Honeywell

Honeywell
115 Tabor Road
Morris Plains, NJ 07950

Mr. Alex Czuhanich
Project Manager
Remedial Bureau E, 12th floor
Division of Environmental Remediation
New York State Department of Environmental Conservation

December 22, 2015

Tonawanda Plastics
3821 River Road, Tonawanda New York
NYSDEC Site No. 915003

Dear Mr. Czuhanich,

Honeywell is transmitting the attached **Summary Investigation Report**, prepared by Parsons, which reports the findings of recent sampling and monitoring activities completed at the above-referenced facility. These activities were completed in response to the New York State Department of Environmental Conservation letter dated October 30, 2013.

All recent sampling and fieldwork were completed between October 2014 and April 2015. This work included two rounds of water level readings, two rounds of groundwater sampling, and collection of surface water and sediment samples from onsite sewers. Inlet and outlet water samples were collected from the 36-inch-diameter sewer; only inlet samples were collected from the 48-inch-diameter sewer because the outlet could not be accessed. Results of surface water samples collected from the inlet and outlet show no VOCs or SVOCs above regulatory standards, and metals concentrations that did exceed the standards were found in the same concentrations in both the influent and effluent samples from the sewer, suggesting an off-site source.

Based on the groundwater sampling results, there is no evidence of significant changes in the concentrations of chemicals of concern when compared to analytical data collected during 2000 and 2001 sampling events. Further, there is minimal to no visual or analytical evidence that contamination from the facility is through the sewer system or off-site in storm sewer sediment. In addition, basic groundwater modeling was completed as part of this investigation. Results of the model show that chemicals of concern (using benzene as an indicator) will not migrate past the down gradient property line, nor will they reach any potential receptors.

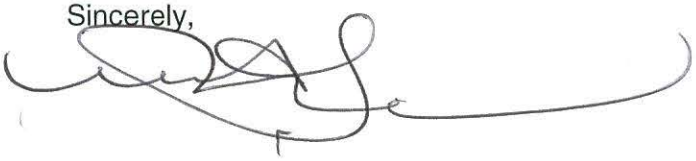
Honeywell

Given the results of these analyses, Parsons concluded that there is no need to conduct further investigations or remedial activities at the Site, a recommendation with which Honeywell agrees.

We believe we have addressed the DEC concerns expressed in their October 30, 2013 letter. We are ready to answer any question you may have as you review the data and we are amenable to a meeting if you think that would assist you in the review process.

Should you have further questions, please feel free to contact me at 215-807-8453.

Sincerely,



Mark A. Sweitzer
Remediation Manager

PARSONS

INVESTIGATION SUMMARY REPORT

TONAWANDA PLASTICS
EPA ID NYD051816262

Prepared for:

Honeywell International Inc.
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Claymont, Delaware 19703

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December 2015

Parsons PN 449024

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ACRONYMS

Acronym	Definition / Description
BTEX	Benzene, toluene, ethylbenzene and xylene
CSM	Conceptual site model
FOI	Freedom of Information
Honeywell	Honeywell International Inc.
µg/L	Microgram per liter
NYSDEC	New York State Department of Environmental Conservation
OBG	O'Brien & Gere Engineers, Inc.
PAH	Polycyclic aromatic hydrocarbons
SVOC	Semi-volatile organic compound
VOC	Volatile organic compound

1.0 INTRODUCTION

This report describes investigation activities that have been completed at the Tonawanda Plastics Site in Tonawanda, New York (the Site). This work was completed in response to an October 2013 letter from the New York State Department of Environmental Conservation (NYSDEC). The NYSDEC requested that an investigation be completed to evaluate whether Site-related chemical constituents were migrating off-site in groundwater or through the storm sewer system. The investigation was conducted between October 2014 and April 2015. The scope of work and results of the investigation are summarized herein.

Based on the results of the groundwater monitoring and sewer sampling outlined in this report, there is no evidence that contaminants are migrating off site through the groundwater or through the sewer system.

