16/2014 15:38	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.4
394	09/16/2014 15:39	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
395	09/16/2014 15:40	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
396	09/16/2014 15:41	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
397	09/16/2014 15:42	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
398	09/16/2014 15:43	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
399	09/16/2014 15:44	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
400	09/16/2014 15:45	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
401	09/16/2014 15:46	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3

402	09/16/2014 15:47	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
403	09/16/2014 15:48	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
404	09/16/2014 15:49	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
405	09/16/2014 15:50	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
406	09/16/2014 15:51	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
407	09/16/2014 15:52	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
408	09/16/2014 15:53	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
409	09/16/2014 15:54	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
410	09/16/2014 15:55	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
411	09/16/2014 15:56	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
412	09/16/2014 15:57	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
413	09/16/2014 15:58	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
414	09/16/2014 15:59	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
415	09/16/2014 16:00	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
416	09/16/2014 16:01	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
417	09/16/2014 16:02	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
418	09/16/2014 16:03	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
419	09/16/2014 16:04	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
420	09/16/2014 16:05	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
421	09/16/2014 16:06	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
422	09/16/2014 16:07	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
423	09/16/2014 16:08	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
424	09/16/2014 16:09	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
425	09/16/2014 16:10	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
426	09/16/2014 16:11	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
427	09/16/2014 16:12	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
428	09/16/2014 16:13	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
429	09/16/2014 16:14	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
430	09/16/2014 16:15	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
431	09/16/2014 16:16	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
432	09/16/2014 16:17	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
433	09/16/2014 16:18	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
434	09/16/2014 16:19	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
435	09/16/2014 16:20	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
436	09/16/2014 16:21	-----	-----	-----	0.0	0.2	0.3	0.0	0.3	0.3
437	09/16/2014 16:22	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
438	09/16/2014 16:23	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
439	09/16/2014 16:24	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
440	09/16/2014 16:25	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
441	09/16/2014 16:26	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
442	09/16/2014 16:27	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
443	09/16/2014 16:28	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
444	09/16/2014 16:29	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
445	09/16/2014 16:30	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
446	09/16/2014 16:31	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
447	09/16/2014 16:32	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
448	09/16/2014 16:33	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
449	09/16/2014 16:34	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
450	09/16/2014 16:35	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
451	09/16/2014 16:36	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
452	09/16/2014 16:37	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
453	09/16/2014 16:38	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
454	09/16/2014 16:39	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
455	09/16/2014 16:40	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
456	09/16/2014 16:41	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
457	09/16/2014 16:42	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
458	09/16/2014 16:43	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
459	09/16/2014 16:44	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
460	09/16/2014 16:45	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
461	09/16/2014 16:46	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
462	09/16/2014 16:47	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
463	09/16/2014 16:48	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
464	09/16/2014 16:49	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
465	09/16/2014 16:50	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
466	09/16/2014 16:51	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
467	09/16/2014 16:52	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
468	09/16/2014 16:53	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
469	09/16/2014 16:54	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
470	09/16/2014 16:55	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3

471	09/16/2014 16:56	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
472	09/16/2014 16:57	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
473	09/16/2014 16:58	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
474	09/16/2014 16:59	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
475	09/16/2014 17:00	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
476	09/16/2014 17:01	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
477	09/16/2014 17:02	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
478	09/16/2014 17:03	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
479	09/16/2014 17:04	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
480	09/16/2014 17:05	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
481	09/16/2014 17:06	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
482	09/16/2014 17:07	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
483	09/16/2014 17:08	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
484	09/16/2014 17:09	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
485	09/16/2014 17:10	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
486	09/16/2014 17:11	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
487	09/16/2014 17:12	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
488	09/16/2014 17:13	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
489	09/16/2014 17:14	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
490	09/16/2014 17:15	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
491	09/16/2014 17:16	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
492	09/16/2014 17:17	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
493	09/16/2014 17:18	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
494	09/16/2014 17:19	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
495	09/16/2014 17:20	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
496	09/16/2014 17:21	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
497	09/16/2014 17:22	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
498	09/16/2014 17:23	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
499	09/16/2014 17:24	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
500	09/16/2014 17:25	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
501	09/16/2014 17:26	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
502	09/16/2014 17:27	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
503	09/16/2014 17:28	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
504	09/16/2014 17:29	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
505	09/16/2014 17:30	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
506	09/16/2014 17:31	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
507	09/16/2014 17:32	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
508	09/16/2014 17:33	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3
509	09/16/2014 17:34	-----	-----	-----	0.0	0.2	0.2	0.0	0.3	0.3

COMMUNITY AIR MONITORING DAILY LOG

Date: 9/17/14
Project: Coke Oven Gas Pipe Removal
Job No.: 0071-013-125
Client: Tonawanda Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: Pipe Overburden Excavation

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1200 P.M.
Ambient Air Temp.:	65°F	65°F
Wind Direction:	SW	SW
Wind Speed:	5-10 mph	5-10 mph
Precipitation:		

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLD Date: 9/17/14
Checked By: Date:

```
"Model Number", "DataRAM 4 ", 106
"Serial no.  ", "D836 !    "
"Device no.  ", 1
"Tag Number  ", 12
"Start Time  ", 02:42:47
"Start Date  ", 17-Sept-2014
"Log Period  ", 00:16:00
"Number      ", 15
"CalFactor   ", 1.000000
"Unit        ", 0
"Unit Name   ", "(MASS )ug/m3"
"SIZE_CORRECT", "ENABLED"
"TEMPUNITS   ", F
"Max MASS    ", 52.395070
"Max MASS  @ ", 10  ,05:22:47  ,17-Sept-2014
"Avg MASS    ", 26.024350
"Max Diam    ", 0.197878
"Max Diam @  ", 1  ,02:58:47  ,17-Sept-2014
"Avg Diam    ", 0.131836
"ALARM       ", "DISABLED"
"ALARM_LEVEL ", 0.0
"AUTO_ZERO   ", "DISABLED"
"AZ INTERVAL ", 1
"Errors      ", 0001
record,"(MASS )ug/m3", Temp, RHumidity, Diameter
     1,        9.9,  67.0,   46,   0.1979  ,02:58:47  ,17-Sept-2014
     2,       18.6,  66.1,   51,   0.1535  ,03:14:47  ,17-Sept-2014
     3,       14.5,  65.6,   50,   0.1516  ,03:30:47  ,17-Sept-2014
     4,       30.8,  65.4,   49,   0.1223  ,03:46:47  ,17-Sept-2014
     5,       31.6,  65.5,   47,   0.1142  ,04:02:47  ,17-Sept-2014
     6,       23.2,  65.9,   47,   0.1295  ,04:18:47  ,17-Sept-2014
     7,       23.0,  66.6,   46,   0.1224  ,04:34:47  ,17-Sept-2014
     8,       19.7,  67.3,   45,   0.1309  ,04:50:47  ,17-Sept-2014
     9,       43.1,  68.3,   44,   0.1128  ,05:06:47  ,17-Sept-2014
    10,       52.4,  68.4,   44,   0.0873  ,05:22:47  ,17-Sept-2014
    11,       43.5,  69.0,   43,   0.1027  ,05:38:47  ,17-Sept-2014
    12,       25.5,  71.0,   41,   0.1204  ,05:54:47  ,17-Sept-2014
    13,       20.6,  73.1,   39,   0.1288  ,06:10:47  ,17-Sept-2014
    14,       14.4,  74.4,   38,   0.1444  ,06:26:47  ,17-Sept-2014
    15,       19.5,  75.1,   37,   0.1590  ,06:42:47  ,17-Sept-2014
```

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 012776
User ID: 00000001 Site ID: 00000449
Data Points: 247 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 09/04/2014 09:25
Start At: 09/17/2014 11:49 End At: 09/17/2014 15:55

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100.0	100.0	100.0
Low Alarm Levels:	50.0	50.0	50.0
STEL Alarm Levels:	9025.0	9025.0	9025.0
TWA Alarm Levels:	10.0	10.0	10.0

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
Peak Data Value:	-----	0.0	0.1
Min Data Value:	-----	0.0	0.0
TWA Data Value:	-----	0.0	0.0
AVG Data Value:	-----	0.0	0.0

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 012776
User ID: 00000001 Site ID: 00000449
Data Points: 247 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 09/04/2014 09:25

Measurement Type:	Min(ppm)			Avg(ppm)			Max(ppm)		
Alarm Type:	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
Alarm Levels:	9025.0	10.0		9025.0	10.0		9025.0	10.0	

			Min(ppm)			Avg(ppm)			Max(ppm)		
Line#	Date	Time	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
1	09/17/2014	11:49	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
2	09/17/2014	11:50	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
3	09/17/2014	11:51	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
4	09/17/2014	11:52	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
5	09/17/2014	11:53	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
6	09/17/2014	11:54	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
7	09/17/2014	11:55	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
8	09/17/2014	11:56	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
9	09/17/2014	11:57	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
10	09/17/2014	11:58	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
11	09/17/2014	11:59	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
12	09/17/2014	12:00	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
13	09/17/2014	12:01	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
14	09/17/2014	12:02	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
15	09/17/2014	12:03	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
16	09/17/2014	12:04	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
17	09/17/2014	12:05	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
18	09/17/2014	12:06	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
19	09/17/2014	12:07	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
20	09/17/2014	12:08	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
21	09/17/2014	12:09	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
22	09/17/2014	12:10	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
23	09/17/2014	12:11	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
24	09/17/2014	12:12	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
25	09/17/2014	12:13	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
26	09/17/2014	12:14	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
27	09/17/2014	12:15	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
28	09/17/2014	12:16	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
29	09/17/2014	12:17	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
30	09/17/2014	12:18	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
31	09/17/2014	12:19	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
32	09/17/2014	12:20	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
33	09/17/2014	12:21	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
34	09/17/2014	12:22	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
35	09/17/2014	12:23	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
36	09/17/2014	12:24	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
37	09/17/2014	12:25	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
38	09/17/2014	12:26	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
39	09/17/2014	12:27	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
40	09/17/2014	12:28	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
41	09/17/2014	12:29	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
42	09/17/2014	12:30	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
43	09/17/2014	12:31	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
44	09/17/2014	12:32	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
45	09/17/2014	12:33	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
46	09/17/2014	12:34	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
47	09/17/2014	12:35	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
48	09/17/2014	12:36	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
49	09/17/2014	12:37	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
50	09/17/2014	12:38	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
51	09/17/2014	12:39	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
52	09/17/2014	12:40	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
53	09/17/2014	12:41	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
54	09/17/2014	12:42	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
55	09/17/2014	12:43	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
56	09/17/2014	12:44	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0

57	09/17/2014	12:45	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
58	09/17/2014	12:46	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
59	09/17/2014	12:47	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
60	09/17/2014	12:48	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
61	09/17/2014	12:49	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
62	09/17/2014	12:50	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
63	09/17/2014	12:51	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
64	09/17/2014	12:52	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
65	09/17/2014	12:53	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
66	09/17/2014	12:54	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
67	09/17/2014	12:55	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
68	09/17/2014	12:56	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
69	09/17/2014	12:57	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
70	09/17/2014	12:58	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
71	09/17/2014	12:59	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
72	09/17/2014	13:00	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
73	09/17/2014	13:01	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
74	09/17/2014	13:02	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
75	09/17/2014	13:03	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
76	09/17/2014	13:04	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
77	09/17/2014	13:05	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
78	09/17/2014	13:06	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
79	09/17/2014	13:07	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
80	09/17/2014	13:08	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
81	09/17/2014	13:09	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
82	09/17/2014	13:10	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
83	09/17/2014	13:11	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
84	09/17/2014	13:12	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
85	09/17/2014	13:13	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
86	09/17/2014	13:14	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
87	09/17/2014	13:15	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
88	09/17/2014	13:16	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
89	09/17/2014	13:17	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
90	09/17/2014	13:18	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
91	09/17/2014	13:19	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
92	09/17/2014	13:20	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
93	09/17/2014	13:21	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
94	09/17/2014	13:22	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
95	09/17/2014	13:23	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
96	09/17/2014	13:24	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
97	09/17/2014	13:25	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
98	09/17/2014	13:26	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
99	09/17/2014	13:27	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
100	09/17/2014	13:28	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
101	09/17/2014	13:29	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
102	09/17/2014	13:30	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
103	09/17/2014	13:31	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
104	09/17/2014	13:32	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
105	09/17/2014	13:33	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
106	09/17/2014	13:34	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
107	09/17/2014	13:35	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
108	09/17/2014	13:36	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
109	09/17/2014	13:37	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
110	09/17/2014	13:38	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
111	09/17/2014	13:39	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
112	09/17/2014	13:40	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
113	09/17/2014	13:41	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
114	09/17/2014	13:42	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
115	09/17/2014	13:43	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
116	09/17/2014	13:44	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
117	09/17/2014	13:45	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
118	09/17/2014	13:46	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
119	09/17/2014	13:47	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
120	09/17/2014	13:48	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
121	09/17/2014	13:49	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
122	09/17/2014	13:50	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
123	09/17/2014	13:51	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
124	09/17/2014	13:52	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
125	09/17/2014	13:53	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0

126	09/17/2014	13:54	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
127	09/17/2014	13:55	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
128	09/17/2014	13:56	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
129	09/17/2014	13:57	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
130	09/17/2014	13:58	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
131	09/17/2014	13:59	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
132	09/17/2014	14:00	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
133	09/17/2014	14:01	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
134	09/17/2014	14:02	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
135	09/17/2014	14:03	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
136	09/17/2014	14:04	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
137	09/17/2014	14:05	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
138	09/17/2014	14:06	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
139	09/17/2014	14:07	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
140	09/17/2014	14:08	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
141	09/17/2014	14:09	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
142	09/17/2014	14:10	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
143	09/17/2014	14:11	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
144	09/17/2014	14:12	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
145	09/17/2014	14:13	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
146	09/17/2014	14:14	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
147	09/17/2014	14:15	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
148	09/17/2014	14:16	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
149	09/17/2014	14:17	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
150	09/17/2014	14:18	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
151	09/17/2014	14:19	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
152	09/17/2014	14:20	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
153	09/17/2014	14:21	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
154	09/17/2014	14:22	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
155	09/17/2014	14:23	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
156	09/17/2014	14:24	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
157	09/17/2014	14:25	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
158	09/17/2014	14:26	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
159	09/17/2014	14:27	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
160	09/17/2014	14:28	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
161	09/17/2014	14:29	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
162	09/17/2014	14:30	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
163	09/17/2014	14:31	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
164	09/17/2014	14:32	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
165	09/17/2014	14:33	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
166	09/17/2014	14:34	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
167	09/17/2014	14:35	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
168	09/17/2014	14:36	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
169	09/17/2014	14:37	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
170	09/17/2014	14:38	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
171	09/17/2014	14:39	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
172	09/17/2014	14:40	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
173	09/17/2014	14:41	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
174	09/17/2014	14:42	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
175	09/17/2014	14:43	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
176	09/17/2014	14:44	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
177	09/17/2014	14:45	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
178	09/17/2014	14:46	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
179	09/17/2014	14:47	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
180	09/17/2014	14:48	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
181	09/17/2014	14:49	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
182	09/17/2014	14:50	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
183	09/17/2014	14:51	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
184	09/17/2014	14:52	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
185	09/17/2014	14:53	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
186	09/17/2014	14:54	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
187	09/17/2014	14:55	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
188	09/17/2014	14:56	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
189	09/17/2014	14:57	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
190	09/17/2014	14:58	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
191	09/17/2014	14:59	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
192	09/17/2014	15:00	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
193	09/17/2014	15:01	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
194	09/17/2014	15:02	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0

195	09/17/2014	15:03	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
196	09/17/2014	15:04	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
197	09/17/2014	15:05	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
198	09/17/2014	15:06	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
199	09/17/2014	15:07	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
200	09/17/2014	15:08	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
201	09/17/2014	15:09	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
202	09/17/2014	15:10	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
203	09/17/2014	15:11	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
204	09/17/2014	15:12	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
205	09/17/2014	15:13	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
206	09/17/2014	15:14	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
207	09/17/2014	15:15	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
208	09/17/2014	15:16	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
209	09/17/2014	15:17	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
210	09/17/2014	15:18	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
211	09/17/2014	15:19	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
212	09/17/2014	15:20	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
213	09/17/2014	15:21	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
214	09/17/2014	15:22	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
215	09/17/2014	15:23	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
216	09/17/2014	15:24	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
217	09/17/2014	15:25	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
218	09/17/2014	15:26	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
219	09/17/2014	15:27	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
220	09/17/2014	15:28	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
221	09/17/2014	15:29	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
222	09/17/2014	15:30	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
223	09/17/2014	15:31	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
224	09/17/2014	15:32	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
225	09/17/2014	15:33	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
226	09/17/2014	15:34	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
227	09/17/2014	15:35	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
228	09/17/2014	15:36	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
229	09/17/2014	15:37	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
230	09/17/2014	15:38	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
231	09/17/2014	15:39	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
232	09/17/2014	15:40	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
233	09/17/2014	15:41	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
234	09/17/2014	15:42	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
235	09/17/2014	15:43	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
236	09/17/2014	15:44	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
237	09/17/2014	15:45	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
238	09/17/2014	15:46	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
239	09/17/2014	15:47	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
240	09/17/2014	15:48	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
241	09/17/2014	15:49	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
242	09/17/2014	15:50	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
243	09/17/2014	15:51	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
244	09/17/2014	15:52	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
245	09/17/2014	15:53	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
246	09/17/2014	15:54	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
247	09/17/2014	15:55	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0

COMMUNITY AIR MONITORING DAILY LOG

Date: 9/19/14
Project: Coke Oven Gas Removal
Job No.:
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: Exposing Coke oven gas pipes

WEATHER CONDITIONS:

Time of Day:	A.M.	P.M.
Ambient Air Temp.:	45 °F	65 °F
Wind Direction:	E	E
Wind Speed:	0-10 mph	0-10 mph
Precipitation:	none	none

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLD Date: 9/19/14
Checked By: Date:

```
"Model Number", "DataRAM 4 ", 106
"Serial no.  ", "D836 !    "
"Device no.  ", 1
"Tag Number  ", 13
"Start Time  ", 04:07:45
"Start Date  ", 19-Sept-2014
"Log Period  ", 00:16:00
"Number      ", 6
"CalFactor   ", 1.000000
"Unit        ", 0
"Unit Name   ", "(MASS )ug/m3"
"SIZE_CORRECT", "ENABLED"
"TEMPUNITS   ", F
"Max MASS    ", 3.558502
"Max MASS  @ ", 1  ,04:23:45  ,19-Sept-2014
"Avg MASS    ", 3.121428
"Max Diam    ", 0.355250
"Max Diam @  ", 3  ,04:55:45  ,19-Sept-2014
"Avg Diam    ", 0.344441
"ALARM       ", "DISABLED"
"ALARM_LEVEL ", 0.0
"AUTO_ZERO   ", "DISABLED"
"AZ INTERVAL ", 1
"Errors      ", 0000
record,"(MASS )ug/m3", Temp, RHumidity, Diameter
     1,        3.6,  72.4,   35,   0.3541  ,04:23:45  ,19-Sept-2014
     2,        3.0,  74.7,   32,   0.3535  ,04:39:45  ,19-Sept-2014
     3,        3.0,  76.1,   29,   0.3553  ,04:55:45  ,19-Sept-2014
     4,        2.9,  76.6,   28,   0.3261  ,05:11:45  ,19-Sept-2014
     5,        3.5,  76.9,   28,   0.3473  ,05:27:45  ,19-Sept-2014
     6,        2.8,  77.4,   27,   0.3304  ,05:43:45  ,19-Sept-2014
```

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 012776
User ID: 00000001 Site ID: 00000449
Data Points: 108 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 09/04/2014 09:25
Start At: 09/19/2014 13:16 End At: 09/19/2014 15:03

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100.0	100.0	100.0
Low Alarm Levels:	50.0	50.0	50.0
STEL Alarm Levels:	9025.0	9025.0	9025.0
TWA Alarm Levels:	10.0	10.0	10.0

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
Peak Data Value:	-----	0.0	0.0
Min Data Value:	-----	0.0	0.0
TWA Data Value:	-----	0.0	0.0
AVG Data Value:	-----	0.0	0.0

Instrument: MiniRAE 2000 (PGM7600) Serial Number: 012776
User ID: 00000001 Site ID: 00000449
Data Points: 108 Gas Name: Isobutylene Sample Period: 60 sec
Last Calibration Time: 09/04/2014 09:25

Measurement Type:	Min(ppm)			Avg(ppm)			Max(ppm)		
Alarm Type:	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
Alarm Levels:	9025.0	10.0		9025.0	10.0		9025.0	10.0	