As a result of the investigation work completed, Parsons believes that the goals outlined by the NYSDEC in their letter of October 2013 have been met and that there is no basis for conducting additional investigations or remedial activities at the Site.

2.0 SITE DESCRIPTION

The Site is located at 3821 River Road in Tonawanda, New York (Figure 1). The approximately 17-acre Site is currently owned by the Tonawanda Coke Corporation and is used for office, laboratory space and warehouse storage.

3.0 BACKGROUND

In May 1991, Honeywell International Inc. (Honeywell) completed a project to excavate subsurface soil pursuant to an Administrative Order on Consent. An Implementation Report[1] was submitted and accepted by the NYSDEC. The soil removal area is located in the southwest corner of the property (Figure 2).

A total of 12 groundwater monitoring wells have been installed in the overburden soils. Prior to the investigation activities described in this report, these wells were most recently sampled in May 1999 and June 2001. Volatile organic compounds (VOCs), including benzene and xylene, were detected in the samples. Several semi-volatile organic compounds (SVOCs) and metals were also detected.

Two sewer lines traverse the Site: one 36-inch-diameter line and one 48-inch-diameter line. Portions of these sewers were investigated prior to 2000. The investigation included collection of sediment samples from within the inlet and outfall and a video inspection of the interior of the sewer to document the structural condition of the piping. VOCs, SVOCs and metals were detected in the sediment samples[2].

[1] ERM-Northeast, Inc., July 10, 1991
[2] O'Brien & Gere Engineers, Inc. (OBG), May 2001

4.0 SITE VISITS

4.1 Preliminary Site Visit

On August 19, 2014, Parsons personnel completed a preliminary site visit to examine the project area and identify groundwater monitoring well and sewer locations. Parsons was accompanied on this visit by representatives from Honeywell and Tonawanda Coke.

4.2 Well Survey

On September 17, 2014, Parsons mobilized to field survey the groundwater monitoring wells and sewers on the Site. The following activities were completed:

- Removed the old locks from the wells and replaced them with keyed-alike locks;
- Assessed the condition of the wells and recorded well depths and the depth to water in each well;
- Identified the locations of the 36-inch and 48-inch-diameter storm sewer inlets and outlets and surface water catch basins to the sewers; and
- Recorded the well and sewer locations using a global positioning system.

The majority of the wells were found to be in good condition, with little accumulation of sediment at the bottom. The exception was MW-3, which was found to have a damaged surface casing. Additionally, the casings for wells MW-11 and MW-12 had been raised, and well MW-12 was blocked. Records included in the report submitted by OBG on February 19, 2002, indicated that MW-11 and MW-12 were originally constructed in 2001 at measured depths of 11.4 and 12.3 feet below the top of casing, respectively. Sometime between 2002 and 2006, an earthen berm was constructed along the west side of the Site. This necessitated that MW-11 and MW-12 be raised. No records of modifications to these two wells have been found. Parsons was able to measure MW-11 to a depth of 21.4 feet from the top of the well casing. In well MW-12, the depth was only measured at 10 feet below the top of casing. Copies of the well inspections are included in Appendix A. Well depth and depth to water measurements for both monitoring events are included in Appendix B.

Groundwater potentiometric surface maps have been prepared based on the water level measurements taken in the wells and are included as Figure 3 (October 2014) and Figure 4 (April 2015). Based on these data, groundwater flow direction is toward the west or southwest. This is consistent with the local geology and the location of the Niagara River, which lies west-southwest of the Site and flows to the north. Information provided in historical reports indicates that groundwater in the vicinity is perched in alluvial/lacustrine sediments, which primarily consist of graded silts and clay. The sediments have been reported to have a hydraulic conductivity on the order of 10^{-7} centimeters per second (cm/sec)[3]. This is consistent with our findings and the low rate of groundwater observed flowing into the wells after purging (see Section 4.3 below).