			Min(ppm)			Avg(ppm)			Max(ppm)		
Line#	Date	Time	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
1	09/19/2014	13:16	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
2	09/19/2014	13:17	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
3	09/19/2014	13:18	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
4	09/19/2014	13:19	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
5	09/19/2014	13:20	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
6	09/19/2014	13:21	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
7	09/19/2014	13:22	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
8	09/19/2014	13:23	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
9	09/19/2014	13:24	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
10	09/19/2014	13:25	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
11	09/19/2014	13:26	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
12	09/19/2014	13:27	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
13	09/19/2014	13:28	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
14	09/19/2014	13:29	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
15	09/19/2014	13:30	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
16	09/19/2014	13:31	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
17	09/19/2014	13:32	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
18	09/19/2014	13:33	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
19	09/19/2014	13:34	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
20	09/19/2014	13:35	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
21	09/19/2014	13:36	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
22	09/19/2014	13:37	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
23	09/19/2014	13:38	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
24	09/19/2014	13:39	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
25	09/19/2014	13:40	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
26	09/19/2014	13:41	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
27	09/19/2014	13:42	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
28	09/19/2014	13:43	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
29	09/19/2014	13:44	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
30	09/19/2014	13:45	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
31	09/19/2014	13:46	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
32	09/19/2014	13:47	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
33	09/19/2014	13:48	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
34	09/19/2014	13:49	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
35	09/19/2014	13:50	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
36	09/19/2014	13:51	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
37	09/19/2014	13:52	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
38	09/19/2014	13:53	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
39	09/19/2014	13:54	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
40	09/19/2014	13:55	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
41	09/19/2014	13:56	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
42	09/19/2014	13:57	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
43	09/19/2014	13:58	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
44	09/19/2014	13:59	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
45	09/19/2014	14:00	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
46	09/19/2014	14:01	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
47	09/19/2014	14:02	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
48	09/19/2014	14:03	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
49	09/19/2014	14:04	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
50	09/19/2014	14:05	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
51	09/19/2014	14:06	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
52	09/19/2014	14:07	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
53	09/19/2014	14:08	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
54	09/19/2014	14:09	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
55	09/19/2014	14:10	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
56	09/19/2014	14:11	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0

57	09/19/2014 14:12	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
58	09/19/2014 14:13	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
59	09/19/2014 14:14	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
60	09/19/2014 14:15	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
61	09/19/2014 14:16	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
62	09/19/2014 14:17	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
63	09/19/2014 14:18	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
64	09/19/2014 14:19	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
65	09/19/2014 14:20	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
66	09/19/2014 14:21	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
67	09/19/2014 14:22	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
68	09/19/2014 14:23	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
69	09/19/2014 14:24	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
70	09/19/2014 14:25	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
71	09/19/2014 14:26	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
72	09/19/2014 14:27	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
73	09/19/2014 14:28	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
74	09/19/2014 14:29	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
75	09/19/2014 14:30	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
76	09/19/2014 14:31	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
77	09/19/2014 14:32	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
78	09/19/2014 14:33	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
79	09/19/2014 14:34	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
80	09/19/2014 14:35	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
81	09/19/2014 14:36	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
82	09/19/2014 14:37	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
83	09/19/2014 14:38	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
84	09/19/2014 14:39	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
85	09/19/2014 14:40	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
86	09/19/2014 14:41	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
87	09/19/2014 14:42	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
88	09/19/2014 14:43	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
89	09/19/2014 14:44	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
90	09/19/2014 14:45	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
91	09/19/2014 14:46	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
92	09/19/2014 14:47	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
93	09/19/2014 14:48	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
94	09/19/2014 14:49	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
95	09/19/2014 14:50	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
96	09/19/2014 14:51	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
97	09/19/2014 14:52	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
98	09/19/2014 14:53	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
99	09/19/2014 14:54	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
100	09/19/2014 14:55	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
101	09/19/2014 14:56	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
102	09/19/2014 14:57	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
103	09/19/2014 14:58	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
104	09/19/2014 14:59	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
105	09/19/2014 15:00	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
106	09/19/2014 15:01	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
107	09/19/2014 15:02	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0
108	09/19/2014 15:03	-----	-----	-----	0.0	0.0	0.0	0.0	0.0	0.0

COMMUNITY AIR MONITORING DAILY LOG

Date: 12-17-15
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

WEATHER CONDITIONS:

	A.M.	P.M.
Time of Day:	0800	1530
Ambient Air Temp.:	40°F	45°F
Wind Direction:	W	W
Wind Speed:	10-15 mph	10-15 mph
Precipitation:	Rain	Rain

DESCRIPTION OF SITE ACTIVITIES: Pipe Removal - Setup Decon pad - no monitors Setup Due to Rain Showers

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLO Date: 12/17/15
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 12-18-15
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map): NO monitors Setup Due to Mw

DESCRIPTION OF SITE ACTIVITIES: PIPE Removal

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1600 P.M.
Ambient Air Temp.:	35 °F	40°F
Wind Direction:	W	W
Wind Speed:	10-15 mph	10-15 mph
Precipitation:	RAIN	RAIN

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLO Date: 12/18/15
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 12-21-15
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map): no monitoring setup due to rain showers

DESCRIPTION OF SITE ACTIVITIES: PIPE removal -

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1600 P.M.
Ambient Air Temp.:	40°F	45°F
Wind Direction:	W	W
Wind Speed:	10-15 mph	10-15 mph
Precipitation:	LT rain showers	rain

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLO Date: 12-21-15
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 12-22-15

Project: Former Coke Oven Gas Line

Job No.: 0071-013-125

Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map): no monitors setup due to Rain Showers

DESCRIPTION OF SITE ACTIVITIES: Pipe Removal

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1530 P.M.
Ambient Air Temp.:	35 °F	45 °F
Wind Direction:	W	W
Wind Speed:	10-15 mph	10-15 mph
Precipitation:	Rain	Rain

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLO Date: 12-22-15

Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 12-28-15
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map): no monitoring stop Due to snow

DESCRIPTION OF SITE ACTIVITIES: Pipe cleaning - non Intrusive work

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1600 P.M.
Ambient Air Temp.:	28 °F	28 °F
Wind Direction:	E	E
Wind Speed:	15-20 mph	15-20 mph
Precipitation:	Snow	Snow

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLO Date: 12-28-15
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 12-29-15
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1600 P.M.
Ambient Air Temp.:	40°F	40°F
Wind Direction:	W / SW	W/SW
Wind Speed:	10-15 mph	10-15 mph
Precipitation:	None	None

DESCRIPTION OF SITE ACTIVITIES: No Intrusive Activity - Clean pipe / Fitting Grout water in Frac Tank

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			N/A		
Exceedence of 150 ug/m3 [1]			N/A		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			N/A		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			N/A		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			N/A		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLD Date: 12-29-15
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: ~~1/5/16~~ 1/4/16
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: Cleaning Pipe NO Intrusive work performed

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1600 P.M.
Ambient Air Temp.:	13°F	13°F
Wind Direction:	W	W
Wind Speed:	5-10 mph	5-10 mph
Precipitation:	2" Snow	2" Snow

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RHD Date: 1/4/16
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 1/5/16
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: PIPE REMOVAL

WEATHER CONDITIONS:

Time of Day:	0840 A.M.	1600 P.M.
Ambient Air Temp.:	0°F	12°F
Wind Direction:	South	South
Wind Speed:	CALM	CALM
Precipitation:	none	none

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RWD Date: 1/5/16
Checked By: Date:

```
"Model Number", "DataRAM 4 ", 106
"Serial no.  ", "D211      "
"Device no.  ", 1
"Tag Number  ", 26
"Start Time  ", 09:51:01
"Start Date  ", 05-Jan-2016
"Log Period  ", 00:15:00
"Number      ", 18
"CalFactor   ", 1.000000
"Unit        ", 0
"Unit Name   ", "(MASS )ug/m3"
"SIZE_CORRECT", "ENABLED"
"TEMPUNITS   ", C
"Max MASS    ", 27.746470
"Max MASS  @ ", 6  ,11:21:01  ,05-Jan-2016
"Avg MASS    ", 7.274520
"Max Diam    ", 1.214006
"Max Diam @  ", 4  ,10:51:01  ,05-Jan-2016
"Avg Diam    ", 0.772029
"ALARM       ", "DISABLED"
"ALARM_LEVEL ", 0.0
"AUTO_ZERO   ", "DISABLED"
"AZ INTERVAL ", 1
"Errors      ", 0000
record,"(MASS )ug/m3", Temp, RHumidity, Diameter
     1,        7.6,  10.7,   23,   0.7023  ,10:06:01  ,05-Jan-2016
     2,        7.3,   4.5,   21,   0.7380  ,10:21:01  ,05-Jan-2016
     3,        4.9,   0.7,   23,   0.7234  ,10:36:01  ,05-Jan-2016
     4,       13.6,  -1.0,   26,   1.2140  ,10:51:01  ,05-Jan-2016
     5,       14.1,  -2.0,   29,   0.8014  ,11:06:01  ,05-Jan-2016
     6,       27.7,  -2.4,   31,   1.1369  ,11:21:01  ,05-Jan-2016
     7,        7.1,  -2.6,   33,   0.8242  ,11:36:01  ,05-Jan-2016
     8,        5.0,  -2.8,   35,   0.7939  ,11:51:01  ,05-Jan-2016
     9,        7.4,  -2.3,   37,   0.9534  ,12:06:01  ,05-Jan-2016
    10,        3.4,  -1.9,   37,   0.6149  ,12:21:01  ,05-Jan-2016
    11,        4.2,  -1.6,   37,   0.7240  ,12:36:01  ,05-Jan-2016
    12,        6.4,  -1.2,   37,   0.9849  ,12:51:01  ,05-Jan-2016
    13,        4.8,  -0.8,   37,   0.7403  ,13:06:01  ,05-Jan-2016
    14,        6.5,  -0.3,   37,   0.9454  ,13:21:01  ,05-Jan-2016
    15,        2.8,  -0.1,   37,   0.5091  ,13:36:01  ,05-Jan-2016
    16,        2.8,  -0.1,   38,   0.5489  ,13:51:01  ,05-Jan-2016
    17,        2.5,  -0.1,   39,   0.4813  ,14:06:01  ,05-Jan-2016
    18,        2.6,  -0.2,   39,   0.4600  ,14:21:01  ,05-Jan-2016
```

COMMUNITY AIR MONITORING DAILY LOG

Date: 1/6/16
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: Pipe Removal

WEATHER CONDITIONS:

	A.M.	P.M.
Time of Day:	0800	1530
Ambient Air Temp.:	24°F	30°F
Wind Direction:	W	W
Wind Speed:	CALM	CALM
Precipitation:	none	none

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLS Date: 1/6/16
Checked By: Date:

Timestamp (GMT-5)	Batt. Voltage (V)	Current (mA)	Low (ppm)	Peak (ppm)	STEL (ppm)
1/6/2016 14:47	12.76	77.26			
1/6/2016 14:46	12.77	66.15	0	2.514	0
1/6/2016 14:45	12.77	71.45	0.002	2.514	0
1/6/2016 14:44	12.77	64.86	0	2.514	0
1/6/2016 14:43	12.76	77.78	0	2.514	0
1/6/2016 14:42	12.77	66.54	0.002	2.514	0
1/6/2016 14:41	12.77	72.87	0	2.514	0
1/6/2016 14:40	12.76	72.22	0	2.514	0
1/6/2016 14:39	12.76	76.87	0	2.514	0
1/6/2016 14:38	12.77	73.51	0	2.514	0
1/6/2016 14:37	12.77	67.31	0	2.514	0
1/6/2016 14:36	12.77	71.58	0	2.514	0
1/6/2016 14:35	12.77	69.9	0.002	2.514	0
1/6/2016 14:34	12.77	74.42	0	2.514	0
1/6/2016 14:33	12.77	74.55	0.002	2.514	0
1/6/2016 14:32	12.77	75.58	0	2.514	0
1/6/2016 14:31	12.77	71.32	0	2.514	0
1/6/2016 14:30	12.76	88.63	0	2.514	0
1/6/2016 14:29	12.77	68.6	0.001	2.514	0
1/6/2016 14:28	12.77	67.96	0	2.514	0
1/6/2016 14:27	12.77	63.05	0	2.514	0
1/6/2016 14:26	12.77	70.54	0	2.514	0
1/6/2016 14:25	12.77	74.94	0	2.514	0
1/6/2016 14:24	12.76	86.18	0	2.514	0
1/6/2016 14:23	12.77	71.32	0	2.514	0
1/6/2016 14:22	12.75	96.12	0	2.514	0
1/6/2016 14:21	12.77	72.09	0	2.514	0
1/6/2016 14:20	12.77	65.25	0	2.514	0
1/6/2016 14:19	12.77	71.06	0	2.514	0
1/6/2016 14:18	12.77	77.52	0	2.514	0
1/6/2016 14:17	12.78	71.71	0	2.514	0
1/6/2016 14:16	12.77	74.42	0	2.514	0
1/6/2016 14:15	12.78	68.99	0	2.514	0
1/6/2016 14:14	12.78	68.6	0	2.514	0
1/6/2016 14:13	12.78	62.02	0	2.514	0
1/6/2016 14:12	12.78	67.05	0	2.514	0
1/6/2016 14:11	12.78	76.36	0	2.514	0
1/6/2016 14:10	12.77	65.37	0	2.514	0
1/6/2016 14:09	12.77	79.72	0	2.514	0
1/6/2016 14:08	12.77	68.35	0	2.514	0
1/6/2016 14:07	12.78	71.06	0	2.514	0
1/6/2016 14:06			0	2.514	0
1/6/2016 14:05	12.77	71.96			
1/6/2016 14:04	12.77	70.03	0	2.514	0
1/6/2016 14:03	12.78	72.48	0	2.514	0
1/6/2016 14:02	12.77	74.68	0	2.514	0
1/6/2016 14:01	12.78	68.48	0	2.514	0
1/6/2016 14:00	12.77	65.63	0	2.514	0
1/6/2016 13:59	12.77	69.64	0	2.514	0
1/6/2016 13:58	12.78	63.82	0	2.514	0
1/6/2016 13:57	12.77	73.39	0	2.514	0
1/6/2016 13:56	12.78	65.37	0	2.514	0
1/6/2016 13:55	12.77	74.55	0	2.514	0

1/6/2016 13:54	12.77	75.97	0	2.514	0
1/6/2016 13:53	12.77	75.71	0	2.514	0
1/6/2016 13:52	12.77	70.8	0	2.514	0
1/6/2016 13:51	12.78	70.54	0	2.514	0
1/6/2016 13:50	12.77	70.67	0	2.514	0
1/6/2016 13:49	12.77	85.79	0	2.514	0
1/6/2016 13:48	12.77	72.87	0	2.514	0
1/6/2016 13:47	12.77	69.12	0	2.514	0
1/6/2016 13:46	12.78	77.13	0	2.514	0
1/6/2016 13:45	12.77	75.71	0	2.514	0
1/6/2016 13:44	12.78	68.48	0	2.514	0.003
1/6/2016 13:43	12.78	67.7	0	2.514	0.035
1/6/2016 13:42	12.77	69.51	0	2.514	0.055
1/6/2016 13:41	12.77	79.46	0	2.514	0.055
1/6/2016 13:40	12.77	78.68	0	2.514	0.089
1/6/2016 13:39	12.78	68.6	0	2.514	0.089
1/6/2016 13:38	12.78	69.12	0	2.514	0.089
1/6/2016 13:37	12.77	72.61	0	2.514	0.089
1/6/2016 13:36	12.79	60.08	0	2.514	0
1/6/2016 13:35	12.78	72.35	0	2.514	0
1/6/2016 13:34	12.78	68.86	0	2.514	0
1/6/2016 13:33	12.78	63.95	0	2.514	0
1/6/2016 13:32	12.77	85.79	0	2.514	0
1/6/2016 13:31	12.78	66.28	0	2.514	0
1/6/2016 13:30	12.78	70.03	0	2.514	0
1/6/2016 13:29	12.77	71.06	0	2.514	0
1/6/2016 13:28	12.78	67.96	0.055	2.514	0
1/6/2016 13:27	12.77	71.32	0	2.514	0
1/6/2016 13:26	12.78	74.29	0.299	2.514	0
1/6/2016 13:25	12.78	82.43	0	0	0
1/6/2016 13:24	12.79	68.99	0	0	0
1/6/2016 13:23	12.79	87.86	0	0	0
1/6/2016 13:22	12.8	89.41	0	0	0
1/6/2016 13:10	12.81	75.58			
1/6/2016 13:09	12.8	67.18	0	0.261	0
1/6/2016 13:08	12.79	84.37	0	0.261	0
1/6/2016 13:07	12.81	71.32	0	0.261	0
1/6/2016 13:06	12.8	69.77	0	0.261	0
1/6/2016 13:05	12.8	67.7	0	0.261	0
1/6/2016 13:04	12.8	73.13	0	0.261	0
1/6/2016 13:03	12.81	64.08	0	0.261	0
1/6/2016 13:02	12.8	68.86	0	0.261	0
1/6/2016 13:01	12.8	78.68	0	0.261	0
1/6/2016 13:00	12.81	78.29	0	0.261	0
1/6/2016 12:59	12.8	68.22	0	0.261	0
1/6/2016 12:58	12.79	71.96	0	0.261	0
1/6/2016 12:57	12.8	66.93	0	0.261	0
1/6/2016 12:56	12.81	64.21	0	0.261	0
1/6/2016 12:55	12.8	68.99	0	0.261	0
1/6/2016 12:54	12.81	66.67	0	0.261	0
1/6/2016 12:53	12.8	73.64	0	0.261	0
1/6/2016 12:52	12.81	67.96	0	0.261	0
1/6/2016 12:51	12.81	76.1	0	0.261	0
1/6/2016 12:50	12.81	69.9	0	0.261	0
1/6/2016 12:49	12.81	71.83	0	0.261	0

1/6/2016 12:48	12.81	73.13	0	0.261	0
1/6/2016 12:47	12.81	71.19	0	0.261	0
1/6/2016 12:46	12.81	66.28	0	0.261	0
1/6/2016 12:45	12.81	70.93	0	0.261	0
1/6/2016 12:44	12.81	68.6	0	0.261	0
1/6/2016 12:43	12.81	64.73	0	0.261	0
1/6/2016 12:42	12.81	72.35	0	0.261	0
1/6/2016 12:39	12.81	70.03			
1/6/2016 12:38	12.81	67.96	0	0.261	0
1/6/2016 12:37	12.81	68.35	0	0.261	0
1/6/2016 12:36	12.81	67.44	0	0.261	0
1/6/2016 12:35	12.81	74.68	0	0.261	0
1/6/2016 12:34	12.81	64.99	0	0.261	0
1/6/2016 12:33	12.81	72.35	0	0.261	0
1/6/2016 12:32	12.81	68.48	0	0.261	0
1/6/2016 12:31	12.8	70.93	0	0.261	0
1/6/2016 12:30	12.81	71.32	0	0.261	0
1/6/2016 12:29	12.81	73	0	0.261	0
1/6/2016 12:28	12.81	75.58	0	0.261	0
1/6/2016 12:27	12.81	72.74	0	0.261	0
1/6/2016 12:26	12.81	74.42	0	0.261	0
1/6/2016 12:25	12.81	72.61	0	0.261	0
1/6/2016 12:24	12.81	71.58	0	0.261	0
1/6/2016 12:23	12.81	68.48	0	0.261	0
1/6/2016 12:22	12.81	68.09	0	0.261	0
1/6/2016 12:21	12.82	66.93	0	0.261	0
1/6/2016 12:20	12.81	69.12	0	0.261	0
1/6/2016 12:19	12.82	66.67	0	0.261	0
1/6/2016 12:18	12.82	70.93	0	0.261	0
1/6/2016 12:17	12.81	70.03	0	0.261	0
1/6/2016 12:16	12.81	68.22	0	0.261	0
1/6/2016 12:15	12.82	68.86	0	0.261	0
1/6/2016 12:14	12.82	75.45	0	0.261	0
1/6/2016 12:13	12.81	71.32	0	0.261	0
1/6/2016 12:12	12.82	70.28	0	0.261	0
1/6/2016 12:11	12.81	69.51	0	0.261	0
1/6/2016 12:10	12.81	74.42	0	0.261	0
1/6/2016 12:09	12.83	66.15	0	0.261	0
1/6/2016 12:08	12.81	76.23	0	0.261	0
1/6/2016 12:07	12.82	68.6	0	0.261	0
1/6/2016 12:06	12.81	67.7	0	0.261	0
1/6/2016 12:05	12.81	70.28	0	0.261	0
1/6/2016 12:04	12.82	71.71	0	0.261	0
1/6/2016 12:03	12.82	68.35	0	0.261	0
1/6/2016 12:02	12.81	68.6	0	0.261	0
1/6/2016 12:01	12.82	71.96	0	0.261	0
1/6/2016 12:00	12.82	73.26	0	0.261	0
1/6/2016 11:59	12.82	68.73	0	0.261	0
1/6/2016 11:58	12.81	86.69	0	0.261	0
1/6/2016 11:57	12.82	68.73	0	0.261	0
1/6/2016 11:56	12.83	64.99	0	0.261	0
1/6/2016 11:55	12.83	65.63	0	0.261	0
1/6/2016 11:54	12.81	75.06	0	0.261	0
1/6/2016 11:53	12.82	70.28	0	0.261	0
1/6/2016 11:52	12.82	69.64	0	0.261	0

1/6/2016 11:51	12.82	69.25	0	0.261	0
1/6/2016 11:50	12.83	66.15	0	0.261	0
1/6/2016 11:49	12.82	73.26	0	0.261	0
1/6/2016 11:48	12.82	70.67	0	0.261	0
1/6/2016 11:47	12.82	74.03	0	0.261	0
1/6/2016 11:46	12.82	69.38	0	0.261	0
1/6/2016 11:45	12.82	73.9	0	0.261	0
1/6/2016 11:44	12.83	69.38	0	0.261	0
1/6/2016 11:43	12.82	68.48	0	0.261	0
1/6/2016 11:42	12.83	70.41	0	0.261	0
1/6/2016 11:41	12.83	69.64	0	0.261	0
1/6/2016 11:40	12.82	71.58	0	0.261	0
1/6/2016 11:39	12.82	69.12	0	0.261	0
1/6/2016 11:38	12.83	71.58	0	0.261	0
1/6/2016 11:37	12.83	64.6			
1/6/2016 11:36	12.83	70.8	0	0.261	0
1/6/2016 11:35	12.83	69.38	0	0.261	0
1/6/2016 11:34	12.83	67.18	0	0.261	0
1/6/2016 11:33	12.83	65.89	0	0.261	0
1/6/2016 11:32	12.83	66.41	0	0.261	0
1/6/2016 11:31	12.83	68.86	0	0.261	0
1/6/2016 11:30	12.82	71.96	0	0.261	0
1/6/2016 11:29	12.83	72.74	0	0.261	0
1/6/2016 11:28	12.83	67.96	0	0.261	0
1/6/2016 11:27	12.84	69.25	0	0.261	0
1/6/2016 11:26	12.81	84.24	0	0.261	0
1/6/2016 11:25	12.84	67.83	0	0.261	0
1/6/2016 11:24	12.82	71.96	0	0.261	0
1/6/2016 11:23	12.83	70.67	0	0.261	0
1/6/2016 11:22	12.83	70.67	0	0.261	0
1/6/2016 11:21	12.83	70.54	0	0.261	0
1/6/2016 11:20	12.83	70.8	0	0.261	0
1/6/2016 11:19	12.83	72.61	0	0.261	0
1/6/2016 11:18	12.83	66.67	0	0.261	0
1/6/2016 11:17	12.83	73.39	0	0.261	0
1/6/2016 11:16	12.83	68.09	0	0.261	0
1/6/2016 11:15	12.83	72.61	0	0.261	0
1/6/2016 11:14	12.83	65.76	0	0.261	0
1/6/2016 11:13	12.84	68.6	0	0.261	0
1/6/2016 11:12	12.83	71.45	0	0.261	0
1/6/2016 11:11	12.83	71.96	0	0.261	0
1/6/2016 11:10	12.83	69.51	0	0.261	0
1/6/2016 11:09	12.83	70.16	0	0.261	0
1/6/2016 11:08	12.83	70.67	0	0.261	0
1/6/2016 11:07	12.83	70.03	0	0.261	0
1/6/2016 11:06	12.83	67.44	0	0.261	0
1/6/2016 11:05	12.84	67.05	0	0.261	0
1/6/2016 11:04	12.84	70.8	0	0.261	0
1/6/2016 11:03	12.85	66.67	0	0.261	0
1/6/2016 11:02	12.84	66.54	0	0.261	0
1/6/2016 11:01	12.84	64.34	0	0.261	0
1/6/2016 11:00	12.84	71.58	0	0.261	0
1/6/2016 10:59	12.83	76.36	0	0.261	0
1/6/2016 10:58	12.84	73	0	0.261	0
1/6/2016 10:57	12.85	69.77	0	0.261	0

1/6/2016 10:56	12.84	70.16	0	0.261	0
1/6/2016 10:55	12.84	67.83	0	0.261	0
1/6/2016 10:54	12.85	65.63	0	0.261	0
1/6/2016 10:53	12.85	67.83	0	0.261	0
1/6/2016 10:52	12.85	67.83	0	0.261	0
1/6/2016 10:51	12.85	67.31	0	0.261	0
1/6/2016 10:50	12.84	68.09	0	0.261	0
1/6/2016 10:49	12.85	72.87	0	0.261	0
1/6/2016 10:48	12.85	69.51	0	0.261	0
1/6/2016 10:47	12.84	85.92	0	0.261	0
1/6/2016 10:46	12.85	67.96	0	0.261	0
1/6/2016 10:45	12.85	64.08	0	0.261	0
1/6/2016 10:44	12.85	72.74	0	0.261	0
1/6/2016 10:43	12.85	67.18	0	0.261	0
1/6/2016 10:42	12.85	67.44	0	0.261	0
1/6/2016 10:41	12.85	69.25	0	0.261	0
1/6/2016 10:40	12.85	66.54	0	0.261	0
1/6/2016 10:39	12.85	65.89	0	0.261	0
1/6/2016 10:38	12.85	70.03	0	0.261	0
1/6/2016 10:37	12.85	70.16	0	0.261	0
1/6/2016 10:36	12.85	74.16	0	0.261	0
1/6/2016 10:35	12.85	70.03	0	0.261	0
1/6/2016 10:34	12.86	65.12	0	0.261	0
1/6/2016 10:33	12.86	70.54	0	0.261	0
1/6/2016 10:32	12.86	71.58	0	0.261	0
1/6/2016 10:31	12.86	69.25	0	0.261	0
1/6/2016 10:30	12.87	68.35	0	0.261	0
1/6/2016 10:29	12.85	67.18	0	0.261	0
1/6/2016 10:28	12.85	73	0	0.261	0
1/6/2016 10:27	12.86	68.86	0	0.261	0
1/6/2016 10:26	12.85	76.36	0	0.261	0
1/6/2016 10:25	12.86	69.25	0	0.261	0
1/6/2016 10:24	12.85	91.34	0	0.261	0
1/6/2016 10:23	12.85	67.7	0	0.261	0
1/6/2016 10:22	12.86	69.64	0	0.261	0
1/6/2016 10:21	12.87	62.53	0	0.261	0
1/6/2016 10:20	12.87	68.99	0	0.261	0
1/6/2016 10:19	12.87	70.67	0	0.261	0
1/6/2016 10:18	12.88	65.37	0	0.261	0
1/6/2016 10:17	12.86	62.92	0	0.261	0
1/6/2016 10:16	12.87	70.28	0	0.261	0
1/6/2016 10:15	12.87	67.7	0	0.261	0
1/6/2016 10:14	12.87	64.6	0	0.261	0
1/6/2016 10:13	12.88	67.31	0	0.261	0
1/6/2016 10:12	12.87	66.02	0	0.261	0
1/6/2016 10:11	12.87	68.22	0	0.261	0
1/6/2016 10:10	12.88	63.7	0	0.261	0
1/6/2016 10:09	12.88	70.54	0	0.261	0
1/6/2016 10:08	12.87	69.51	0	0.261	0
1/6/2016 10:07	12.87	70.8	0	0.261	0
1/6/2016 10:06	12.86	88.24	0	0.261	0
1/6/2016 10:05	12.87	84.5	0	0.261	0
1/6/2016 10:04	12.88	70.54	0	0.261	0
1/6/2016 10:03	12.87	68.73	0	0.261	0
1/6/2016 10:02	12.88	66.02	0	0.261	0

1/6/2016 10:01	12.88	69.12	0	0.261	0
1/6/2016 9:59	12.88	68.86	0	0.261	0
1/6/2016 9:58	12.87	75.06	0	0.261	0
1/6/2016 9:57	12.88	67.44	0	0.261	0
1/6/2016 9:56	12.88	78.29	0	0.261	0
1/6/2016 9:55	12.88	78.29	0	0.261	0
1/6/2016 9:54	12.88	64.34	0	0.261	0
1/6/2016 9:53	12.88	68.6	0	0.261	0
1/6/2016 9:52	12.88	74.55	0	0.261	0
1/6/2016 9:51	12.88	77.39	0	0.261	0
1/6/2016 9:50	12.88	78.55	0	0.261	0
1/6/2016 9:49	12.88	81.91	0	0.261	0
1/6/2016 9:48	12.88	70.16	0	0.261	0
1/6/2016 9:47	12.88	66.02	0	0.261	0
1/6/2016 9:46	12.89	73.13	0	0.261	0.003
1/6/2016 9:45	12.89	71.06	0	0.261	0.003
1/6/2016 9:44	12.89	70.41	0	0.261	0.004
1/6/2016 9:43	12.89	67.31	0	0.261	0.004
1/6/2016 9:42	12.89	72.61	0	0.261	0.004
1/6/2016 9:41	12.88	85.4	0	0.261	0.004
1/6/2016 9:40	12.9	71.58	0	0.261	0.007
1/6/2016 9:39	12.9	73	0	0.261	0.01
1/6/2016 9:38	12.89	73.64	0	0.261	0.019
1/6/2016 9:37	12.9	68.22	0	0.261	0.02
1/6/2016 9:36	12.9	69.9	0	0.261	0.02
1/6/2016 9:35	12.9	68.73	0	0.261	0.02
1/6/2016 9:34	12.9	66.15	0	0.261	0.02
1/6/2016 9:33	12.89	90.96	0	0.261	0.02
1/6/2016 9:32	12.9	71.06	0.002	0.261	0.02
1/6/2016 9:31	12.9	71.96	0	0.261	0.017
1/6/2016 9:30	12.9	74.81	0	0.261	0.017
1/6/2016 9:29	12.89	77.13	0.028	0.261	0.015
1/6/2016 9:28	12.9	69.12	0	0.261	0.015
1/6/2016 9:27	12.9	64.6	0	0.261	0.015
1/6/2016 9:26	12.9	71.71	0	0.261	0.015
1/6/2016 9:25	12.9	69.25	0.039	0.261	0.012
1/6/2016 9:24	12.89	81.78	0.127	0.261	0.009
1/6/2016 9:23	12.91	64.47	0.201	0.261	0
1/6/2016 9:22	12.9	68.86	0	0	0
1/6/2016 9:21	12.91	73.77	0	0	0
1/6/2016 9:20	12.91	67.7	0	0	0
1/6/2016 9:19	12.9	74.29	0	0	0
1/6/2016 9:18	12.9	79.46	0	0	0
1/6/2016 9:17	12.9	72.22	0	0	0
1/6/2016 9:16	12.9	62.14	0	0	0
1/6/2016 9:15	12.88	70.28	0	0	0
1/6/2016 9:14	12.91	65.37	0	0	0
1/6/2016 9:13	12.96	89.41	0	0	0
1/6/2016 9:12	12.96	69.51	0	0	0
1/6/2016 9:11	12.98	68.73	0	0	0
1/6/2016 9:10	12.98	78.68	0	0	0
1/6/2016 9:09	12.98	70.28	0	0	0
1/6/2016 9:08	12.98	69.12	0	0	0
1/6/2016 9:07	12.98	90.18	0	0	0
1/6/2016 9:06	12.99	69.77	0	0	0

1/6/2016 9:05	12.99	82.04	0	0	0
1/6/2016 9:04	12.99	75.84	0	0	0
1/6/2016 9:03	13	65.89	0	0	0
1/6/2016 9:02	12.99	79.07	0	0	0
1/6/2016 9:01	13.01	89.41	0	0	0
1/6/2016 9:00	13.02	72.22	0	0	0
1/6/2016 8:59	13.06	97.42	0	0	0
1/6/2016 8:58	13.06	79.2	0	0	0
1/6/2016 8:57	13.07	52.2	0	0	0
1/6/2016 8:56	13.07	74.29	0	0	0
1/6/2016 8:55	13.09	59.56	0	0	0
1/6/2016 8:54	13.09	71.71	0	0	0
1/6/2016 8:53	13.09	65.76	0	0	0
1/6/2016 8:51	13.11	69.9	0	0	0
1/6/2016 8:50	13.12	65.89	0	0	0
1/6/2016 8:49	13.14	70.41	0	0	0
1/6/2016 8:48	13.15	80.88	0	0	0
1/6/2016 8:47	13.14	87.98	0	0	0
1/6/2016 8:46	13.16	85.14			

TWA (ppm)	VOC (ppm)	VOC (Avg15) (ppm)	Humidity (%)	Mass (µg/m³)	Particle size (µm)
0.002	0	0.0009	29	5.1	0.39
0.002	0.005	0.0009	29	2.8	0.513
0.002	0	0.0006	30	3.3	0.39
0.002	0	0.0007	30	5.8	0.389
0.002	0.003	0.0007	30	6.2	0.627
0.002	0	0.0005	30	4.4	0.56
0.002	0.001	0.0005	30	3.3	0.402
0.002	0.002	0.0004	29	7	0.374
0.002	0	0.0003	30	4.5	0.382
0.002	0	0.0003	30	4.5	0.402
0.002	0	0.0003	30	3.9	0.384
0.002	0	0.0003	29	3.8	0.39
0.002	0.001	0.0003	30	5.5	0.456
0.002	0.001	0.0002	30	5.4	0.414
0.002	0	0.0001	30	4.6	0.409
0.002	0	0.0001	29	3.7	0.408
0.002	0.001	0.0001	30	3.7	0.341
0.002	0.001	0.0001	29	4.6	0.447
0.002	0	0	29	5	0.393
0.002	0	0	29	3.5	0.353
0.002	0	0	29	3.8	0.399
0.002	0	0	29	4.9	0.408
0.002	0	0	29	4.3	0.51
0.002	0	0	28	4.8	0.379
0.002	0	0	29	6.8	0.492
0.002	0	0	29	3.4	0.373
0.002	0	0	28	3.7	0.366
0.002	0	0	28	3	0.394
0.002	0	0	29	4.6	0.382
0.002	0	0	29	6.1	0.421
0.002	0	0	29	5.2	0.342
0.002	0	0	29	5.7	0.374
0.002	0	0	29	3.5	0.514
0.002	0	0	29	5.1	0.407
0.002	0	0	29	4.9	0.531
0.002	0	0	28	4.6	0.431
0.002	0	0	29	4.2	0.41
0.002	0	0	28	4.4	0.429
0.002	0	0	28	3.4	0.365
0.002	0	0	28	3.7	0.461
0.002	0	0			
0.002	0	0	29	3.6	0.455
0.002	0	0	29	4.7	0.437
0.002	0	0	29	5.3	0.488
0.002	0	0	29	4.4	0.459
0.002	0	0	29	3.2	0.357
0.002	0	0	28	4.7	0.376
0.002	0	0	29	4.4	0.393
0.002	0	0	28	5.7	0.437
0.002	0	0	28	4	0.369
0.002	0	0	29	3.4	0.387

0.002	0	0	28	3.3	0.435
0.002	0	0	28	5	0.392
0.002	0	0	29	5.1	0.621
0.002	0	0	29	3.7	0.372
0.002	0	0	29	4.6	0.476
0.002	0	0	29	4.2	0.333
0.002	0	0	28	4.3	0.309
0.002	0	0	28	4	0.367
0.002	0	0	28	2.2	0.407
0.002	0	0	28	4.7	0.445
0.002	0	0	28	4	0.417
0.002	0	0	28	3.4	0.37
0.002	0	0.0022	28	4.9	0.383
0.002	0	0.0022	28	4.7	0.435
0.002	0	0.03	28	4.4	0.506
0.002	0	0.03	28	4.4	0.395
0.002	0	0.03	28	2.5	0.399
0.002	0	0.03	27	3.5	0.361
0.002	0	0.03	28	3.4	0.355
0.002	0	0.0321	27	4.2	0.354
0.002	0	0.0346	27	4.7	0.425
0.002	0	0.0375	27	4.9	0.521
0.002	0	0.0409	28	4.2	0.342
0.002	0	0.045	27	5.3	0.372
0.002	0	0.05	27	4.7	0.574
0.002	0	0.0562	27	8.4	0.551
0.002	0.033	0.0643	28	18.1	0.478
0.001	0	0.0695	28	4.8	0.422
0	0.417	0.0834	28	15.2	0.458
0	0	0	28	3.8	0.361
0	0	0	28	7.7	0.442
0	0	0	28	3.8	0.46
0	0	0	27	5.7	0.544
			28	4.9	0.463
0	0	0	27	3.6	0.384
0	0	0	27	4.1	0.39
0	0	0	27	4.9	0.406
0	0	0	27	7	0.437
0	0	0	28	4.9	0.433
0	0	0	27	4.8	0.459
0	0	0	27	2	0.394
0	0	0	27	4.2	0.414
0	0	0	27	3.2	0.387
0	0	0	28	7.1	0.564
0	0	0	28	5.3	0.548
0	0	0	28	3.8	0.407
0	0	0	28	4.3	0.359
0	0	0	27	4.8	0.347
0	0	0	28	4.6	0.395
0	0	0	28	3.3	0.368
0	0	0	28	3	0.377
0	0	0	28	4.1	0.398
0	0	0	27	4.3	0.376
0	0	0	27	4.4	0.381
0	0	0	28	4.1	0.448

0	0	0	28	4	0.378
0	0	0	28	4.3	0.416
0	0	0	28	3.5	0.353
0	0	0	28	3.7	0.356
0	0	0	28	3.7	0.395
0	0	0	28	6.1	0.445
0	0	0	27	5.5	0.628
0	0	0	27	3.5	0.351
0	0	0	28	3.6	0.43
0	0	0	28	3.8	0.364
0	0	0	28	3.5	0.341
0	0	0	27	4	0.342
0	0	0	27	4.8	0.36
0	0	0	28	4.1	0.369
0	0	0	27	5.2	0.51
0	0	0	28	3.4	0.348
0	0	0	28	1.7	0.346
0	0	0	28	3.2	0.358
0	0	0	28	4.3	0.37
0	0	0	27	3	0.377
0	0	0	28	3.6	0.376
0	0	0	27	4.4	0.415
0	0	0	27	4.6	0.848
0	0	0	27	4.1	0.387
0	0	0	27	4.1	0.351
0	0	0	28	4.6	0.324
0	0	0	27	6	0.355
0	0	0	28	5	0.373
0	0	0	28	5.1	0.399
0	0	0	27	2.8	0.351
0	0	0	28	4.8	0.366
0	0	0	28	4.8	0.348
0	0	0	28	2.7	0.37
0	0	0	28	4.5	0.399
0	0	0	28	3.1	0.391
0	0	0	28	4.8	0.362
0	0	0	28	3.2	0.333
0	0	0	28	3.1	0.362
0	0	0	28	6.6	0.534
0	0	0	28	4.3	0.365
0	0	0	27	3.8	0.367
0	0	0	28	4.2	0.412
0	0	0	28	4	0.353
0	0	0	28	3.2	0.416
0	0	0	28	4.9	0.49
0	0	0	28	4.7	0.477
0	0	0	28	4.1	0.38
0	0	0	27	5.3	0.431
0	0	0	28	5.8	0.365
0	0	0	27	5.2	0.371
0	0	0	27	4.2	0.397
0	0	0	27	4.8	0.339
0	0	0	28	5.7	0.428
0	0	0	27	5.3	0.45

0	0	0	27	4.1	0.395
0	0	0	27	4.4	0.337
0	0	0	27	5.5	0.39
0	0	0	27	6.3	0.483
0	0	0	27	5.8	0.64
0	0	0	27	6.5	0.518
0	0	0	26	8.5	0.556
0	0	0	26	4.6	0.349
0	0	0	26	5.3	0.44
0	0	0	27	3.4	0.384
0	0	0	27	4.1	0.407
0	0	0	27	4.4	0.484
0	0	0	28	6.2	0.453
0	0	0	27	5.2	0.389
0	0	0	27	4.9	0.401
0	0	0	27	2.8	0.461
0	0	0	27	3.2	0.446
0	0	0	27	7.9	0.45
0	0	0	27	4.8	0.381
0	0	0	27	3.3	0.354
0	0	0	27	5.3	0.415
0	0	0	27	6	0.364
0	0	0	27	8	0.484
0	0	0	27	5.1	0.313
0	0	0	26	4.7	0.341
0	0	0	27	4.6	0.395
0	0	0	26	4.1	0.504
0	0	0	26	6.4	0.51
0	0	0	27	4.3	0.356
0	0	0	27	4.2	0.416
0	0	0	26	4.9	0.463
0	0	0	27	4.6	0.37
0	0	0	27	4	0.392
0	0	0	26	4.9	0.349
0	0	0	27	4.2	0.35
0	0	0	26	3.2	0.375
0	0	0	26	3.9	0.413
0	0	0	27	4.8	0.374
0	0	0	26	3.7	0.346
0	0	0	26	4.2	0.357
0	0	0	26	5.4	0.343
0	0	0	26	5.4	0.348
0	0	0	26	4	0.445
0	0	0	26	4.6	0.373
0	0	0	27	5.5	0.36
0	0	0	27	3.8	0.44
0	0	0	26	4.5	0.354
0	0	0	26	5	0.394
0	0	0	25	4.4	0.341
0	0	0	25	4.7	0.391
0	0	0	26	5	0.417
0	0	0	26	3.9	0.44
0	0	0	26	5.8	0.387
0	0	0	26	4.8	0.351