4.3 Groundwater Sampling

Two rounds of sampling were conducted, the first in October 2014 and the second in April 2015. For each sampling round, Parsons collected groundwater, surface water, and

[3] OBG, 2002. Additional Investigation/IRM Activities Report.

sediment samples. The depth to groundwater in each of the wells was measured, and the wells were purged to prepare them for sampling. A low-flow sampling method was used, and field parameters were measured during purging. Field parameters included pH, temperature, conductivity and turbidity. Wells were sampled once a sufficient volume of water had been removed and the field parameters had stabilized. In some cases, the well did not produce a sufficient volume of water and went dry. The field sampling data for each well are summarized in Appendix C.

During the monitoring event completed on October 6 and 7, 2014, groundwater samples were collected from nine of the 12 monitoring wells. Samples were not collected from MW-2 and MW-11 because there was insufficient water for sampling. Well MW-12 also could not be sampled because it is blocked.

During the monitoring event completed on April 22 and 23, 2015, groundwater samples were collected from 10 of the 12 monitoring wells. Samples were not collected from MW-11 because there was insufficient water and MW-12, which is blocked.

In both sampling rounds, groundwater samples were also collected for quality assurance/quality control purposes, including matrix spike/matrix spike duplicate and field duplicate samples. All of the groundwater samples were submitted for analysis to TestAmerica Laboratories in Amherst, New York (ELAP No.10026). Samples were analyzed for VOCs, SVOCS, and inorganic parameters. Validated chemical analytical results are included as Table 1 (VOCs), Table 2 (SVOCs), and Table 3 (inorganics).

Mr. Alex Czuhanich of the NYSDEC (Albany) conducted a Site visit concurrent with the groundwater sampling activity on October 7, 2014. Mr. Czuhanich, accompanied by Parsons staff and a representative of Tonawanda Coke, toured the area where the monitoring wells and sewers are located.

4.4 Storm Sewer and Sediment Sampling

The locations of the 36-inch and 48-inch-diameter storm sewers were identified, and the influent and effluent points were located. Samples of the water flowing into and out of the 36-inch sewer were collected (SW-36 INF and SW-36-EFF, respectively). A sample of the water flowing into the 48-inch sewer was also collected (SW-48 INF). A sample was not collected from the outfall for the 48-inch sewer because it is inaccessible. Surface water samples were analyzed for VOCs, SVOCs, and inorganics.

A sample of the accumulated sediment at the inlet to the 36-inch sewer was collected and analyzed for VOCs, SVOC, and inorganics. The sediment accumulation quantities in the 48-inch inlet area and the 36-inch outlet were insufficient for sampling.

5.0 DATA VALIDATION

Analytical data were validated in accordance with NYSDEC guidelines for data usability. A copy of the Data Usability Summary Report is available upon request.

6.0 ANALYTICAL RESULTS

6.1 Groundwater Samples

Validated groundwater sample results from the October 2014 and April 2015 sampling events were tabulated and compared with the results reported from the 2001 groundwater sampling round[4] and to the New York State Class GA Groundwater Standards and Guidance values.

Generally, the groundwater results from October 2014 and April 2015 were comparable to those from 2001. Benzene, toluene, ethylbenzene, and xylene (BTEX) compounds were detected at concentrations above the Class GA values in samples collected from MW-1, MW-6, MW-7, MW-9 and MW-10. Figure 5 shows a site plan and includes benzene results from the 2001, 2014, and 2015 groundwater sampling events for the wells with at least one result exceeding the groundwater standard of 1 microgram per liter (µg/L).

Chlorinated VOCs with concentrations above the Class GA values were detected in MW 4 (cis-1,2-dichloroethene, vinyl chloride), MW-5 (vinyl chloride), MW-7 (1,2-dichloroethane) and MW-9 (cis-1,2-dichloroethene, vinyl chloride). Figure 6 shows vinyl chloride results from the 2001, 2014, and 2015 groundwater sampling events for the wells with at least one result exceeding the groundwater standard of 2 µg/L.