0	0	0	26	5.2	0.356
0	0	0	26	4.7	0.459
0	0	0	26	5.9	0.466
0	0	0	26	4.8	0.422
0	0	0	26	5.7	0.483
0	0	0	25	5.7	0.513
0	0	0	26	6.1	0.594
0	0	0	26	4	0.401
0	0	0	25	5.9	0.546
0	0	0	25	5.7	0.456
0	0	0	26	4.4	0.42
0	0	0	26	5.4	0.4
0	0	0	26	4.9	0.365
0	0	0	25	3.3	0.381
0	0	0	26	6.8	0.415
0	0	0	26	4.3	0.372
0	0	0	26	3.8	0.391
0	0	0	26	3.9	0.443
0	0	0	25	5.2	0.522
0	0	0	26	3.9	0.366
0	0	0	25	5	0.456
0	0	0	25	3.9	0.387
0	0	0	25	7.1	0.5
0	0	0	25	6.7	0.446
0	0	0	25	5.9	0.782
0	0	0	25	4.9	0.398
0	0	0	25	4	0.366
0	0	0	25	7.2	0.392
0	0	0	25	11.3	1.117
0	0	0	25	5.5	0.524
0	0	0	25	7.3	0.515
0	0	0	25	6.5	0.404
0	0	0	25	3.5	0.358
0	0	0	25	5.7	0.383
0	0	0	25	5.6	0.371
0	0	0	25	8.3	0.933
0	0	0	24	4.5	0.375
0	0	0	25	5.4	0.476
0	0	0	25	4.9	0.419
0	0	0	24	5.8	0.466
0	0	0	24	6.4	0.418
0	0	0	24	7.5	0.627
0	0	0	25	7.4	1.031
0	0		24	7.4	0.708
0	0		24	6.4	0.709
0	0		24	7.1	0.81
0	0		24	7.9	0.81
0	0		24	9.5	1.292
0	0		24	8.9	0.671
0	0		25	6.4	0.676
0	0		24	11.1	0.804
0	0		24	5.8	0.409
0	0		25	10	0.762
0	0		24	6.4	0.46
0	0		24	5.2	0.423

0	0		24	5.8	0.458
0	0				
0	0		25	4.5	0.382
0	0		24	3.9	0.405
0	0		24	8.3	0.73
0	0		24	4.6	0.449
0	0		24	10.2	0.418
0	0		25	9.3	0.561
0	0		24	6.6	0.495
0	0		24	5.9	0.435
0	0		24	9.4	1.244
0	0		24	7.1	0.885
0	0		24	7	0.62
0	0		24	7.6	0.505
0	0		24	8.2	1.023
0	0		25	6.1	0.731
0	0		24	7.3	0.635
0	0		24	7.5	1.019
0	0		25	5.6	0.83
0	0		24	7.2	0.665
0	0		24	4.7	0.486
0	0		24	6.8	0.465
0	0		24	5	0.672
0	0		24	5.9	0.473
0	0		25	6.3	0.751
0	0		25	11.9	1.232
0	0		25	11.2	0.956
0	0		25	6.2	0.46
0	0		25	7.7	0.46
0	0		26	7.7	0.631
0	0		26	6.9	0.473
0	0.035		26	6.2	0.612
0	0		26	7.8	0.531
0	0		26	11.5	1.464
0	0		26	7.8	0.544
0	0.047		27	8.3	0.714
0	0.096		27	5.3	0.498
0	0.186		27	12.3	0.966
0	0		28	5	0.457
0	0		28	6.3	0.394
0	0		29	7.2	0.463
0	0		29	9.5	0.898
0	0		30	6.1	0.509
0	0		31	6.7	0.493
0	0		31	4.3	0.374
0	0		33	6.2	0.531
0	0		34	7.1	0.516
0	0				
0	0				
0	0				
0	0				
0	0				
0	0				
0	0				
0	0				

0	0				
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0	0				
0	0				
0	0				
0	0				
0	0				
0	0				
0	0				
0	0				

Temperature (°C)	TWA (µg/m³)	Mass (Avg15) (µg/m³)	Latitude	Longitude
			42.8197	-78.8536
9.8	5.1	4.67	42.8197	-78.8537
9.8	5.1	4.58	42.8197	-78.8537
9.8	5.1	4.64	42.8197	-78.8536
9.7	5.1	4.73	42.8197	-78.8537
9.7	5.1	4.67	42.8197	-78.8536
9.7	5.1	4.49	42.8197	-78.8536
9.7	5.1	4.45	42.8197	-78.8536
9.7	5.1	4.56	42.8197	-78.8537
9.7	5.1	4.38	42.8197	-78.8537
9.7	5.1	4.4	42.8197	-78.8536
9.6	5.1	4.55	42.8197	-78.8536
9.7	5.1	4.52	42.8197	-78.8536
9.6	5.1	4.51	42.8197	-78.8536
9.6	5.1	4.35	42.8197	-78.8537
9.6	5.2	4.29	42.8197	-78.8537
9.6	5.2	4.39	42.8197	-78.8537
9.5	5.2	4.49	42.8197	-78.8537
9.5	5.2	4.63	42.8197	-78.8536
9.4	5.2	4.55	42.8197	-78.8536
9.5	5.2	4.56	42.8197	-78.8537
9.5	5.2	4.65	42.8197	-78.8536
9.4	5.2	4.71	42.8197	-78.8536
9.4	5.2	4.66	42.8197	-78.8536
9.4	5.3	4.67	42.8197	-78.8536
9.3	5.3	4.57	42.8197	-78.8536
9.3	5.3	4.37	42.8198	-78.8536
9.3	5.3	4.44	42.8197	-78.8537
9.3	5.3	4.49	42.8197	-78.8537
9.3	5.3	4.54	42.8197	-78.8537
9.3	5.3	4.55	42.8197	-78.8537
9.3	5.4	4.48	42.8197	-78.8536
9.3	5.4	4.42	42.8197	-78.8536
9.3	5.4	4.23	42.8197	-78.8536
9.2	5.4	4.32	42.8197	-78.8536
9.3	5.4	4.27	42.8197	-78.8537
9.3	5.5	4.33	42.8197	-78.8536
9.3	5.5	4.28	42.8197	-78.8536
9.2	5.5	4.22	42.8196	-78.8536
9.2	5.5	4.14	42.8197	-78.8537
9.2	5.5	4.26	42.8197	-78.8537
			42.8197	-78.8536
9.2	5.6	4.34	42.8197	-78.8536
9.3	5.6	4.38	42.8197	-78.8536
9.3	5.7	4.35	42.8197	-78.8536
9.2	5.7	4.27	42.8197	-78.8536
9.2	5.7	4.12	42.8197	-78.8536
9.3	5.8	4.22	42.8197	-78.8537
9.3	5.8	4.17	42.8197	-78.8536
9.3	5.9	4.11	42.8197	-78.8536
9.2	5.9	4.05	42.8197	-78.8536
9.3	5.9	4.1	42.8197	-78.8536

9.3	6	4.17	42.8197	-78.8536
9.3	6	4.24	42.8197	-78.8536
9.3	6	4.07	42.8197	-78.8536
9.3	6.1	3.97	42.8197	-78.8536
9.3	6.2	3.95	42.8197	-78.8536
9.3	6.2	3.92	42.8197	-78.8537
9.4	6.3	3.95	42.8197	-78.8536
9.3	6.4	3.99	42.8197	-78.8536
9.5	6.4	4.01	42.8197	-78.8536
9.4	6.6	4.21	42.8197	-78.8536
9.5	6.7	4.21	42.8197	-78.8536
9.5	6.8	4.51	42.8197	-78.8536
9.5	6.9	5.49	42.8197	-78.8536
9.5	7	5.48	42.8197	-78.8537
9.5	7.1	6.18	42.8197	-78.8536
9.5	7.3	6.14	42.8197	-78.8536
9.5	7.5	6.36	42.8197	-78.8536
9.5	7.6	6.45	42.8197	-78.8536
9.6	7.9	6.59	42.8197	-78.8536
9.6	8.2	6.82	42.8197	-78.8537
9.6	8.4	7.02	42.8197	-78.8536
9.6	8.6	7.22	42.8197	-78.8536
9.6	8.9	7.43	42.8197	-78.8536
9.7	9.3	7.75	42.8197	-78.8536
9.7	9.9	8.02	42.8197	-78.8536
9.7	9.8	8.44	42.8197	-78.8536
9.8	10.1	8.44	42.8197	-78.8536
9.8	9.9	6.83	42.8197	-78.8537
9.8	9	7.24	42.8197	-78.8537
9.8	5.7	5.25	42.8197	-78.8537
9.9	6.1	5.52	42.8197	-78.8536
9.8	5.4	4.5	42.8197	-78.8536
9.9	5.4	4.57	42.8196	-78.8536
10.2	5.4	4.59	42.8108	-78.8466
10.1	5.4	4.57	42.8108	-78.8466
10.2	5.4	4.55	42.8108	-78.8466
10.3	5.4	4.48	42.8108	-78.8466
10.3	5.4	4.43	42.8108	-78.8466
10.3	5.4	4.25	42.8108	-78.8466
10.3	5.4	4.21	42.8108	-78.8466
10.3	5.4	4.17	42.8108	-78.8466
10.3	5.4	4.3	42.8108	-78.8466
10.3	5.4	4.31	42.8108	-78.8466
10.3	5.4	4.33	42.8108	-78.8466
10.3	5.4	4.1	42.8108	-78.8466
10.3	5.4	3.99	42.8108	-78.8466
10.3	5.4	4.15	42.8108	-78.8466
10.3	5.4	4.23	42.8108	-78.8466
10.4	5.4	4.19	42.8108	-78.8466
10.4	5.4	4.15	42.8108	-78.8466
10.4	5.4	4.23	42.8108	-78.8466
10.3	5.4	4.27	42.8108	-78.8466
10.4	5.5	4.23	42.8108	-78.8466
10.4	5.5	4.18	42.8108	-78.8466
10.4	5.5	4.11	42.8108	-78.8466

10.4	5.5	4.1	42.8108	-78.8466
10.5	5.5	4.17	42.8108	-78.8466
10.4	5.5	4.15	42.8108	-78.8466
10.5	5.5	4.29	42.8108	-78.8466
10.5	5.5	4.27	42.8108	-78.8466
10.4	5.5	4.1	42.8108	-78.8466
10.4	5.5	3.86	42.8108	-78.8466
10.4	5.5	3.74	42.8108	-78.8466
10.5	5.5	3.81	42.8108	-78.8466
10.4	5.5	3.85	42.8108	-78.8466
10.5	5.5	3.87	42.8108	-78.8466
10.4	5.5	3.94	42.8108	-78.8466
10.5	5.6	4.07	42.8108	-78.8466
10.5	5.6	4.09	42.8108	-78.8466
10.5	5.6	4.15	42.8108	-78.8466
10.5	5.6	3.99	42.8108	-78.8466
10.3	5.6	4.09	42.8108	-78.8466
10.5	5.6	4.29	42.8108	-78.8466
10.5	5.6	4.26	42.8108	-78.8466
10.5	5.6	4.27	42.8108	-78.8466
10.5	5.6	4.28	42.8108	-78.8466
10.4	5.6	4.36	42.8108	-78.8466
10.5	5.6	4.28	42.8108	-78.8466
10.4	5.6	4.18	42.8108	-78.8466
10.5	5.6	4.35	42.8108	-78.8466
10.5	5.6	4.36	42.8108	-78.8466
10.5	5.7	4.31	42.8108	-78.8466
10.5	5.7	4.19	42.8108	-78.8466
10.5	5.7	4.12	42.8108	-78.8466
10.5	5.7	3.99	42.8108	-78.8466
10.6	5.7	4.13	42.8108	-78.8466
10.5	5.7	4.13	42.8108	-78.8466
10.5	5.7	4.08	42.8108	-78.8466
10.6	5.7	4.25	42.8108	-78.8466
10.6	5.7	4.34	42.8109	-78.8466
10.5	5.7	4.48	42.8109	-78.8466
10.5	5.7	4.44	42.8108	-78.8466
10.6	5.7	4.55	42.8108	-78.8466
10.5	5.8	4.72		
10.5	5.8	4.63	42.8108	-78.8466
10.5	5.8	4.62	42.8108	-78.8466
10.5	5.8	4.66	42.8108	-78.8466
10.5	5.8	4.75	42.8108	-78.8466
10.5	5.8	4.9	42.8108	-78.8466
10.5	5.8	5.07	42.8108	-78.8466
10.5	5.8	5.18	42.8108	-78.8466
10.4	5.8	5.43	42.8108	-78.8466
10.5	5.8	5.47	42.8108	-78.8466
10.4	5.8	5.47	42.8108	-78.8466
10.4	5.8	5.31	42.8108	-78.8466
10.4	5.8	5.23	42.8108	-78.8466
10.3	5.9	5.25	42.8108	-78.8466
10.3	5.9	5.34	42.8108	-78.8466
10.4	5.9	5.31	42.8108	-78.8466

10.3	5.9	5.31	42.8108	-78.8466
10.3	5.9	5.36	42.8108	-78.8466
10.2	5.9	5.25	42.8108	-78.8466
10.3	5.9	5.09	42.8108	-78.8466
10.3	5.9	5.2	42.8108	-78.8466
10.3	5.9	5.13	42.8108	-78.8466
10.2	5.9	4.9	42.8108	-78.8466
10.3	5.9	4.67	42.8108	-78.8466
10.2	5.9	4.77	42.8108	-78.8466
10.3	5.9	4.96	42.8108	-78.8466
10.3	5.9	5.09	42.8108	-78.8466
10.2	5.9	5.13	42.8108	-78.8466
10.2	5.9	5.14	42.8108	-78.8466
10.2	5.9	4.99	42.8108	-78.8466
10.2	6	5.03	42.8108	-78.8466
10.2	6	4.98	42.8108	-78.8466
10.1	6	5.12	42.8108	-78.8466
10.1	6	5.21	42.8108	-78.8466
10.1	6	4.95	42.8108	-78.8466
10.1	6	4.96	42.8108	-78.8466
10.1	6	5.02	42.8108	-78.8466
10.1	6	4.88	42.8108	-78.8466
10.1	6	4.74	42.8108	-78.8466
10.1	6	4.53	42.8108	-78.8466
10.1	6.1	4.43	42.8108	-78.8466
10.1	6.1	4.4	42.8108	-78.8466
10	6.1	4.45	42.8108	-78.8466
10	6.1	4.54	42.8108	-78.8466
10.1	6.1	4.38	42.8108	-78.8466
10	6.1	4.4	42.8108	-78.8466
10	6.1	4.49	42.8108	-78.8466
10	6.1	4.41	42.8108	-78.8466
10	6.2	4.41	42.8108	-78.8466
9.9	6.2	4.47	42.8108	-78.8466
10	6.2	4.44	42.8108	-78.8466
9.9	6.2	4.47	42.8108	-78.8466
9.9	6.2	4.59	42.8108	-78.8466
9.8	6.2	4.59	42.8108	-78.8466
9.8	6.3	4.66	42.8108	-78.8466
9.8	6.3	4.73	42.8108	-78.8466
9.7	6.3	4.8	42.8108	-78.8466
9.8	6.3	4.75	42.8108	-78.8466
9.8	6.3	4.79	42.8108	-78.8466
9.8	6.3	4.84	42.8108	-78.8466
9.8	6.3	4.91	42.8108	-78.8466
9.8	6.4	4.93	42.8108	-78.8466
9.8	6.4	5.08	42.8108	-78.8466
9.8	6.4	5.05	42.8108	-78.8466
9.8	6.4	5.11	42.8108	-78.8466
9.8	6.4	5.19	42.8108	-78.8466
9.7	6.4	5.17	42.8108	-78.8466
9.8	6.4	5.2	42.8108	-78.8466
9.8	6.5	5.27	42.8108	-78.8466
9.7	6.5	5.1	42.8108	-78.8466

9.7	6.5	5.23	42.8108	-78.8466
9.7	6.5	5.17	42.8108	-78.8466
9.7	6.5	5.11	42.8108	-78.8466
9.7	6.5	4.98	42.8108	-78.8466
9.7	6.5	5.01	42.8108	-78.8466
9.7	6.6	4.89	42.8108	-78.8466
9.7	6.6	4.84	42.8108	-78.8466
9.7	6.6	4.69	42.8108	-78.8466
9.6	6.6	4.9	42.8108	-78.8466
9.6	6.6	4.95	42.8108	-78.8466
9.6	6.6	4.97	42.8108	-78.8466
9.6	6.7	5	42.8108	-78.8466
9.6	6.7	4.91	42.8108	-78.8466
9.6	6.7	5.06	42.8108	-78.8466
9.6	6.7	5.59	42.8108	-78.8466
9.6	6.8	5.51	42.8108	-78.8466
9.5	6.8	5.71	42.8108	-78.8466
9.4	6.8	5.89	42.8108	-78.8466
9.5	6.8	5.86	42.8108	-78.8466
9.4	6.9	5.89	42.8108	-78.8466
9.5	6.9	6.01	42.8108	-78.8466
9.4	6.9	6.23	42.8108	-78.8466
9.4	6.9	6.27	42.8108	-78.8466
9.5	6.9	6.15	42.8108	-78.8466
9.4	6.9	6.03	42.8108	-78.8466
9.4	7	6.03	42.8108	-78.8466
9.4	7	6.13	42.8108	-78.8466
9.4	7	6.36	42.8108	-78.8466
9.4	7	6.37	42.8108	-78.8466
9.4	7	6.11	42.8108	-78.8466
9.3	7	6.17	42.8108	-78.8466
9.3	7.1	6.16	42.8108	-78.8466
9.3	7.1	6.25	42.8108	-78.8466
9.3	7.1	6.65	42.8108	-78.8466
9.3	7.1	6.87	42.8108	-78.8466
9.2	7.1	6.92	42.8108	-78.8466
9.2	7.1	7.11	42.8108	-78.8466
9.3	7.1	7.19	42.8108	-78.8466
9.2	7.2	7.5	42.8108	-78.8466
9.2	7.2	7.6	42.8108	-78.8466
9.3	7.2	7.56	42.8108	-78.8466
9.2	7.2	7.52	42.8108	-78.8466
9.3	7.2	7.52	42.8108	-78.8466
9.2	7.2		42.8108	-78.8466
9.2	7.2		42.8108	-78.8465
9.2	7.2		42.8108	-78.8465
9.2	7.2		42.8108	-78.8465
9.2	7.2		42.8108	-78.8466
9.2	7.1		42.8108	-78.8466
9.2	7.1		42.8108	-78.8466
9.2	7.1		42.8108	-78.8466
9.2	7.1		42.8108	-78.8466
9.2	7.1		42.8108	-78.8466
9.2	7.1		42.8108	-78.8466
9.3	7.1		42.8108	-78.8466

9.2	7.1		42.8108	-78.8466
			42.8108	-78.8466
9.2	7.2		42.8108	-78.8466
9.3	7.3		42.8108	-78.8466
9.3	7.4		42.8108	-78.8466
9.3	7.4		42.8108	-78.8466
9.2	7.4		42.8108	-78.8466
9.3	7.3		42.8108	-78.8466
9.3	7.3		42.8108	-78.8466
9.3	7.3		42.8108	-78.8466
9.3	7.4		42.8108	-78.8466
9.3	7.3		42.8108	-78.8466
9.3	7.4		42.8108	-78.8466
9.4	7.3		42.8108	-78.8466
9.4	7.3		42.8108	-78.8466
9.4	7.3		42.8108	-78.8466
9.4	7.3		42.8108	-78.8466
9.5	7.3		42.8108	-78.8466
9.5	7.3		42.8108	-78.8466
9.5	7.3		42.8108	-78.8466
9.6	7.3		42.8108	-78.8466
9.5	7.4		42.8108	-78.8466
9.7	7.4		42.8108	-78.8466
9.7	7.5		42.8108	-78.8466
9.7	7.5		42.8108	-78.8466
9.7	7.4		42.8108	-78.8466
9.8	7		42.8108	-78.8466
9.9	7		42.8108	-78.8466
10	7.1		42.8108	-78.8466
10	7		42.8108	-78.8466
10	7		42.8108	-78.8466
10.1	7		42.8108	-78.8466
10.3	7.1		42.8108	-78.8466
10.3	7		42.8108	-78.8466
10.4	7		42.8108	-78.8466
10.5	7.1		42.8108	-78.8466
10.5	6.9		42.8108	-78.8466
10.8	6.8		42.8108	-78.8466
10.9	6.5		42.8108	-78.8466
11	6.7		42.8108	-78.8466
11.2	6.7		42.8108	-78.8466
11.4	6.3		42.8108	-78.8466
11.6	5.9		42.8108	-78.8466
11.9	6.1		42.8108	-78.8466
12.1	6.2		42.8108	-78.8466
12.4	6.1		42.8108	-78.8466
12.8	6.2		42.8108	-78.8466
	0		42.8108	-78.8465
	0		42.8108	-78.8466
	0		42.8108	-78.8466
	0		42.8108	-78.8466
	0		42.8108	-78.8466
	0		42.8108	-78.8466
	0		42.8108	-78.8465
	0		42.8107	-78.8465

	0		42.8108	-78.8466
	0		42.8108	-78.8465
	0		42.8108	-78.8465
	0		42.8107	-78.8465
	0		42.8107	-78.8466
	0		42.8108	-78.8466
	0		42.8108	-78.8465
	0		42.8108	-78.8465
	0		42.8108	-78.8465
	0		42.8108	-78.8465
	0		42.8108	-78.8466
	0		42.8107	-78.8466
	0		42.8108	-78.8466
	0		42.8108	-78.8466
	0		42.8108	-78.8465
	0		42.8108	-78.8466
	0		42.8108	-78.8466
	0		42.8108	-78.8466

COMMUNITY AIR MONITORING DAILY LOG

Date: 1/7/16
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: NO INTRUSIVE WORK PERFORMED TODAY

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1600 P.M.
Ambient Air Temp.:	28 F	38 F
Wind Direction:	CALM	CALM
Wind Speed:	CALM	CALM
Precipitation:	none	none

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLO Date: 1/7/16
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 2/23/16
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

WEATHER CONDITIONS:

	A.M.	P.M.
Time of Day:	0800	1200
Ambient Air Temp.:	30°F	32°F
Wind Direction:	W	W
Wind Speed:	10-15	10-15
Precipitation:	none	none

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: Pumping ground water - no intrusive work

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: 2/23/16 Date: RLD
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 2/24/16
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1600 P.M.
Ambient Air Temp.:	30 °F	33°F
Wind Direction:	W	SW
Wind Speed:	5-10 mph	10-15 mph
Precipitation:	none	none

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

DESCRIPTION OF SITE ACTIVITIES: Pumping ground water to frac tank - no intrusive work performed

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: Date:
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 2/25/16
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

WEATHER CONDITIONS:

Time of Day:	~~25~~ 08 A.M.	1530 P.M.
Ambient Air Temp.:	30 °F	35°F
Wind Direction:	W	W
Wind Speed:	5-10	5-10 mph
Precipitation:	+ Rain	Rain

DESCRIPTION OF SITE ACTIVITIES: Cleaning of PIPE - In place

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RD Date: 2/25/16
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: 2/29/16
Project: Former Coke Oven Gas Line
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map): no monitors setup due to rain

DESCRIPTION OF SITE ACTIVITIES: PIPE removal

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1200 P.M.
Ambient Air Temp.:	35°F	38°F
Wind Direction:	W/SW	W/SW
Wind Speed:	10-15	10-15
Precipitation:	none	none

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			n/a		
Exceedence of 150 ug/m3 [1]			n/a		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			n/a		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			n/a		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			N/A		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: Date:
Checked By: Date:

COMMUNITY AIR MONITORING DAILY LOG

Date: ~~3/10~~ 3/11/16

Project: Coke oven GAS PIPE removal

Job No.: 0071-013-125

Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map): NO INVASIVE WORK PERFORMED

DESCRIPTION OF SITE ACTIVITIES: CONCRETE BACKFILLING TO SEAL IN-PLACE PIPES

WEATHER CONDITIONS:

Time of Day:	0800 A.M.	1600 P.M.
Ambient Air Temp.:	35°F	35°F
Wind Direction:	W	W
Wind Speed:	5-10 mph	5-10 mph
Precipitation:		

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLD Date: 3/11/16

Checked By: Date:

TurnKey Environmental Restoration, LLC

COMMUNITY AIR MONITORING DAILY LOG

Date: 3/2/16
Project: ~~BOS Phase II~~ Coke Oven Gas Line Removal
Job No.: 0071-013-125
Client: Tecumseh Redevelopment, Inc

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map):

WEATHER CONDITIONS:

	A.M.	P.M.
Time of Day:	0800	1600
Ambient Air Temp.:	32	35
Wind Direction:	W/SW	SW
Wind Speed:	5-10	5-10
Precipitation:	none	none

DESCRIPTION OF SITE ACTIVITIES: Cleaning pipe at Decon PAD. No Intrusive work performed

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 [1]			NA		
Exceedence of 150 ug/m3 [1]			NA		
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm [1]			NA		Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm [1]			NA		Temporarily halt Work, abate emissions with corrective actions and continue monitoring [3]
Exceedence of 25 ppm [2]			NA		Shut Down Work Immediately and notify Site Safety & Health Officer

1. Above background for 15 minute moving average.
2. Above background at Site perimeter (indicate location on attached sketch)
3. Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whicever is less) is below 5 ppm for 15 min.

NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: RLD Date: 3/2/16
Checked By: Date:

APPENDIX E

LABORATORY ANALYTICAL DATA PACKAGES

ANALYTICAL REPORT

Lab Number:	L1517610
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Tom Forbes
Phone:	(716) 856-0599
Project Name:	30-INCH COKE GAS LINE
Project Number:	0071-013-125
Report Date:	07/29/15

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1517610-01	PRE CARBON-PILOT TEST	WATER	TECUMSEH	07/28/15 10:18	07/28/15
L1517610-02	POST CARBON-PILOT TEST	WATER	TECUMSEH	07/28/15 12:15	07/28/15
L1517610-03	TRIP BLANK	WATER	TECUMSEH	07/28/15 00:00	07/28/15

Project Name:	30-INCH COKE GAS LINE	**Lab Number:**	L1517610
Project Number:	0071-013-125	**Report Date:**	07/29/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	30-INCH COKE GAS LINE	**Lab Number:**	L1517610
Project Number:	0071-013-125	**Report Date:**	07/29/15

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Semivolatile Organics

The WG806891-2 LCS recovery, associated with L1517610-01 and -02, is below the acceptance criteria for benzidine (6%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

PCBs

The WG806887-1 Method Blank, associated with L1517610-01 and -02, has concentrations above the reporting limits for Aroclor 1260. Since the samples were non-detect for this target analyte, no further actions were taken. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Cristin Walker

Title: Technical Director/Representative Date: 07/29/15

ORGANICS

VOLATILES

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-01 D
Client ID: PRE CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/29/15 12:51
Analyst: PD

Date Collected: 07/28/15 10:18
Date Received: 07/28/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	440		ug/l	2.0	0.64	4
Toluene	72		ug/l	10	2.8	4
Ethylbenzene	ND		ug/l	10	2.8	4
Methyl tert butyl ether	ND		ug/l	10	2.8	4
p/m-Xylene	19		ug/l	10	2.8	4
o-Xylene	8.9	J	ug/l	10	2.8	4
n-Butylbenzene	ND		ug/l	10	2.8	4
sec-Butylbenzene	ND		ug/l	10	2.8	4
tert-Butylbenzene	ND		ug/l	10	2.8	4
Isopropylbenzene	ND		ug/l	10	2.8	4
p-Isopropyltoluene	ND		ug/l	10	2.8	4
n-Propylbenzene	ND		ug/l	10	2.8	4
1,3,5-Trimethylbenzene	ND		ug/l	10	2.8	4
1,2,4-Trimethylbenzene	ND		ug/l	10	2.8	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	119		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	100		70-130

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-02
Client ID: POST CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/29/15 12:23
Analyst: PD

Date Collected: 07/28/15 12:15
Date Received: 07/28/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	118		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	105		70-130

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-03
Client ID: TRIP BLANK
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/29/15 11:55
Analyst: PD

Date Collected: 07/28/15 00:00
Date Received: 07/28/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	119		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	105		70-130

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125
Lab Number: L1517610
Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/29/15 09:06
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG807070-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/29/15 09:06
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG807070-3					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylene (Total)	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene (total)	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
tert-Butyl Alcohol	ND		ug/l	10	0.90
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125
Lab Number: L1517610
Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/29/15 09:06
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG807070-3					
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	118		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	103		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG807070-1 WG807070-2								
Methylene chloride	89		87		70-130	2		20
1,1-Dichloroethane	109		108		70-130	1		20
Chloroform	109		105		70-130	4		20
Carbon tetrachloride	91		89		63-132	2		20
1,2-Dichloropropane	102		101		70-130	1		20
Dibromochloromethane	98		98		63-130	0		20
1,1,2-Trichloroethane	109		111		70-130	2		20
Tetrachloroethene	97		96		70-130	1		20
Chlorobenzene	100		98		75-130	2		20
Trichlorofluoromethane	129		125		62-150	3		20
1,2-Dichloroethane	96		96		70-130	0		20
1,1,1-Trichloroethane	97		95		67-130	2		20
Bromodichloromethane	93		92		67-130	1		20
trans-1,3-Dichloropropene	99		101		70-130	2		20
cis-1,3-Dichloropropene	83		83		70-130	0		20
1,1-Dichloropropene	94		93		70-130	1		20
Bromoform	96		97		54-136	1		20
1,1,2,2-Tetrachloroethane	101		102		67-130	1		20
Benzene	100		99		70-130	1		20
Toluene	113		110		70-130	3		20
Ethylbenzene	104		102		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG807070-1 WG807070-2								
Chloromethane	**47**	Q	**54**	Q	64-130	14		20
Bromomethane	65		66		39-139	2		20
Vinyl chloride	87		86		55-140	1		20
Chloroethane	97		93		55-138	4		20
1,1-Dichloroethene	101		100		61-145	1		20
trans-1,2-Dichloroethene	99		98		70-130	1		20
Trichloroethene	98		95		70-130	3		20
1,2-Dichlorobenzene	92		92		70-130	0		20
1,3-Dichlorobenzene	98		99		70-130	1		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	86		89		63-130	3		20
p/m-Xylene	103		101		70-130	2		20
o-Xylene	97		95		70-130	2		20
cis-1,2-Dichloroethene	99		96		70-130	3		20
Dibromomethane	89		89		70-130	0		20
1,2,3-Trichloropropane	120		121		64-130	1		20
Acrylonitrile	104		108		70-130	4		20
Tert-Butyl Alcohol	80		94		70-130	16		20
Styrene	100		98		70-130	2		20
Dichlorodifluoromethane	59		58		36-147	2		20
Acetone	120		128		58-148	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30-INCH COKE GAS LINE

Project Number: 0071-013-125

Lab Number: L1517610

Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG807070-1 WG807070-2								
Carbon disulfide	90		89		51-130	1		20
2-Butanone	132		**143**	Q	63-138	8		20
Vinyl acetate	70		75		70-130	7		20
4-Methyl-2-pentanone	75		79		59-130	5		20
2-Hexanone	85		91		57-130	7		20
Bromochloromethane	95		96		70-130	1		20
2,2-Dichloropropane	88		86		63-133	2		20
1,2-Dibromoethane	93		95		70-130	2		20
1,3-Dichloropropane	106		108		70-130	2		20
1,1,1,2-Tetrachloroethane	106		104		64-130	2		20
Bromobenzene	90		89		70-130	1		20
n-Butylbenzene	108		118		53-136	9		20
sec-Butylbenzene	98		102		70-130	4		20
tert-Butylbenzene	89		91		70-130	2		20
o-Chlorotoluene	114		112		70-130	2		20
p-Chlorotoluene	103		102		70-130	1		20
1,2-Dibromo-3-chloropropane	98		103		41-144	5		20
Hexachlorobutadiene	94		104		63-130	10		20
Isopropylbenzene	96		95		70-130	1		20
p-Isopropyltoluene	96		102		70-130	6		20
Naphthalene	81		88		70-130	8		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30-INCH COKE GAS LINE

Project Number: 0071-013-125

Lab Number: L1517610

Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG807070-1 WG807070-2								
n-Propylbenzene	104		102		69-130	2		20
1,2,3-Trichlorobenzene	91		102		70-130	11		20
1,2,4-Trichlorobenzene	103		108		70-130	5		20
1,3,5-Trimethylbenzene	108		110		64-130	2		20
1,2,4-Trimethylbenzene	100		102		70-130	2		20
1,4-Dioxane	104		114		56-162	9		20
p-Diethylbenzene	96		102		70-130	6		20
p-Ethyltoluene	102		101		70-130	1		20
1,2,4,5-Tetramethylbenzene	103		104		70-130	1		20
Ethyl ether	118		118		59-134	0		20
trans-1,4-Dichloro-2-butene	89		92		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		102		70-130
Toluene-d8	117		117		70-130
4-Bromofluorobenzene	93		94		70-130
Dibromofluoromethane	105		105		70-130

SEMIVOLATILES

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-01
Client ID: PRE CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/29/15 10:37
Analyst: JB

Date Collected: 07/28/15 10:18
Date Received: 07/28/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:09

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
Biphenyl	ND		ug/l	2.0	0.24	1
4-Chloroaniline	ND		ug/l	5.0	0.84	1
2-Nitroaniline	ND		ug/l	5.0	0.96	1
3-Nitroaniline	ND		ug/l	5.0	0.67	1
4-Nitroaniline	ND		ug/l	5.0	0.83	1
Dibenzofuran	ND		ug/l	2.0	0.22	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36	1
Acetophenone	590	E	ug/l	5.0	0.43	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-01 Date Collected: 07/28/15 10:18

Client ID: PRE CARBON-PILOT TEST Date Received: 07/28/15

Sample Location: TECUMSEH Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1
2-Methylphenol	ND		ug/l	5.0	0.70	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75	1
Carbazole	ND		ug/l	2.0	0.37	1
Benzaldehyde	ND		ug/l	5.0	0.99	1
Caprolactam	ND		ug/l	10	0.39	1
Atrazine	ND		ug/l	10	0.79	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		21-120
Phenol-d6	51		10-120
Nitrobenzene-d5	101		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	86		41-149

Project Name: 30-INCH COKE GAS LINE
Lab Number: L1517610
Project Number: 0071-013-125
Report Date: 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-01
Client ID: PRE CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/29/15 11:26
Analyst: MW

Date Collected: 07/28/15 10:18
Date Received: 07/28/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.04	1
2-Chloronaphthalene	ND		ug/l	0.20	0.04	1
Fluoranthene	0.05	J	ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.04	1
Naphthalene	ND		ug/l	0.20	0.04	1
Benzo(a)anthracene	0.02	J	ug/l	0.20	0.02	1
Benzo(a)pyrene	ND		ug/l	0.20	0.04	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.02	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.04	1
Chrysene	ND		ug/l	0.20	0.04	1
Acenaphthylene	0.44		ug/l	0.20	0.04	1
Anthracene	0.05	J	ug/l	0.20	0.04	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.04	1
Fluorene	ND		ug/l	0.20	0.04	1
Phenanthrene	0.08	J	ug/l	0.20	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.04	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.04	1
Pyrene	ND		ug/l	0.20	0.04	1
2-Methylnaphthalene	ND		ug/l	0.20	0.05	1
Pentachlorophenol	ND		ug/l	0.80	0.22	1
Hexachlorobenzene	ND		ug/l	0.80	0.03	1
Hexachloroethane	ND		ug/l	0.80	0.03	1

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-01 Date Collected: 07/28/15 10:18

Client ID: PRE CARBON-PILOT TEST Date Received: 07/28/15

Sample Location: TECUMSEH Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	61		15-120
2,4,6-Tribromophenol	87		10-120
4-Terphenyl-d14	69		41-149

Project Name: 30-INCH COKE GAS LINE
Lab Number: L1517610
Project Number: 0071-013-125
Report Date: 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-01 D
Client ID: PRE CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/29/15 13:44
Analyst: JB

Date Collected: 07/28/15 10:18
Date Received: 07/28/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:09

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	640		ug/l	25	2.1	5

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-02
Client ID: POST CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/29/15 11:04
Analyst: JB

Date Collected: 07/28/15 12:15
Date Received: 07/28/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:09

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
Biphenyl	ND		ug/l	2.0	0.24	1
4-Chloroaniline	ND		ug/l	5.0	0.84	1
2-Nitroaniline	ND		ug/l	5.0	0.96	1
3-Nitroaniline	ND		ug/l	5.0	0.67	1
4-Nitroaniline	ND		ug/l	5.0	0.83	1
Dibenzofuran	ND		ug/l	2.0	0.22	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36	1
Acetophenone	ND		ug/l	5.0	0.43	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-02 Date Collected: 07/28/15 12:15

Client ID: POST CARBON-PILOT TEST Date Received: 07/28/15

Sample Location: TECUMSEH Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1
2-Methylphenol	ND		ug/l	5.0	0.70	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75	1
Carbazole	ND		ug/l	2.0	0.37	1
Benzaldehyde	ND		ug/l	5.0	0.99	1
Caprolactam	ND		ug/l	10	0.39	1
Atrazine	ND		ug/l	10	0.79	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	47		23-120
2-Fluorobiphenyl	45		15-120
2,4,6-Tribromophenol	46		10-120
4-Terphenyl-d14	50		41-149

Project Name: 30-INCH COKE GAS LINE
Lab Number: L1517610
Project Number: 0071-013-125
Report Date: 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-02
Client ID: POST CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/29/15 13:25
Analyst: MW

Date Collected: 07/28/15 12:15
Date Received: 07/28/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.04	1
2-Chloronaphthalene	ND		ug/l	0.20	0.04	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.04	1
Naphthalene	0.20		ug/l	0.20	0.04	1
Benzo(a)anthracene	ND		ug/l	0.20	0.02	1
Benzo(a)pyrene	ND		ug/l	0.20	0.04	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.02	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.04	1
Chrysene	ND		ug/l	0.20	0.04	1
Acenaphthylene	ND		ug/l	0.20	0.04	1
Anthracene	ND		ug/l	0.20	0.04	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.04	1
Fluorene	ND		ug/l	0.20	0.04	1
Phenanthrene	0.02	J	ug/l	0.20	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.04	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.04	1
Pyrene	ND		ug/l	0.20	0.04	1
2-Methylnaphthalene	ND		ug/l	0.20	0.05	1
Pentachlorophenol	ND		ug/l	0.80	0.22	1
Hexachlorobenzene	ND		ug/l	0.80	0.03	1
Hexachloroethane	ND		ug/l	0.80	0.03	1

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-02 Date Collected: 07/28/15 12:15

Client ID: POST CARBON-PILOT TEST Date Received: 07/28/15

Sample Location: TECUMSEH Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	95		15-120
2,4,6-Tribromophenol	91		10-120
4-Terphenyl-d14	93		41-149

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/29/15 09:20
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:09

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG806891-1					
Acenaphthene	ND		ug/l	2.0	0.28
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Benzidine	ND		ug/l	20	5.2
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.40
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
2-Chloronaphthalene	ND		ug/l	2.0	0.46
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
Azobenzene	ND		ug/l	2.0	0.54
Fluoranthene	ND		ug/l	2.0	0.40
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorobutadiene	ND		ug/l	2.0	0.42
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Hexachloroethane	ND		ug/l	2.0	0.30
Isophorone	ND		ug/l	5.0	0.79
Naphthalene	ND		ug/l	2.0	0.33
Nitrobenzene	ND		ug/l	2.0	0.40
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/29/15 09:20
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:09

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG806891-1					
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39
Dimethyl phthalate	ND		ug/l	5.0	0.33
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.66
Benzo(b)fluoranthene	ND		ug/l	2.0	0.37
Benzo(k)fluoranthene	ND		ug/l	2.0	0.30
Chrysene	ND		ug/l	2.0	0.30
Acenaphthylene	ND		ug/l	2.0	0.37
Anthracene	ND		ug/l	2.0	0.20
Benzo(ghi)perylene	ND		ug/l	2.0	0.57
Fluorene	ND		ug/l	2.0	0.32
Phenanthrene	ND		ug/l	2.0	0.23
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.44
Indeno(1,2,3-cd)Pyrene	ND		ug/l	2.0	0.43
Pyrene	ND		ug/l	2.0	0.52
Biphenyl	ND		ug/l	2.0	0.24
Aniline	ND		ug/l	2.0	0.55
4-Chloroaniline	ND		ug/l	5.0	0.84
2-Nitroaniline	ND		ug/l	5.0	0.96
3-Nitroaniline	ND		ug/l	5.0	0.67
4-Nitroaniline	ND		ug/l	5.0	0.83
Dibenzofuran	ND		ug/l	2.0	0.22
2-Methylnaphthalene	ND		ug/l	2.0	0.36
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36
Acetophenone	ND		ug/l	5.0	0.43
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/29/15 09:20
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:09

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG806891-1					
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4
Pentachlorophenol	ND		ug/l	10	3.2
Phenol	ND		ug/l	5.0	0.27
2-Methylphenol	ND		ug/l	5.0	0.70
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75
Benzoic Acid	ND		ug/l	50	1.0
Benzyl Alcohol	ND		ug/l	2.0	0.68
Carbazole	ND		ug/l	2.0	0.37
Pyridine	ND		ug/l	5.0	0.31
Benzaldehyde	ND		ug/l	5.0	0.99
Caprolactam	ND		ug/l	10	0.39
Atrazine	ND		ug/l	10	0.79
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.59

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/29/15 09:20
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:09

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG806891-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		21-120
Phenol-d6	24		10-120
Nitrobenzene-d5	49		23-120
2-Fluorobiphenyl	50		15-120
2,4,6-Tribromophenol	46		10-120
4-Terphenyl-d14	61		41-149

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 07/29/15 09:57
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:12

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG806893-1					
Acenaphthene	ND		ug/l	0.20	0.04
2-Chloronaphthalene	ND		ug/l	0.20	0.04
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.04
Naphthalene	ND		ug/l	0.20	0.04
Benzo(a)anthracene	ND		ug/l	0.20	0.02
Benzo(a)pyrene	ND		ug/l	0.20	0.04
Benzo(b)fluoranthene	ND		ug/l	0.20	0.02
Benzo(k)fluoranthene	ND		ug/l	0.20	0.04
Chrysene	ND		ug/l	0.20	0.04
Acenaphthylene	ND		ug/l	0.20	0.04
Anthracene	ND		ug/l	0.20	0.04
Benzo(ghi)perylene	ND		ug/l	0.20	0.04
Fluorene	ND		ug/l	0.20	0.04
Phenanthrene	ND		ug/l	0.20	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.04
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.04
Pyrene	ND		ug/l	0.20	0.04
2-Methylnaphthalene	ND		ug/l	0.20	0.05
Pentachlorophenol	ND		ug/l	0.80	0.22
Hexachlorobenzene	ND		ug/l	0.80	0.03
Hexachloroethane	ND		ug/l	0.80	0.03