SVOCs, primarily polycyclic aromatic hydrocarbons (PAHs), were detected at concentrations above the Class GA values in a total of five wells: MW-1(biphenyl, naphthalene), MW-5 (benzo(a)anthracene, benzo(b)flouranthene), MW-6 (biphenyl, naphthalene), MW-7 (naphthalene), and MW-9 (naphthalene). Figure 7 shows naphthalene results from the 2001, 2014, and 2015 groundwater sampling events for the wells with at least one result exceeding the groundwater guidance value of 10 µg/L.

All of the wells sampled contained some metals with concentrations exceeding the Class GA standards. Chromium was detected at or above the Class GA value in five of the wells. Figure 8 shows chromium results from the 2001, 2014, and 2015 groundwater sampling events for the wells with at least one result exceeding the groundwater standard of 50 µg/L.

Cyanide was detected at or above the Class GA value in all of the recently sampled wells. Figure 9 shows cyanide results from the 2001, 2014, and 2015 groundwater sampling events for the wells with at least one result exceeding the groundwater standard of 200 µg/L.

6.2 Storm Sewer and Sediment Samples

No VOCs were detected in the water samples collected at storm sewer influent location SS-36 INF. Only two VOCs (cis-1,2-dichloroethene and carbon disulfide) were detected in the effluent from the 36-inch sewer. Both results were below the New York State Class A Surface Water Standards.

No SVOCs were detected in the water samples collected at the storm sewer influent locations. Naphthalene was detected in the effluent from the 36-inch sewer. Acetone and four PAHs were identified in the sediment sample collected at the 36-inch sewer inlet.

[4] Ibid

Validated chemical analytical results for the surface water samples are provided in Table 4, and the results for the sediment sample are provided in Table 5.

There were no VOCs or SVOCs exceeding the New York State Class A surface water standards. A number of metals exceeded the standards in both the influent and effluent samples from the sewers. These metals included aluminum, iron, manganese and sodium.

7.0 WASTE MANAGEMENT

During groundwater sampling, approximately 150 gallons of purge and wash water were recovered. These wastes were stored on-site in a contained area until disposal. The wastes from the October 2014 sampling event were removed from the Site on January 6, 2015. The wastes from the April 2015 sampling event were removed from the Site on June 16, 2015. The waste materials were disposed of through Veolia North America at their facility in West Carrollton, Ohio. Copies of the completed waste manifests are included in Appendix D.

8.0 GROUNDWATER MODELING

In order to determine the potential for chemicals of concern to migrate off the property, a basic analytical fate and transport model was completed; the model predicted fate and transport of volatile organic compounds (VOCs) in shallow groundwater at the Site, based on presently available groundwater data.

The results of the model indicate the plume is in a steady state (no longer growing) and has reached a maximum length of approximately 100 feet from the source area. Given the conservative nature of this model, the plume is predicted to be less than 100 feet long. The closest offsite potential receptor is the drainage ditch (outfall ditch), located approximately 450 feet north of the plume. The modeling exercise is summarized in Appendix E.

9.0 CONCLUSIONS

The work completed at the Site has shown that the existing groundwater monitoring network is suitable for providing chemical and groundwater elevation data sufficient to draw conclusions regarding the concentrations and transport of contaminated groundwater. A review of the recent groundwater sampling results indicate that there are no significant changes in the concentrations of chemicals of concern in the groundwater when compared to analytical data collected during the 2000 and 2001 sampling events. Groundwater modeling (Appendix E) has shown that contaminants in groundwater will be naturally degraded before they can reach the nearest potential receptor.

Sampling results presented in this report do not indicate any contamination from the Site migrating through the sewer system, and there is no evidence that site-related contamination is migrating off Site in storm sewer sediment.

Parsons believes that the goals outlined by the NYSDEC in their letter of October 2013 have been met and there is no reason to conduct additional investigations or remedial activities at the Site.