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 07/29/15 09:57
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:12

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG806893-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	22		21-120
Phenol-d6	17		10-120
Nitrobenzene-d5	35		23-120
2-Fluorobiphenyl	43		15-120
2,4,6-Tribromophenol	46		10-120
4-Terphenyl-d14	47		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30-INCH COKE GAS LINE

Project Number: 0071-013-125

Lab Number: L1517610

Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG806891-2 WG806891-3								
Acenaphthene	63		73		37-111	15		30
1,2,4-Trichlorobenzene	56		63		39-98	12		30
Benzidine	**6**	Q	26		10-66	**124**	Q	30
n-Nitrosodimethylamine	36		40		22-100	11		30
Hexachlorobenzene	65		76		40-140	16		30
Bis(2-chloroethyl)ether	64		73		40-140	13		30
2-Chloronaphthalene	62		73		40-140	16		30
1,2-Dichlorobenzene	55		60		40-140	9		30
1,3-Dichlorobenzene	52		58		40-140	11		30
1,4-Dichlorobenzene	54		59		36-97	9		30
3,3'-Dichlorobenzidine	66		79		40-140	18		30
2,4-Dinitrotoluene	67		78		24-96	15		30
2,6-Dinitrotoluene	67		79		40-140	16		30
Azobenzene	67		78		40-140	15		30
Fluoranthene	70		80		40-140	13		30
4-Chlorophenyl phenyl ether	66		76		40-140	14		30
4-Bromophenyl phenyl ether	68		78		40-140	14		30
Bis(2-chloroisopropyl)ether	64		72		40-140	12		30
Bis(2-chloroethoxy)methane	67		77		40-140	14		30
Hexachlorobutadiene	53		59		40-140	11		30
Hexachlorocyclopentadiene	84		90		40-140	7		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG806891-2 WG806891-3								
Hexachloroethane	54		59		40-140	9		30
Isophorone	67		78		40-140	15		30
Naphthalene	58		66		40-140	13		30
Nitrobenzene	68		78		40-140	14		30
NitrosoDiPhenylAmine(NDPA)/DPA	69		80		40-140	15		30
n-Nitrosodi-n-propylamine	70		80		29-132	13		30
Bis(2-Ethylhexyl)phthalate	69		75		40-140	8		30
Butyl benzyl phthalate	62		71		40-140	14		30
Di-n-butylphthalate	69		81		40-140	16		30
Di-n-octylphthalate	63		70		40-140	11		30
Diethyl phthalate	71		84		40-140	17		30
Dimethyl phthalate	70		82		40-140	16		30
Benzo(a)anthracene	67		80		40-140	18		30
Benzo(a)pyrene	59		68		40-140	14		30
Benzo(b)fluoranthene	63		79		40-140	23		30
Benzo(k)fluoranthene	65		72		40-140	10		30
Chrysene	69		77		40-140	11		30
Acenaphthylene	68		78		45-123	14		30
Anthracene	76		88		40-140	15		30
Benzo(ghi)perylene	57		66		40-140	15		30
Fluorene	68		79		40-140	15		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG806891-2 WG806891-3								
Phenanthrene	67		75		40-140	11		30
Dibenzo(a,h)anthracene	57		66		40-140	15		30
Indeno(1,2,3-cd)Pyrene	57		65		40-140	13		30
Pyrene	69		80		26-127	15		30
Biphenyl	65		75		54-104	14		30
Aniline	**26**	Q	**38**	Q	40-140	**38**	Q	30
4-Chloroaniline	54		69		40-140	24		30
2-Nitroaniline	67		79		52-143	16		30
3-Nitroaniline	54		67		25-145	21		30
4-Nitroaniline	67		79		51-143	16		30
Dibenzofuran	65		75		40-140	14		30
2-Methylnaphthalene	62		72		40-140	15		30
1,2,4,5-Tetrachlorobenzene	59		68		2-134	14		30
Acetophenone	67		77		39-129	14		30
2,4,6-Trichlorophenol	65		74		30-130	13		30
P-Chloro-M-Cresol	70		81		23-97	15		30
2-Chlorophenol	62		70		27-123	12		30
2,4-Dichlorophenol	70		80		30-130	13		30
2,4-Dimethylphenol	68		79		30-130	15		30
2-Nitrophenol	66		77		30-130	15		30
4-Nitrophenol	42		49		10-80	15		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG806891-2 WG806891-3								
2,4-Dinitrophenol	64		76		20-130	17		30
4,6-Dinitro-o-cresol	66		76		20-164	14		30
Pentachlorophenol	66		74		9-103	11		30
Phenol	35		40		12-110	13		30
2-Methylphenol	59		67		30-130	13		30
3-Methylphenol/4-Methylphenol	58		69		30-130	17		30
2,4,5-Trichlorophenol	67		79		30-130	16		30
Benzoic Acid	29		36		10-110	22		30
Benzyl Alcohol	52		62		15-110	18		30
Carbazole	70		81		55-144	15		30
Pyridine	12		17		10-66	**34**	Q	30
Benzaldehyde	80		92		40-140	14		30
Caprolactam	16		22		10-130	**32**	Q	30
Atrazine	83		97		40-140	16		30
2,3,4,6-Tetrachlorophenol	66		75		54-145	13		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30-INCH COKE GAS LINE

Project Number: 0071-013-125

Lab Number: L1517610

Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG806891-2 WG806891-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	46		51		21-120
Phenol-d6	34		39		10-120
Nitrobenzene-d5	70		81		23-120
2-Fluorobiphenyl	66		75		15-120
2,4,6-Tribromophenol	67		77		10-120
4-Terphenyl-d14	67		78		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG806893-2 WG806893-3								
Acenaphthene	75		63		37-111	17		40
2-Chloronaphthalene	68		63		40-140	8		40
Fluoranthene	79		70		40-140	12		40
Hexachlorobutadiene	64		57		40-140	12		40
Naphthalene	68		59		40-140	14		40
Benzo(a)anthracene	86		75		40-140	14		40
Benzo(a)pyrene	82		71		40-140	14		40
Benzo(b)fluoranthene	86		74		40-140	15		40
Benzo(k)fluoranthene	75		65		40-140	14		40
Chrysene	80		68		40-140	16		40
Acenaphthylene	75		68		40-140	10		40
Anthracene	79		68		40-140	15		40
Benzo(ghi)perylene	77		68		40-140	12		40
Fluorene	79		67		40-140	16		40
Phenanthrene	76		66		40-140	14		40
Dibenzo(a,h)anthracene	81		69		40-140	16		40
Indeno(1,2,3-cd)Pyrene	82		71		40-140	14		40
Pyrene	82		70		26-127	16		40
2-Methylnaphthalene	68		61		40-140	11		40
Pentachlorophenol	75		66		9-103	13		40
Hexachlorobenzene	82		70		40-140	16		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30-INCH COKE GAS LINE

Project Number: 0071-013-125

Lab Number: L1517610

Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG806893-2 WG806893-3								
Hexachloroethane	69		53		40-140	26		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	46		36		21-120
Phenol-d6	38		29		10-120
Nitrobenzene-d5	78		58		23-120
2-Fluorobiphenyl	80		69		15-120
2,4,6-Tribromophenol	94		73		10-120
4-Terphenyl-d14	88		70		41-149

PCBS

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-01
Client ID: PRE CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 07/29/15 09:13
Analyst: JT

Date Collected: 07/28/15 10:18
Date Received: 07/28/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/29/15
Cleanup Method: EPA 3660B
Cleanup Date: 07/29/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	54		30-150	B
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	45		30-150	A

Project Name: 30-INCH COKE GAS LINE **Lab Number:** L1517610

Project Number: 0071-013-125 **Report Date:** 07/29/15

SAMPLE RESULTS

Lab ID: L1517610-02
Client ID: POST CARBON-PILOT TEST
Sample Location: TECUMSEH
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 07/29/15 09:29
Analyst: JT

Date Collected: 07/28/15 12:15
Date Received: 07/28/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/29/15
Cleanup Method: EPA 3660B
Cleanup Date: 07/29/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	71		30-150	B
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	63		30-150	A

Project Name: 30-INCH COKE GAS LINE

Project Number: 0071-013-125

Lab Number: L1517610

Report Date: 07/29/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/29/15 09:45
Analyst: JT

Extraction Method: EPA 3510C
Extraction Date: 07/29/15 03:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/29/15
Cleanup Method: EPA 3660B
Cleanup Date: 07/29/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG806887-1						
Aroclor 1016	ND		ug/l	0.083	0.055	A
Aroclor 1221	ND		ug/l	0.083	0.053	A
Aroclor 1232	ND		ug/l	0.083	0.031	A
Aroclor 1242	ND		ug/l	0.083	0.060	A
Aroclor 1248	ND		ug/l	0.083	0.051	A
Aroclor 1254	ND		ug/l	0.083	0.034	A
Aroclor 1262	ND		ug/l	0.083	0.029	A
Aroclor 1268	ND		ug/l	0.083	0.038	A
PCBs, Total	0.095		ug/l	0.083	0.029	A
Aroclor 1260	0.095		ug/l	0.083	0.032	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	B
Decachlorobiphenyl	70		30-150	B
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	61		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30-INCH COKE GAS LINE

Project Number: 0071-013-125

Lab Number: L1517610

Report Date: 07/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG806887-2 WG806887-3									
Aroclor 1016	74		78		40-140	6		50	A
Aroclor 1260	68		74		40-140	9		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		63		30-150	B
Decachlorobiphenyl	70		79		30-150	B
2,4,5,6-Tetrachloro-m-xylene	58		62		30-150	A
Decachlorobiphenyl	65		71		30-150	A

Project Name: 30-INCH COKE GAS LINE
Project Number: 0071-013-125

Lab Number: L1517610
Report Date: 07/29/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1517610-01A	Vial HCl preserved	A	N/A	5.4	Y	Absent	NYTCL-8260(14)
L1517610-01B	Vial HCl preserved	A	N/A	5.4	Y	Absent	NYTCL-8260(14)
L1517610-01C	Vial HCl preserved	A	N/A	5.4	Y	Absent	NYTCL-8260(14)
L1517610-01D	Amber 1000ml unpreserved	A	7	5.4	Y	Absent	NYTCL-8082-1200ML(7)
L1517610-01E	Amber 1000ml unpreserved	A	7	5.4	Y	Absent	NYTCL-8082-1200ML(7)
L1517610-01F	Amber 1000ml unpreserved	A	7	5.4	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1517610-01G	Amber 1000ml unpreserved	A	7	5.4	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1517610-02A	Vial HCl preserved	A	N/A	5.4	Y	Absent	NYTCL-8260(14)
L1517610-02B	Vial HCl preserved	A	N/A	5.4	Y	Absent	NYTCL-8260(14)
L1517610-02C	Vial HCl preserved	A	N/A	5.4	Y	Absent	NYTCL-8260(14)
L1517610-02D	Amber 1000ml unpreserved	A	7	5.4	Y	Absent	NYTCL-8082-1200ML(7)
L1517610-02E	Amber 1000ml unpreserved	A	7	5.4	Y	Absent	NYTCL-8082-1200ML(7)
L1517610-02F	Amber 1000ml unpreserved	A	7	5.4	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1517610-02G	Amber 1000ml unpreserved	A	7	5.4	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1517610-03A	Vial HCl preserved	A	N/A	5.4	Y	Absent	NYTCL-8260(14)
L1517610-03B	Vial HCl preserved	A	N/A	5.4	Y	Absent	NYTCL-8260(14)

Container Comments

L1517610-01G

L1517610-02F

*Values in parentheses indicate holding time in days

Project Name:	30-INCH COKE GAS LINE	**Lab Number:**	L1517610
Project Number:	0071-013-125	**Report Date:**	07/29/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	30-INCH COKE GAS LINE	**Lab Number:**	L1517610
Project Number:	0071-013-125	**Report Date:**	07/29/15

Data Qualifiers

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	30-INCH COKE GAS LINE	**Lab Number:**	L1517610
Project Number:	0071-013-125	**Report Date:**	07/29/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab 7/29/15

ALPHA Job # L1517610

Client Information

Client: Benchmark Environmental
Address: 2558 Hamburg Turnpike,Ste300
Buffalo, NY 14218
Phone: 716-856-0599
Fax:
Email: tforbes@benchmarkturnkey.com

Project Information

Project Name: 30"-Inch Coke GAS Line
Project Location: Tecumseh
Project #
(Use Project name as Project #) ☐
Project Manager: ~~Candace Fox~~ Tom Forbes
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☑ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☑ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other: NA

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

24 Hour TAT

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL-VOC CP-51	TCL SVOC+BNA	PCBs	Sample Specific Comments	Total Bottles
17610 -01	Pre Carbon - Pilot Test	7/28/15	1618	WATER	MK	x	x	x		7
02	Post Carbon - Pilot Test	~~7/28/15~~ 7/28/15	1215	WATER	RLO	x	x	x		7
				WATER		x	x	x		7
03	Trip Blank			WATER		x				2

Container Type: A A
Preservative: A A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	1400 7/28/15	AHL	7/28/15 1631
AHL	7/28/15 1815		7/28/15 1815
	7/28/15 2330		7/28/15 2330
	7/28/15 2330		7/28/15 2330
	7/29/15 0100	AHL	7/29/15 0100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1522765
Client:	Turnkey Environmental Restoration, LLC 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Tom Forbes
Phone:	(716) 856-0599
Project Name:	30" COKE GAS LINE PROJECT
Project Number:	0071-013-125
Report Date:	09/17/15

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1522765-01	BASELINE TREATED SAMPLE	WATER	TECUMSEH LACKAWANNA	09/15/15 10:15	09/15/15
L1522765-02	TRIP BLANK	WATER	TECUMSEH LACKAWANNA	09/15/15 00:00	09/15/15

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765
Project Number: 0071-013-125 **Report Date:** 09/17/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	30" COKE GAS LINE PROJECT	**Lab Number:**	L1522765
Project Number:	0071-013-125	**Report Date:**	09/17/15

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

A Trip Blank was received in the laboratory but not listed on the Chain of Custody. At the client's request, the Trip Blank was not analyzed.

Metals

The WG821746-2 LCS recoveries, associated with L1522765-01, are above the acceptance criteria for cadmium (124%) and selenium (126%); however, the associated samples are non-detect for these target analytes. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Lisa Westerlind

Title: Technical Director/Representative Date: 09/17/15

ORGANICS

VOLATILES

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

SAMPLE RESULTS

Lab ID: L1522765-01
Client ID: BASELINE TREATED SAMPLE
Sample Location: TECUMSEH LACKAWANNA
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/17/15 10:54
Analyst: PD

Date Collected: 09/15/15 10:15
Date Received: 09/15/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

SAMPLE RESULTS

Lab ID: L1522765-01 Date Collected: 09/15/15 10:15

Client ID: BASELINE TREATED SAMPLE Date Received: 09/15/15

Sample Location: TECUMSEH LACKAWANNA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

SAMPLE RESULTS

Lab ID: L1522765-01 Date Collected: 09/15/15 10:15

Client ID: BASELINE TREATED SAMPLE Date Received: 09/15/15

Sample Location: TECUMSEH LACKAWANNA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	121		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	106		70-130

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/17/15 09:58
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG822296-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/17/15 09:58
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG822296-3					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/17/15 09:58
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG822296-3					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	120		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG822296-1 WG822296-2								
Methylene chloride	98		92		70-130	6		20
1,1-Dichloroethane	117		111		70-130	5		20
Chloroform	119		112		70-130	6		20
Carbon tetrachloride	104		97		63-132	7		20
1,2-Dichloropropane	105		99		70-130	6		20
Dibromochloromethane	108		99		63-130	9		20
1,1,2-Trichloroethane	121		111		70-130	9		20
Tetrachloroethene	107		103		70-130	4		20
Chlorobenzene	107		102		75-130	5		20
Trichlorofluoromethane	150		140		62-150	7		20
1,2-Dichloroethane	103		96		70-130	7		20
1,1,1-Trichloroethane	107		101		67-130	6		20
Bromodichloromethane	101		95		67-130	6		20
trans-1,3-Dichloropropene	110		100		70-130	10		20
cis-1,3-Dichloropropene	90		84		70-130	7		20
1,1-Dichloropropene	103		98		70-130	5		20
Bromoform	106		95		54-136	11		20
1,1,2,2-Tetrachloroethane	108		98		67-130	10		20
Benzene	110		105		70-130	5		20
Toluene	119		114		70-130	4		20
Ethylbenzene	107		103		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG822296-1 WG822296-2								
Chloromethane	**57**	Q	**54**	Q	64-130	5		20
Bromomethane	73		73		39-139	0		20
Vinyl chloride	88		82		55-140	7		20
Chloroethane	132		121		55-138	9		20
1,1-Dichloroethene	113		108		61-145	5		20
trans-1,2-Dichloroethene	107		102		70-130	5		20
Trichloroethene	108		102		70-130	6		20
1,2-Dichlorobenzene	95		90		70-130	5		20
1,3-Dichlorobenzene	99		94		70-130	5		20
1,4-Dichlorobenzene	103		97		70-130	6		20
Methyl tert butyl ether	92		85		63-130	8		20
p/m-Xylene	107		103		70-130	4		20
o-Xylene	99		95		70-130	4		20
cis-1,2-Dichloroethene	105		100		70-130	5		20
Dibromomethane	100		91		70-130	9		20
1,2,3-Trichloropropane	124		114		64-130	8		20
Acrylonitrile	99		88		70-130	12		20
Isopropyl Ether	96		91		70-130	5		20
tert-Butyl Alcohol	71		**69**	Q	70-130	3		20
Styrene	100		94		70-130	6		20
Dichlorodifluoromethane	63		60		36-147	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG822296-1 WG822296-2								
Acetone	98		83		58-148	17		20
Carbon disulfide	109		102		51-130	7		20
2-Butanone	103		89		63-138	15		20
Vinyl acetate	76		**69**	Q	70-130	10		20
4-Methyl-2-pentanone	68		60		59-130	13		20
2-Hexanone	70		64		57-130	9		20
Acrolein	74		69		40-160	7		20
Bromochloromethane	107		99		70-130	8		20
2,2-Dichloropropane	100		95		63-133	5		20
1,2-Dibromoethane	102		94		70-130	8		20
1,3-Dichloropropane	116		107		70-130	8		20
1,1,1,2-Tetrachloroethane	116		107		64-130	8		20
Bromobenzene	93		88		70-130	6		20
n-Butylbenzene	86		86		53-136	0		20
sec-Butylbenzene	77		80		70-130	4		20
tert-Butylbenzene	76		76		70-130	0		20
o-Chlorotoluene	106		102		70-130	4		20
p-Chlorotoluene	98		94		70-130	4		20
1,2-Dibromo-3-chloropropane	102		97		41-144	5		20
Hexachlorobutadiene	82		83		63-130	1		20
Isopropylbenzene	87		87		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG822296-1 WG822296-2								
p-Isopropyltoluene	80		80		70-130	0		20
Naphthalene	87		81		70-130	7		20
n-Propylbenzene	91		90		69-130	1		20
1,2,3-Trichlorobenzene	107		103		70-130	4		20
1,2,4-Trichlorobenzene	109		104		70-130	5		20
1,3,5-Trimethylbenzene	98		96		64-130	2		20
1,2,4-Trimethylbenzene	95		92		70-130	3		20
Methyl Acetate	98		89		70-130	10		20
Ethyl Acetate	92		83		70-130	10		20
Cyclohexane	96		94		70-130	2		20
Ethyl-Tert-Butyl-Ether	87		82		70-130	6		20
Tertiary-Amyl Methyl Ether	83		77		66-130	8		20
1,4-Dioxane	93		101		56-162	8		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	116		112		70-130	4		20
p-Diethylbenzene	78		78		70-130	0		20
p-Ethyltoluene	88		87		70-130	1		20
1,2,4,5-Tetramethylbenzene	96		92		70-130	4		20
Ethyl ether	133		122		59-134	9		20
trans-1,4-Dichloro-2-butene	**64**	Q	**60**	Q	70-130	6		20
Methyl cyclohexane	94		94		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG822296-1 WG822296-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		98		70-130
Toluene-d8	120		120		70-130
4-Bromofluorobenzene	89		90		70-130
Dibromofluoromethane	108		107		70-130

SEMIVOLATILES

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

SAMPLE RESULTS

Lab ID:	L1522765-01	Date Collected:	09/15/15 10:15
Client ID:	BASELINE TREATED SAMPLE	Date Received:	09/15/15
Sample Location:	TECUMSEH LACKAWANNA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/16/15 06:34
Analytical Date:	09/16/15 23:12		
Analyst:	AS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.28	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Hexachlorobenzene	ND		ug/l	2.0	0.40	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
2-Chloronaphthalene	ND		ug/l	2.0	0.46	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Fluoranthene	ND		ug/l	2.0	0.40	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorobutadiene	ND		ug/l	2.0	0.42	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Hexachloroethane	ND		ug/l	2.0	0.30	1
Isophorone	ND		ug/l	5.0	0.79	1
Naphthalene	0.63	J	ug/l	2.0	0.33	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

SAMPLE RESULTS

Lab ID: L1522765-01 Date Collected: 09/15/15 10:15

Client ID: BASELINE TREATED SAMPLE Date Received: 09/15/15

Sample Location: TECUMSEH LACKAWANNA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.66	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.37	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.30	1
Chrysene	ND		ug/l	2.0	0.30	1
Acenaphthylene	ND		ug/l	2.0	0.37	1
Anthracene	ND		ug/l	2.0	0.20	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.57	1
Fluorene	ND		ug/l	2.0	0.32	1
Phenanthrene	ND		ug/l	2.0	0.23	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.44	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	2.0	0.43	1
Pyrene	ND		ug/l	2.0	0.52	1
Biphenyl	ND		ug/l	2.0	0.24	1
4-Chloroaniline	ND		ug/l	5.0	0.84	1
2-Nitroaniline	ND		ug/l	5.0	0.96	1
3-Nitroaniline	ND		ug/l	5.0	0.67	1
4-Nitroaniline	ND		ug/l	5.0	0.83	1
Dibenzofuran	ND		ug/l	2.0	0.22	1
2-Methylnaphthalene	ND		ug/l	2.0	0.36	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36	1
Acetophenone	ND		ug/l	5.0	0.43	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Pentachlorophenol	ND		ug/l	10	3.2	1
Phenol	ND		ug/l	5.0	0.27	1
2-Methylphenol	ND		ug/l	5.0	0.70	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75	1
Benzoic Acid	ND		ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.68	1
Carbazole	ND		ug/l	2.0	0.37	1

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

SAMPLE RESULTS

Lab ID: L1522765-01 Date Collected: 09/15/15 10:15

Client ID: BASELINE TREATED SAMPLE Date Received: 09/15/15

Sample Location: TECUMSEH LACKAWANNA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		21-120
Phenol-d6	54		10-120
Nitrobenzene-d5	95		23-120
2-Fluorobiphenyl	88		15-120
2,4,6-Tribromophenol	102		10-120
4-Terphenyl-d14	100		41-149

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/16/15 18:10
Analyst: AS

Extraction Method: EPA 3510C
Extraction Date: 09/16/15 06:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG821704-1					
Acenaphthene	ND		ug/l	2.0	0.28
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Hexachlorobenzene	ND		ug/l	2.0	0.40
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
2-Chloronaphthalene	ND		ug/l	2.0	0.46
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
Fluoranthene	ND		ug/l	2.0	0.40
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorobutadiene	ND		ug/l	2.0	0.42
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Hexachloroethane	ND		ug/l	2.0	0.30
Isophorone	ND		ug/l	5.0	0.79
Naphthalene	ND		ug/l	2.0	0.33
Nitrobenzene	ND		ug/l	2.0	0.40
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/16/15 18:10
Analyst: AS

Extraction Method: EPA 3510C
Extraction Date: 09/16/15 06:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG821704-1					
Dimethyl phthalate	ND		ug/l	5.0	0.33
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.66
Benzo(b)fluoranthene	ND		ug/l	2.0	0.37
Benzo(k)fluoranthene	ND		ug/l	2.0	0.30
Chrysene	ND		ug/l	2.0	0.30
Acenaphthylene	ND		ug/l	2.0	0.37
Anthracene	ND		ug/l	2.0	0.20
Benzo(ghi)perylene	ND		ug/l	2.0	0.57
Fluorene	ND		ug/l	2.0	0.32
Phenanthrene	ND		ug/l	2.0	0.23
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.44
Indeno(1,2,3-cd)Pyrene	ND		ug/l	2.0	0.43
Pyrene	ND		ug/l	2.0	0.52
Biphenyl	ND		ug/l	2.0	0.24
4-Chloroaniline	ND		ug/l	5.0	0.84
2-Nitroaniline	ND		ug/l	5.0	0.96
3-Nitroaniline	ND		ug/l	5.0	0.67
4-Nitroaniline	ND		ug/l	5.0	0.83
Dibenzofuran	ND		ug/l	2.0	0.22
2-Methylnaphthalene	ND		ug/l	2.0	0.36
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36
Acetophenone	ND		ug/l	5.0	0.43
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125
Lab Number: L1522765
Report Date: 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/16/15 18:10
Analyst: AS

Extraction Method: EPA 3510C
Extraction Date: 09/16/15 06:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG821704-1					
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4
Pentachlorophenol	ND		ug/l	10	3.2
Phenol	ND		ug/l	5.0	0.27
2-Methylphenol	ND		ug/l	5.0	0.70
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75
Benzoic Acid	ND		ug/l	50	1.0
Benzyl Alcohol	ND		ug/l	2.0	0.68
Carbazole	ND		ug/l	2.0	0.37

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	96		10-120
4-Terphenyl-d14	97		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG821704-2 WG821704-3								
Acenaphthene	82		86		37-111	5		30
1,2,4-Trichlorobenzene	76		77		39-98	1		30
Hexachlorobenzene	92		99		40-140	7		30
Bis(2-chloroethyl)ether	76		77		40-140	1		30
2-Chloronaphthalene	82		87		40-140	6		30
1,2-Dichlorobenzene	72		71		40-140	1		30
1,3-Dichlorobenzene	70		69		40-140	1		30
1,4-Dichlorobenzene	70		70		36-97	0		30
3,3'-Dichlorobenzidine	81		89		40-140	9		30
2,4-Dinitrotoluene	92		**98**	Q	24-96	6		30
2,6-Dinitrotoluene	90		96		40-140	6		30
Fluoranthene	89		96		40-140	8		30
4-Chlorophenyl phenyl ether	83		88		40-140	6		30
4-Bromophenyl phenyl ether	92		99		40-140	7		30
Bis(2-chloroisopropyl)ether	91		92		40-140	1		30
Bis(2-chloroethoxy)methane	82		85		40-140	4		30
Hexachlorobutadiene	78		80		40-140	3		30
Hexachlorocyclopentadiene	68		72		40-140	6		30
Hexachloroethane	74		72		40-140	3		30
Isophorone	83		87		40-140	5		30
Naphthalene	75		77		40-140	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG821704-2 WG821704-3								
Nitrobenzene	87		90		40-140	3		30
NitrosoDiPhenylAmine(NDPA)/DPA	85		91		40-140	7		30
n-Nitrosodi-n-propylamine	82		84		29-132	2		30
Bis(2-Ethylhexyl)phthalate	98		103		40-140	5		30
Butyl benzyl phthalate	95		102		40-140	7		30
Di-n-butylphthalate	88		95		40-140	8		30
Di-n-octylphthalate	100		107		40-140	7		30
Diethyl phthalate	90		94		40-140	4		30
Dimethyl phthalate	89		94		40-140	5		30
Benzo(a)anthracene	87		96		40-140	10		30
Benzo(a)pyrene	90		96		40-140	6		30
Benzo(b)fluoranthene	92		94		40-140	2		30
Benzo(k)fluoranthene	83		93		40-140	11		30
Chrysene	86		93		40-140	8		30
Acenaphthylene	86		90		45-123	5		30
Anthracene	84		89		40-140	6		30
Benzo(ghi)perylene	88		97		40-140	10		30
Fluorene	86		90		40-140	5		30
Phenanthrene	82		88		40-140	7		30
Dibenzo(a,h)anthracene	93		101		40-140	8		30
Indeno(1,2,3-cd)Pyrene	96		105		40-140	9		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG821704-2 WG821704-3								
Pyrene	88		94		26-127	7		30
Biphenyl	82		87		54-104	6		30
4-Chloroaniline	88		92		40-140	4		30
2-Nitroaniline	95		100		52-143	5		30
3-Nitroaniline	73		79		25-145	8		30
4-Nitroaniline	94		102		51-143	8		30
Dibenzofuran	81		87		40-140	7		30
2-Methylnaphthalene	81		84		40-140	4		30
1,2,4,5-Tetrachlorobenzene	82		85		2-134	4		30
Acetophenone	83		86		39-129	4		30
2,4,6-Trichlorophenol	95		100		30-130	5		30
P-Chloro-M-Cresol	91		96		23-97	5		30
2-Chlorophenol	77		79		27-123	3		30
2,4-Dichlorophenol	88		92		30-130	4		30
2,4-Dimethylphenol	80		86		30-130	7		30
2-Nitrophenol	88		91		30-130	3		30
4-Nitrophenol	62		75		10-80	19		30
2,4-Dinitrophenol	121		127		20-130	5		30
4,6-Dinitro-o-cresol	112		118		20-164	5		30
Pentachlorophenol	84		90		9-103	7		30
Phenol	32		34		12-110	6		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG821704-2 WG821704-3								
2-Methylphenol	70		74		30-130	6		30
3-Methylphenol/4-Methylphenol	64		68		30-130	6		30
2,4,5-Trichlorophenol	91		97		30-130	6		30
Benzoic Acid	45		48		10-110	6		30
Benzyl Alcohol	69		72		15-110	4		30
Carbazole	87		94		55-144	8		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	50		50		21-120
Phenol-d6	35		36		10-120
Nitrobenzene-d5	91		92		23-120
2-Fluorobiphenyl	83		85		15-120
2,4,6-Tribromophenol	92		97		10-120
4-Terphenyl-d14	87		91		41-149

PCBS

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

SAMPLE RESULTS

Lab ID:	L1522765-01	Date Collected:	09/15/15 10:15
Client ID:	BASELINE TREATED SAMPLE	Date Received:	09/15/15
Sample Location:	TECUMSEH LACKAWANNA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/16/15 05:18
Analytical Date:	09/16/15 15:52	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	09/16/15
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/16/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	46		30-150	B
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	50		30-150	A

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 09/16/15 16:06
Analyst: JT

Extraction Method: EPA 3510C
Extraction Date: 09/16/15 05:18
Cleanup Method: EPA 3665A
Cleanup Date: 09/16/15
Cleanup Method: EPA 3660B
Cleanup Date: 09/16/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG821685-1						
Aroclor 1016	ND		ug/l	0.083	0.055	A
Aroclor 1221	ND		ug/l	0.083	0.053	A
Aroclor 1232	ND		ug/l	0.083	0.031	A
Aroclor 1242	ND		ug/l	0.083	0.060	A
Aroclor 1248	ND		ug/l	0.083	0.051	A
Aroclor 1254	ND		ug/l	0.083	0.034	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.029	A
Aroclor 1268	ND		ug/l	0.083	0.038	A
PCBs, Total	ND		ug/l	0.083	0.029	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	56		30-150	B
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	62		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG821685-2 WG821685-3									
Aroclor 1016	86		107		40-140	22		50	A
Aroclor 1260	78		97		40-140	22		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		89		30-150	B
Decachlorobiphenyl	56		72		30-150	B
2,4,5,6-Tetrachloro-m-xylene	66		89		30-150	A
Decachlorobiphenyl	61		78		30-150	A

PESTICIDES

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

SAMPLE RESULTS

Lab ID:	L1522765-01	Date Collected:	09/15/15 10:15
Client ID:	BASELINE TREATED SAMPLE	Date Received:	09/15/15
Sample Location:	TECUMSEH LACKAWANNA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/16/15 05:16
Analytical Date:	09/16/15 19:50	Cleanup Method:	EPA 3620B
Analyst:	KE	Cleanup Date:	09/16/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	92		30-150	A
Decachlorobiphenyl	84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	65		30-150	B

Project Name: 30" COKE GAS LINE PROJECT
Lab Number: L1522765
Project Number: 0071-013-125
Report Date: 09/17/15

SAMPLE RESULTS

Lab ID: L1522765-01
Client ID: BASELINE TREATED SAMPLE
Sample Location: TECUMSEH LACKAWANNA
Matrix: Water
Analytical Method: 1,8151A
Analytical Date: 09/17/15 10:43
Analyst: EC

Date Collected: 09/15/15 10:15
Date Received: 09/15/15
Field Prep: Not Specified
Extraction Method: EPA 8151A
Extraction Date: 09/16/15 08:20

Methylation Date: 09/16/15 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	46		30-150	A
DCAA	43		30-150	B

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125
Lab Number: L1522765
Report Date: 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 09/16/15 19:03
Analyst: KE

Extraction Method: EPA 3510C
Extraction Date: 09/16/15 05:16
Cleanup Method: EPA 3620B
Cleanup Date: 09/16/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01 Batch: WG821684-1						
Delta-BHC	ND		ug/l	0.020	0.005	A
Lindane	ND		ug/l	0.020	0.004	A
Alpha-BHC	ND		ug/l	0.020	0.004	A
Beta-BHC	ND		ug/l	0.020	0.006	A
Heptachlor	ND		ug/l	0.020	0.003	A
Aldrin	ND		ug/l	0.020	0.002	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	A
Endrin	ND		ug/l	0.040	0.004	A
Endrin ketone	ND		ug/l	0.040	0.005	A
Dieldrin	ND		ug/l	0.040	0.004	A
4,4'-DDE	ND		ug/l	0.040	0.004	A
4,4'-DDD	ND		ug/l	0.040	0.005	A
4,4'-DDT	ND		ug/l	0.040	0.004	A
Endosulfan I	ND		ug/l	0.020	0.003	A
Endosulfan II	ND		ug/l	0.040	0.005	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	A
Methoxychlor	ND		ug/l	0.200	0.007	A
Toxaphene	ND		ug/l	0.200	0.063	A
cis-Chlordane	ND		ug/l	0.020	0.007	A
trans-Chlordane	ND		ug/l	0.020	0.006	A
Chlordane	ND		ug/l	0.200	0.046	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	99		30-150	A
Decachlorobiphenyl	100		30-150	A
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	128		30-150	B

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125
Lab Number: L1522765
Report Date: 09/17/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 09/17/15 11:04
Analyst: EC

Extraction Method: EPA 8151A
Extraction Date: 09/16/15 08:20

Methylation Date: 09/16/15 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01 Batch: WG821734-1						
2,4-D	ND		ug/l	10.0	0.498	A
2,4,5-T	ND		ug/l	2.00	0.531	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	82		30-150	A
DCAA	85		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01 Batch: WG821684-2 WG821684-3									
Delta-BHC	80		83		30-150	3		20	A
Lindane	100		103		30-150	3		20	A
Alpha-BHC	109		112		30-150	3		20	A
Beta-BHC	86		89		30-150	3		20	A
Heptachlor	112		114		30-150	2		20	A
Aldrin	103		105		30-150	2		20	A
Heptachlor epoxide	101		104		30-150	3		20	A
Endrin	118		120		30-150	2		20	A
Endrin ketone	97		101		30-150	4		20	A
Dieldrin	113		116		30-150	3		20	A
4,4'-DDE	108		111		30-150	3		20	A
4,4'-DDD	109		113		30-150	4		20	A
4,4'-DDT	133		135		30-150	1		20	A
Endosulfan I	111		109		30-150	2		20	A
Endosulfan II	104		107		30-150	3		20	A
Endosulfan sulfate	93		98		30-150	5		20	A
Methoxychlor	105		107		30-150	2		20	A
cis-Chlordane	101		107		30-150	6		20	A
trans-Chlordane	107		109		30-150	2		20	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01 Batch: WG821684-2 WG821684-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	99		95		30-150	A
Decachlorobiphenyl	100		98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	98		96		30-150	B
Decachlorobiphenyl	122		124		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01 Batch: WG821734-2 WG821734-3									
2,4-D	96		100		30-150	4		25	A
2,4,5-T	97		104		30-150	7		25	A
2,4,5-TP (Silvex)	92		102		30-150	10		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	77		86		30-150	A
DCAA	101		98		30-150	B

METALS

Project Name: 30" COKE GAS LINE PROJECT
Lab Number: L1522765
Project Number: 0071-013-125
Report Date: 09/17/15

SAMPLE RESULTS

Lab ID: L1522765-01
Client ID: BASELINE TREATED SAMPLE
Sample Location: TECUMSEH LACKAWANNA
Matrix: Water
Date Collected: 09/15/15 10:15
Date Received: 09/15/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	0.01389		mg/l	0.00050	0.00012	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Barium, Total	0.1000		mg/l	0.00050	0.00006	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Chromium, Total	0.00577		mg/l	0.00100	0.00025	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Copper, Total	0.03032		mg/l	0.00100	0.00026	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Lead, Total	0.00949		mg/l	0.00100	0.00012	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Manganese, Total	2.146		mg/l	0.02000	0.00604	20	09/16/15 09:40	09/17/15 08:17	EPA 3005A	1,6020A	KL
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/16/15 10:43	09/16/15 20:18	EPA 7470A	1,7470A	EA
Nickel, Total	0.00152		mg/l	0.00050	0.00008	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Selenium, Total	ND		mg/l	0.00500	0.00100	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL
Zinc, Total	0.00808	J	mg/l	0.01000	0.00256	1	09/16/15 09:40	09/16/15 19:47	EPA 3005A	1,6020A	KL

Project Name: 30" COKE GAS LINE PROJECT **Lab Number:** L1522765

Project Number: 0071-013-125 **Report Date:** 09/17/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG821746-1										
Arsenic, Total	ND		mg/l	0.00050	0.00012	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Barium, Total	ND		mg/l	0.00050	0.00006	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Chromium, Total	ND		mg/l	0.00100	0.00025	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Copper, Total	ND		mg/l	0.00100	0.00026	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Lead, Total	ND		mg/l	0.00100	0.00012	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Manganese, Total	0.00091	J	mg/l	0.00100	0.00030	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Nickel, Total	0.00014	J	mg/l	0.00050	0.00008	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Selenium, Total	ND		mg/l	0.00500	0.00100	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL
Zinc, Total	ND		mg/l	0.01000	0.00256	1	09/16/15 09:40	09/17/15 07:44	1,6020A	KL

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG821815-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/16/15 10:43	09/16/15 20:11	1,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG821746-2								
Arsenic, Total	110		-		80-120	-		
Barium, Total	99		-		80-120	-		
Beryllium, Total	116		-		80-120	-		
Cadmium, Total	**124**	Q	-		80-120	-		
Chromium, Total	94		-		80-120	-		
Copper, Total	107		-		80-120	-		
Lead, Total	103		-		80-120	-		
Manganese, Total	100		-		80-120	-		
Nickel, Total	107		-		80-120	-		
Selenium, Total	**126**	Q	-		80-120	-		
Silver, Total	106		-		80-120	-		
Zinc, Total	109		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG821815-2								
Mercury, Total	120		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG821746-3 WG821746-4 QC Sample: L1522161-17 Client ID: MS Sample												
Arsenic, Total	0.00123	0.12	0.1346	111		0.1144	94		75-125	16		20
Barium, Total	0.03232	2	2.022	99		1.990	98		75-125	2		20
Beryllium, Total	ND	0.05	0.05330	107		0.05116	102		75-125	4		20
Cadmium, Total	ND	0.051	0.05836	114		0.05326	104		75-125	9		20
Chromium, Total	0.00059J	0.2	0.1994	100		0.1936	97		75-125	3		20
Copper, Total	0.00027J	0.25	0.2622	105		0.2720	109		75-125	4		20
Lead, Total	ND	0.51	0.5260	103		0.4956	97		75-125	6		20
Manganese, Total	2.532	0.5	3.084	110		3.062	106		75-125	1		20
Nickel, Total	0.00392	0.5	0.5244	104		0.5184	103		75-125	1		20
Selenium, Total	ND	0.12	0.135	112		0.111	92		75-125	20		20
Silver, Total	ND	0.05	0.05280	106		0.05150	103		75-125	2		20
Zinc, Total	0.01383	0.5	0.5678	111		0.5274	103		75-125	7		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD		RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG821746-7 WG821746-8 QC Sample: L1522795-01 Client ID: MS Sample										
Arsenic, Total	ND	0.12	0.1284	106	0.1327	110	75-125	3		20
Barium, Total	ND	2	2.082	98	2.090	98	75-125	0		20
Beryllium, Total	ND	0.05	0.05354	107	0.05298	106	75-125	1		20
Cadmium, Total	ND	0.051	0.05930	116	0.05586	110	75-125	6		20
Chromium, Total	ND	0.2	0.1935	97	0.1995	100	75-125	3		20
Copper, Total	ND	0.25	0.2680	104	0.2710	105	75-125	1		20
Lead, Total	ND	0.51	0.5246	103	0.5278	103	75-125	1		20
Manganese, Total	0.02315	0.5	0.4928	94	0.5130	98	75-125	4		20
Nickel, Total	ND	0.5	0.5368	107	0.5128	102	75-125	5		20
Selenium, Total	ND	0.12	0.103	86	0.128	107	75-125	**22**	Q	20
Silver, Total	ND	0.05	0.05222	104	0.05174	103	75-125	1		20
Zinc, Total	ND	0.5	0.4986	100	0.4892	98	75-125	2		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG821815-4 QC Sample: L1522765-01 Client ID: BASELINE TREATED SAMPLE										
Mercury, Total	ND	0.005	0.00559	112	-	-	80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG821815-3 QC Sample: L1522765-01 Client ID: BASELINE TREATED SAMPLE						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