FIGURES

HONEYWELL TONAWANDA PLASTICS

FIGURE_1
SITE LOCATION MAP

PARSONS
40 LA RIVIERE DRIVE, SUITE 350, BUFFALO. NEW YORK 14202 PHONE: 716-541-0730

448965.01100
P:\HONEYWELL_TONAWANDA_PLASTICS\CAD\HONEYWELL_TONAWANDA_SLM_020315.dwg

OUTLET B
OUTLET A
6" STORM SEWER
48" STORM SEWER
36" STORM SEWER
48" STORM SEWER
WAX STORAGE WAREHOUSE
WAX PRODUCTION BUILDING
COMPRESSOR BUILDING
PUMP HOUSE
PROCESS BUILDING
TRUCK RAMP
STORES & MACHINE SHOP
BUILDING 4 & 5 WAREHOUSE
EXTRUDER WAREHOUSE
STORAGE
OFFICE BUILDING
LABORATORY BUILDING
UNITS 4 & 5
FORMER PIT
LOCKER BUILDING
MW-12
MW-4
MW-3
MW-2
MW-8
MW-1
MW-6
MW-7
MW-9
MW-11
MW-5
MW-10
INLET A
INLET B

LEGEND

- INLET
- OUTLET
- MONITORING WELL
- STORM SEWER
- BUILDING FOUNDATION
- PARCEL

N

75 10 0 75

SCALE IN FEET

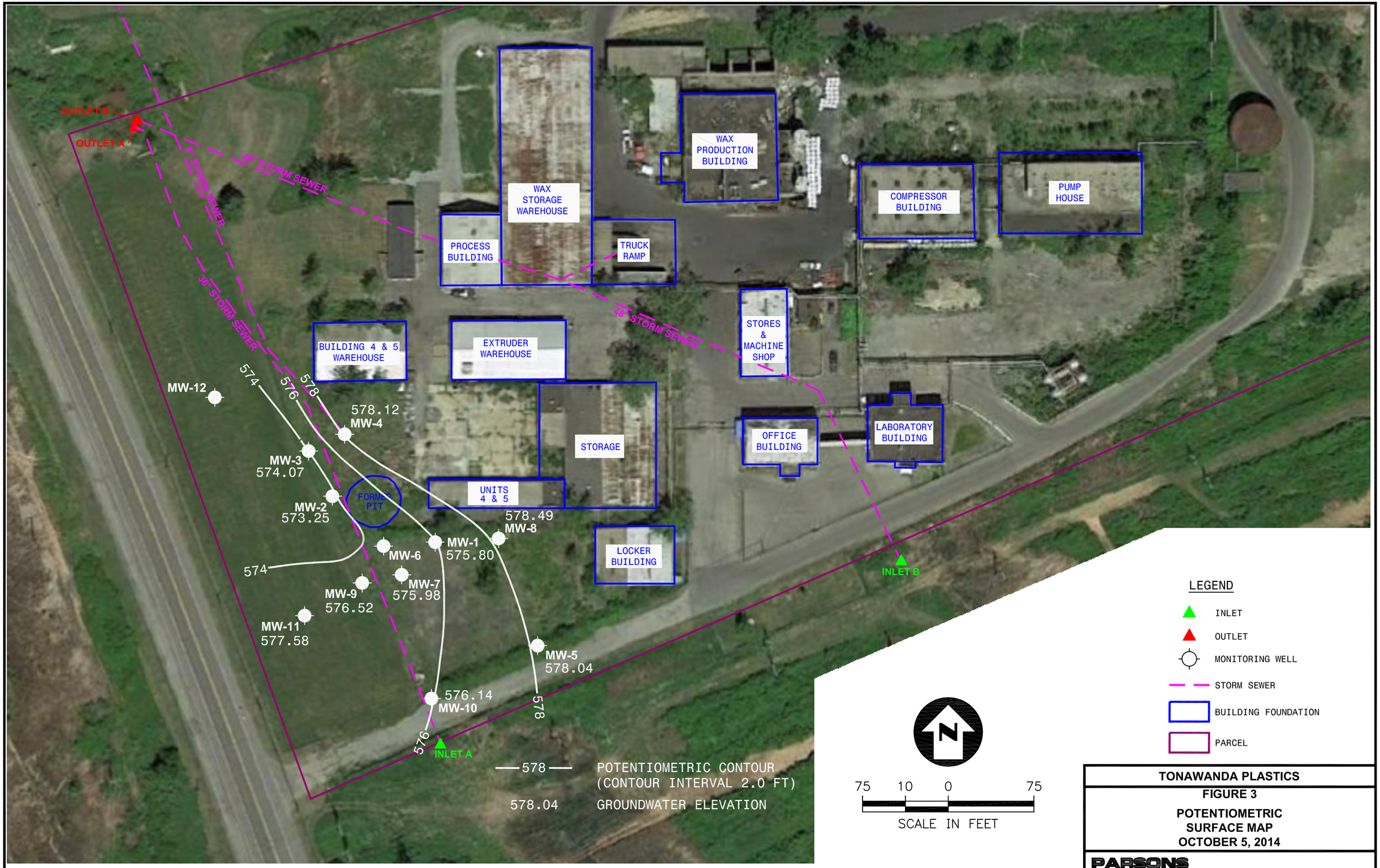
448965.01100
P:\TONAWANDA_PLASTICS\CAD\TONAWANDA_SITE_121615.dwg