SAMPLE RESULTS

Lab ID: L1522765-01
Client ID: BASELINE TREATED SAMPLE
Sample Location: TECUMSEH LACKAWANNA
Matrix: Water

Date Collected: 09/15/15 10:15
Date Received: 09/15/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	ND		mg/l	0.010	0.010	1	-	09/16/15 19:47	107,-	
Cyanide, Total	0.136		mg/l	0.005	0.001	1	09/16/15 15:51	09/17/15 11:21	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	09/16/15 06:50	09/16/15 07:01	1,7196A	TA

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125
Lab Number: L1522765
Report Date: 09/17/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG821687-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	09/16/15 06:50	09/16/15 07:01	1,7196A	TA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG821946-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	09/16/15 15:51	09/17/15 11:07	1,9010C/9012B	JO

Lab Control Sample Analysis

Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT

Project Number: 0071-013-125

Lab Number: L1522765

Report Date: 09/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG821687-2								
Chromium, Hexavalent	98		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG821946-2 WG821946-3								
Cyanide, Total	100		99		80-120	1		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG821687-4 QC Sample: L1522765-01 Client ID: BASELINE TREATED SAMPLE												
Chromium, Hexavalent	ND	0.1	0.099	99		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG821946-4 WG821946-5 QC Sample: L1522161-17 Client ID: MS Sample												
Cyanide, Total	0.002J	0.2	0.190	95		0.193	96		80-120	2		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG821687-3 QC Sample: L1522765-01 Client ID: BASELINE TREATED SAMPLE						
Chromium, Hexavalent	ND	ND	mg/l	NC		20

Project Name: 30" COKE GAS LINE PROJECT
Project Number: 0071-013-125

Lab Number: L1522765
Report Date: 09/17/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1522765-01A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1522765-01B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1522765-01C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1522765-01D	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8270(7)
L1522765-01E	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8270(7)
L1522765-01F	Amber 500ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8081(7)
L1522765-01G	Amber 500ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8081(7)
L1522765-01H	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8082-1200ML(7)
L1522765-01I	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8082-1200ML(7)
L1522765-01J	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	HERB-APA(7)
L1522765-01K	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	HERB-APA(7)
L1522765-01L	Plastic 250ml unpreserved	A	7	4.2	Y	Absent	HEXCR-7196(1),TRICR-CALC(1)
L1522765-01M	Plastic 250ml NaOH preserved	A	>12	4.2	Y	Absent	TCN-9010(14)
L1522765-01N	Plastic 250ml HNO3 preserved	A	<2	4.2	Y	Absent	BA-6020T(180),SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1522765-02A	Vial HCl preserved	A	N/A	4.2	Y	Absent	HOLD-8260(14)
L1522765-02B	Vial HCl preserved	A	N/A	4.2	Y	Absent	HOLD-8260(14)

Container Comments

L1522765-01N

*Values in parentheses indicate holding time in days

Project Name:	30" COKE GAS LINE PROJECT	**Lab Number:**	L1522765
Project Number:	0071-013-125	**Report Date:**	09/17/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	30" COKE GAS LINE PROJECT	**Lab Number:**	L1522765
Project Number:	0071-013-125	**Report Date:**	09/17/15

Data Qualifiers

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	30" COKE GAS LINE PROJECT	**Lab Number:**	L1522765
Project Number:	0071-013-125	**Report Date:**	09/17/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

107 Alpha Analytical - In-house calculation method.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:09171514:04

ALPHA

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 9/16/15

ALPHA Job #: L1522765

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Project Information
Project Name: 30" Coke GAS Line Project
Project Location: Tecumseh - LACKAWANNA
Project #: 0071-013-125
(Use Project name as Project #) ☐
Project Manager: Tom Forbes
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information
Client: TurnKey Env Restoration, LLC
Address: 2558 Hamburg Turnpike BUFFALO, NY 14218
Phone: 716-856-0599
Fax: 716-856-0583
Email: TForbes@benchmarkees.com

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☑ NY Part 375
☐ AWQ Standards ☑ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL VOCs 8260 + STARS	TCL SVOCs 8270	TCL Pest	TCL Herbs	PCBs	Hex Cr	Part 375 Total metals 21st	Tot CN	Sample Specific Comments	Total Bottles
22765-01	Baseline Treated sample	9/15/15	1015	W	RLD	✓	✓	✓	✓	✓	✓	✓	✓		

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/15/15 1218	[signature] AAL	9/15/15 1218
[signature]	9/15/15 1540	[signature] AAL	9/15/15 1540
[signature] AAL	9/15/15 21:15	[signature]	9/15/15 21:15
[signature]	9/16/15 0110	[signature]	9/16/15 0110
[signature]	9/16/15 0355	[signature]	9/16/15 0355

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

APPENDIX F

SCALE RECEIPTS & WASTE MANIFEST

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	190920	9	PAUL BAGLIA 602395

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/05/16	05/05/16	09:15	09:15	ZC171	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt.	73120	LB	Inbound - Charge ticket
Stored Tare Wt.	28080	LB	
Net Weight	45040	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
22.52	TON	Soil Benefit OutCo				

(CCL01)

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver RON
Generator TECUMSEH REDEVELOPMENT
Comment NY ERIE COUNTY
Hauler: <USE ONLY AT LANDFILL>

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

Dup

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	190921	9	PAUL BAGLIA 602395

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/05/16	05/05/16	09:20	09:34		

REFERENCE	ORIGIN
041416S1	CHAUTAUQUA COUNTY

Manual Gross Wt.	71260	LB
Scale 1 Tare Wt.	28600	LB
Net Weight	42660	LB

Inbound - Charge ticket

NY ERIE —

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
21.33	TON	Soil Benefit OutCo				

(CCL) 02

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785
Driver JAMES B
Generator TECUMSEH REDVLPMT

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

DUPLICATE TICKET

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

02 190972 9 CHRIS GOODWILL

05/05/16 05/05/16 12:53 12:53 ZC171

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

041416S1 ERIE COUNTY (NY)

Scale 1 Gross Wt.	68980	LB
Stored Tare Wt.	28080	LB
Net Weight	40900	LB

Inbound - Charge ticket

20.45 TON Soil Benefit OutCo

Operating hours 7:30 AM to 3:30 P.M. Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver RON
Generator 2303 HAMBURG TURNPIKE
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	190973	9	CHRIS GOODWILL

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/05/16	05/05/16	12:56	12:56		

REFERENCE	ORIGIN
041416S1	CHAUTAUQUA COUNTY

Scale 1 Gross Wt.	70580	LB
Manual Tare Wt.	28600	LB
Net Weight	41980	LB

Inbound - Charge ticket erie NY

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
20.99	TON	Soil Benefit OutCo				

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785
Driver JAMES
Generator 2303 HAMBURG TURNPIKE
Comment LACKAWANNA, NY 14218

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191059	9	KATE HILL 601425

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/06/16	05/06/16	10:13	10:13	ZC171	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt.	70340	LB	Inbound - Charge ticket
Stored Tare Wt.	28080	LB	
Net Weight	42260	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
21.13	TON	Soil Benefit OutCo				

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver RON
Generator TECUMSEH REDEVELOPMENT
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191092	9	KATE HILL 601425

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/06/16	05/06/16	13:07	13:07	ZC174	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt.	70900	LB	Inbound - Charge ticket
Stored Tare Wt.	28440	LB	
Net Weight	42460	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
21.23	TON	Soil Benefit OutCo				

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver RUDY
Generator 2303 HAMBURG TURNPIKE
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191096	9	KATE HILL 601425

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/06/16	05/06/16	13:23	13:23	ZC171	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt.	70320	LB
Stored Tare Wt.	28080	LB
Net Weight	42240	LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
21.12	TON	Soil Benefit OutCo				

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver RON
Generator TECUMSEH REDEVELOPMENT
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191138	9	KATE HILL 601425

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/09/16	05/09/16	09:02	09:02	ZC174	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Inbound - Charge ticket

Scale 1 Gross Wt.	70020	LB
Stored Tare Wt.	28440	LB
Net Weight	41580	LB

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
20.79	TON	Soil Benefit OutCo				

NET AMOUNT

TENDERED

CHANGE

CHECK NO.

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type.
Telephone (716) 985-4785

Driver RON
Generator TECUMSEH REDEVELOPMENT
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

SIGNATURE

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191139	9	KATE HILL 601425

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/09/16	05/09/16	09:05	09:05	ZC244	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt.	71460	LB	Inbound - Charge ticket
Stored Tare Wt.	29080	LB	
Net Weight	42380	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
21.19	TON	Soil Benefit OutCo				

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785
Driver RYAN
Generator TECUMSEH REDEVELOPMENT
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191196	9	CHRIS GOODWILL

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/09/16	05/09/16	12:22	12:22	ZC174	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt.	69880	LB	Inbound - Charge ticket
Stored Tare Wt.	28440	LB	
Net Weight	41440	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
20.72	TON	Soil Benefit OutCo				

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver RON
Generator TECUMSEH REDEVELOPMENT
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191197	9	CHRIS GOODWILL

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/09/16	05/09/16	12:23	12:23	ZC244	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt. 69780 LB
Stored Tare Wt. 29080 LB
Net Weight 40700 LB

Inbound - Charge ticket

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
20.35	TON	Soil Benefit OutCo				

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver RYAN
Generator TECUMSEH REDEVELOPMENT
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191258	9	KATE HILL 601425

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/10/16	05/10/16	08:50	08:50	ZC242	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt.	63460	LB	Inbound - Charge ticket
Stored Tare Wt.	29260	LB	
Net Weight	34200	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
17.10	TON	Soil Benefit OutCo				

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver DENNIS
Generator TECUMSEH REDEVELOPMENT
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

CHAUTAUQUA COUNTY LANDFILL
3889 Towerville Road
Jamestown, New York 14701

000486 ZOLADZ CONSTRUCTION COMPANY
13600 RAILROAD STREET
ALDEN NY 14004

SITE	TICKET	GRID	WEIGHMASTER
02	191308	9	CHRIS GOODWILL

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
05/10/16	05/10/16	12:09	12:09	ZC242	

REFERENCE	ORIGIN
041416S1	ERIE COUNTY (NY)

Scale 1 Gross Wt.	55560	LB	Inbound - Charge ticket
Stored Tare Wt.	29260	LB	
Net Weight	26300	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
13.15	TON	Soil Benefit OutCo				

Operating hours 7:30 AM to 3:30 PM Monday thru Friday.
This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type. Telephone (716) 985-4785

Driver DENNIS
Generator TECUMSEH REDEVELOPMENT
Comment LACKAWANNA, NY 14218
Hauler: <USE ONLY AT LANDFILL>

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SIGNATURE _____

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone: 856-0599

4. Waste Tracking Number: Truck # 17 (CC401)

5. Generator's Name and Mailing Address

Tecumseh Redevelopment, Inc
2558 Hamburg Turnpike, Lackawanna, NY 14218

Generator's Phone: 856-0599

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Zoladz Const Co, Inc — U.S. EPA ID Number: 94499

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Chautauqua Cty Landfill
Ellery, NY

Facility's Phone: 985-4785

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. non-Regulated Soil/Fill CC041416.51	1	DT		
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Obisz As Agent For Generator — Signature: [signature] — Month 5 Day 5 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X Ron [signature] 2171 — Signature: X — Month 5 Day 5 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a 190920

Printed/Typed Name: Paul 602395 — Signature: [signature] — Month 5 Day 5 Year 16

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
		856-0599	(CC4 02-

GENERATOR

5. Generator's Name and Mailing Address
Tecumseh Redevelopment, Inc
2558 Hamburg Turnpike LACKAWANNA, NY 14218
Generator's Phone: 716-856-0599

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
20402 CONST CO, INC

U.S. EPA ID Number
CA499

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Chautauqua County LANDFILL
Ellery, NY 985-4785
Facility's Phone:

U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non-Regulated Soil/Fill CC0414.16 S1	1	DT			
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. DuBisz - As Agent For Generator
Signature:
Month: 5 Day: 5 Year: 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X James M Burg
Signature: X James M Burg
Month: 5 Day: 5 Year: 16

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: PAUL
Signature: 190921
Month: 5 Day: 5 Year: 16

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone: 856-0599

4. Waste Tracking Number: CC-03

5. Generator's Name and Mailing Address: Tecumseh Redevelopment, Inc, 2558 Hamburg Turnpike, Lackawanna, NY 14218

Generator's Phone: 856-0599

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Zoladz Const Co, Inc — U.S. EPA ID Number: 91499

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chautauqua Cty Landfill, Ellery, NY — U.S. EPA ID Number

Facility's Phone: 985-4185

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non-Regulated Solids CC041416-S1	1	DT		
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Drbisz As Agent For Generator — Signature: [signature] — Month 5 Day 5 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X [signature] — Signature: X — Month 5 Day 5 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Chris Goodwill — Signature: [signature] — Month 5 Day 5 Year 16

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DESIGNATED FACILITY'S COPY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone 856-0549	4. Waste Tracking Number 11-04

GENERATOR

5. Generator's Name and Mailing Address
Tramsen Refrigeration, Inc
2338 Mainbury Turnpike, Mckeesport, NY 14402
Generator's Phone: 858-0245

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: 20M12 Const Co, Inc — U.S. EPA ID Number: 9A495

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Chautauqua Cty Landfill
Ellery, NY
Facility's Phone: 985-4781
U.S. EPA ID Number

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non-Regulated Soil/Fill CC041416.S1	1	DT		
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Dubsz As Agent For Generator — Signature: [signature] — Month 5 Day 5 Year 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: James n Brooks — Signature: James n Brooks — Month 5 Day 5 Year 16
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Chris Goodwill — Signature: Chris Goodwill — Month 5 Day 5 Year 16

169-BLC-O 5 11977 (Rev. 9/09) DESIGNATED FACILITY'S COPY

Ø 191059

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
			856-0595	

GENERATOR

5. Generator's Name and Mailing Address
Tecumseh Redevelopment, Inc
2038 Hamburg Turnpike, Lackawanna NY 14218
Generator's Phone: 856-0595

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
Zoladz Const Co, Inc

U.S. EPA ID Number
NY 495

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Chautauqua City Landfill
Ellery, NY
Facility's Phone: 965-4735

U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non-Regulated Soil Fill / CC04141851	1	OT			
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Dubiel As Agent For Generator | Signature | Month: 5 | Day: 6 | Year: 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Zoladz Trucking/Ron Deplczynski | Signature | Month: 5 | Day: 6 | Year: 16

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: R Hull | Signature | Month: 5 | Day: 16 | Year

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DESIGNATED FACILITY'S COPY

191092 191096

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
		856-0599	

GENERATOR

5. Generator's Name and Mailing Address
Transfer Redevelopment, Inc
2558 Hamburg Turnpike Lackawanna, NY 14218
Generator's Phone: 856-0599

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Zoladz Const Co, Inc — U.S. EPA ID Number: GA4669

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
~~Chautauqua~~ Chautauqua CTY Landfill
Ellery, NY
Facility's Phone: 483-4255

U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	non-regulated soil/fill CC041416.51	1	DT			
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
R. Dubisz AS Agent For Generator		5	6	16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Zoladz Trucking / X Rudy Harris	X Rudy Harris	5	6	16
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Phone:

ure of Alternate Facility (or Generator) — Month Day Year

vner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

	Signature	Month	Day	Year
Goodwill		5	6	16

v. 9/09)

DESIGNATED FACILITY'S COPY

191096

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	
2. Page 1 of	
3. Emergency Response Phone	856-0599
4. Waste Tracking Number	

5. Generator's Name and Mailing Address: Tecumseh Redevelopment, Inc 2558 Hamburg Turnpike, Lackawanna, NY 14218

Generator's Site Address (if different than mailing address)

Generator's Phone: 856-0599

6. Transporter 1 Company Name: Zoladz Const. Co, Inc — U.S. EPA ID Number: 64499

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chautauqua Cty Landfill Ellery, NY — U.S. EPA ID Number

Facility's Phone: 9856178?

	9. Waste Shipping Name and Description	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non Regulated Soil/Fill CC041416.51	1	DT		
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Dobr As Agent for Gavan ka — Signature — Month 5 Day 6 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X Zoladz Trkg (7?) Ron Depczynski — Signature — Month 5 Day 6 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Chris Goodwill — Signature — Month 5 Day 6 Year 16

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

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DESIGNATED FACILITY'S COPY

191138

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
		856-0599	

GENERATOR

5. Generator's Name and Mailing Address
Tawson Redevelopment, Inc
2358 Hamburg Turnpike Lackawanna NY
Generator's Phone: 856-0599

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
Zumoz Const Co, Inc

U.S. EPA ID Number
GA499

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Chautauqua County Landfill
Ellery, NY
Facility's Phone: 985-4785

U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	non Regulated Soil/Fill / CCO4H, 18 SI	1	DT			
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Dubiel As Agent For Generator | Signature | Month | Day | Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Zumoz Const X Ron Depczynski | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: K Tyll | Signature | Month: 5 | Day: 9 | Year: 16

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DESIGNATED FACILITY'S COPY

191139

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone 856-0599	4. Waste Tracking Number

5. Generator's Name and Mailing Address: Transit Redevelopment, Inc, 2558 Hamburg Turnpike, Lackawanna NY 14218

Generator's Site Address (if different than mailing address)

Generator's Phone: 858-0599

6. Transporter 1 Company Name: Zoladz Const Co, Inc — U.S. EPA ID Number: GA 499

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chautauqua Cty Landfill, Ellery, NY — U.S. EPA ID Number

Facility's Phone: 985-4785

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non Regulated Soil/Fill CC04/14/16, S1	1	DT		
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Dase as Agent for Generator — Signature — Month 5 Day 9 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: 244 Zoladz Const. (Ryan) x Ryan Layton — Signature x — Month 5 Day 9 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: K Hall — Signature — Month 5 Day 9 Year 16

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
		856-0599	

5. Generator's Name and Mailing Address: Tecumseh Redevelopment, Inc, 2558 Hamburg Turnpike, Lackawanna, NY 14218

Generator's Site Address (if different than mailing address)

Generator's Phone: 716-856-0599

6. Transporter 1 Company Name: Zolad Const Co, Inc — U.S. EPA ID Number: 9A499

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Chautauqua County Landfill, Ellery, NY — U.S. EPA ID Number:

Facility's Phone: 985-4785

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non-Regulated Soil/Fill CC0414/651	1	DT		
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Dusz As Agent For Generator — Signature: [signature] — Month 5 Day 9 Year 16

INT'L — 15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER — 16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X Zolad Const 174 X Ron Deprez/DSKI — Signature: X [signature] — Month 5 Day 9 Year 16

Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

DESIGNATED FACILITY — 17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Chris Goodwill — Signature: [signature] — Month 5 Day 9 Year 16

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NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
		856-0599	

GENERATOR

5. Generator's Name and Mailing Address
Tawsen Redevelopment, Inc
2558 Hamburg Turnpike Lackawanna, NY 14218
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Zoladz Const Co, Inc — U.S. EPA ID Number: 9A455

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Chautauqua County Landfill
Ellery, NY
Facility's Phone: 985-4785

U.S. EPA ID Number:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non-Regulated Soil/Fill CC0414.1651	1	DT			
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Dubiel AS Agent for Generator — Signature — Month: 5 Day: 9 Year: 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Zoladz East — Signature — Month: 5 Day: 9 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Chris (Goodwill) — Signature — Month: 5 Day: 9 Year: 16

DESIGNATED FACILITY'S COPY

191258

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
		856-0599	

GENERATOR

5. Generator's Name and Mailing Address
Tecumseh Redevelopment, Inc
2558 Hamburg Turnpike, Lackawanna NY
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
Zoadz Const Co, Inc
U.S. EPA ID Number 9A495

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Chautauqua County Landfill
Ellery, NY. 985-4785
Facility's Phone:
U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Regulated Soil/Fill CC 0411.1651	1	DT			
2.	Denny Frey					
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Davis AS Agnt For Generator
Signature:
Month: 5 Day: 9 Year: 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X Zoadz Const 242 X Denny Frey
Signature: X Denny Frey
Month: 5 Day: 9 Year: 16

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: K Hull
Signature:
Month: 5 Day: 10 Year: 16

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DESIGNATED FACILITY'S COPY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone 856-0544	4. Waste Tracking Number

GENERATOR

5. Generator's Name and Mailing Address
Tecumseh Redevelopment, Inc
2558 Hamburg Turnpike Lackawanna NY 14218
Generator's Phone: 856-0544

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Zoladz Const Co, Inc — U.S. EPA ID Number: 9A455

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address — U.S. EPA ID Number:
Chautauqua County Landfill
Ellery, NY
Facility's Phone: 985-4785

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non Regulated Soil/Fill CC041416S1	1	DT		
2.	Denny Frey				
3.					
4.					

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: R. Dubaz as Agent for Generator — Signature: [signature] — Month 5 Day 10 Year 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Zoladz Const x Denny Frey — Signature: X Denny Frey — Month 5 Day 10 Year 16
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Chris Gaswill — Signature: [signature] — Month 5 Day 10 Year 16