TONAWANDA PLASTICS

FIGURE 2

SITE PLAN

PARSONS
40 LA RIVIERE DRIVE, SUITE 350, BUFFALO. NEW YORK 14202 PHONE: 716-541-0730



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TONAWANDA PLASTICS

FIGURE 3

POTENTIOMETRIC SURFACE MAP
OCTOBER 5, 2014

PARSONS
40 LA RIVIERE DRIVE, SUITE 350, BUFFALO. NEW YORK 14202 PHONE: 716-541-0730

OUTLET B
OUTLET A
6" STORM SEWER
48" STORM SEWER
36" STORM SEWER
48" STORM SEWER
WAX STORAGE WAREHOUSE
WAX PRODUCTION BUILDING
COMPRESSOR BUILDING
PUMP HOUSE
PROCESS BUILDING
TRUCK RAMP
STORES & MACHINE SHOP
BUILDING 4 & 5 WAREHOUSE
EXTRUDER WAREHOUSE
STORAGE
OFFICE BUILDING
LABORATORY BUILDING
UNITS 4 & 5
FORMER PIT
LOCKER BUILDING
580
MW-12
578.18
MW-4
MW-3
578.55
MW-2
579.17
577.92
582.62
MW-8
MW-1
MW-6
576.41
578.38
MW-9
MW-7
577.74
579.64
MW-11
578
576
576
578
580
MW-5
580.45
578.37
MW-10
INLET A
INLET B
576 POTENTIOMETRIC CONTOUR (CONTOUR INTERVAL 2.0 FT)
575.80 GROUNDWATER ELEVATION

LEGEND
- INLET
- OUTLET
- MONITORING WELL
- STORM SEWER
- BUILDING FOUNDATION
- PARCEL

N

75 10 0 75
SCALE IN FEET

TONAWANDA PLASTICS

FIGURE 4

POTENTIOMETRIC SURFACE MAP APRIL 22, 2015

PARSONS
40 LA RIVIERE DRIVE, SUITE 350, BUFFALO. NEW YORK 14202 PHONE: 716-541-0730

448965.01100
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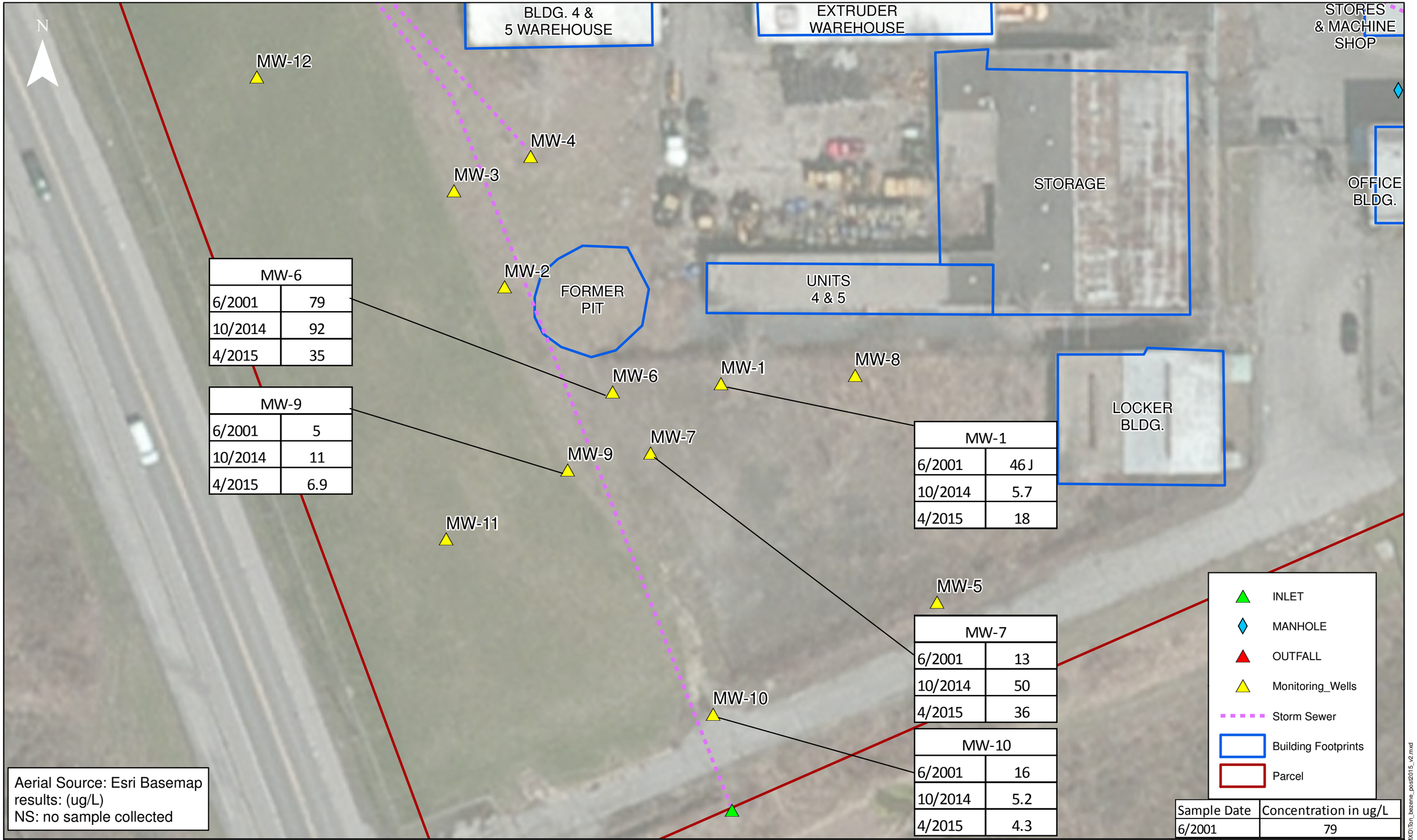

PARSONS

Benzene Concentrations Exceeding
Class GA Standard (1 ug/L) in Groundwater
Tonawanda Plastics Site
Tonawanda, NY

0 37.5 75 Feet

1 inch equals 37 feet

C. Oneal	8/22/2015	
Revision: 8/22/2015	Figure No.: 5	Parsons Project No. 448965.01100

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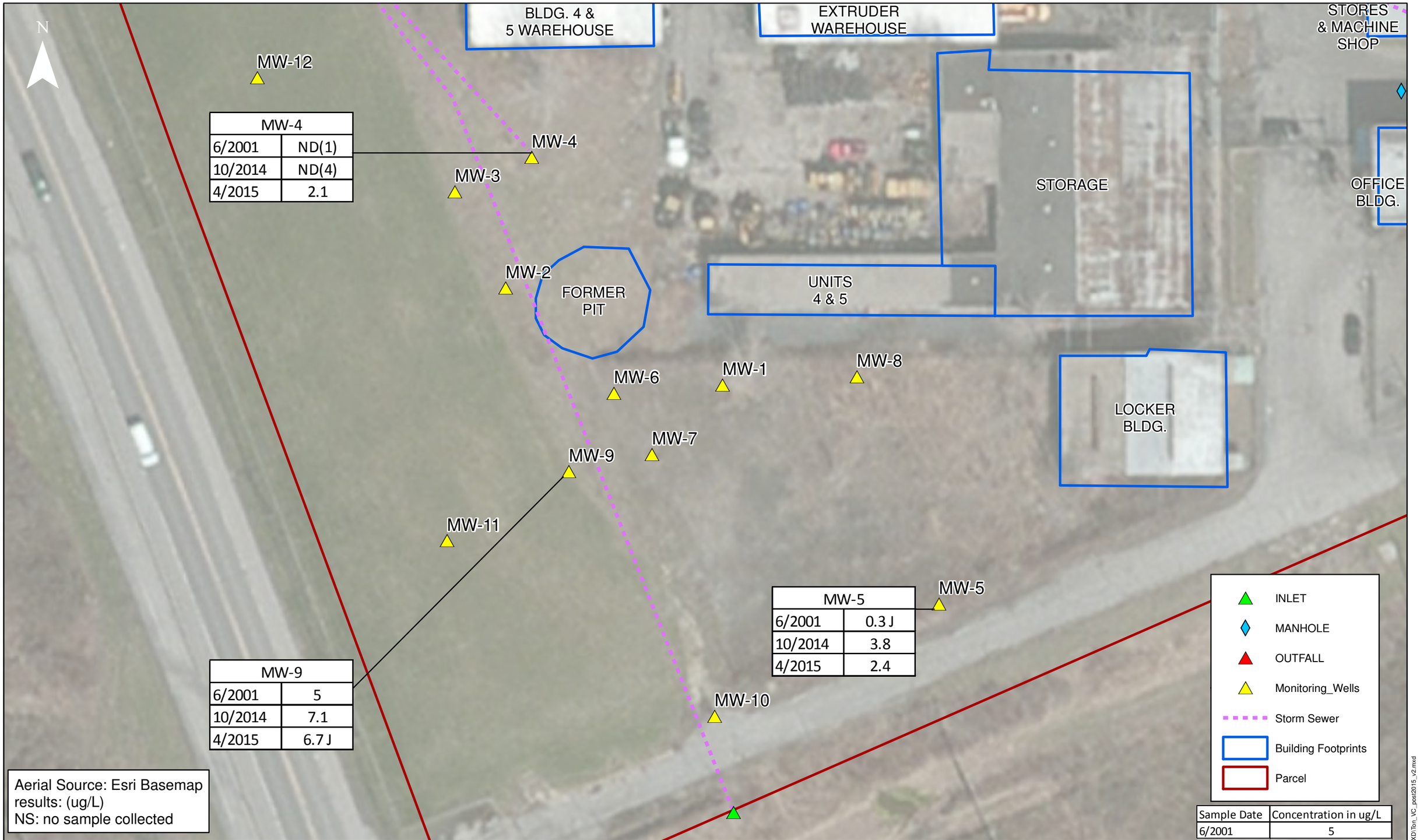

Aerial Source: Esri Basemap
results: (ug/L)
NS: no sample collected

PARSONS

Vinyl Chloride Concentrations Exceeding
Class GA Standard (2 ug/L) in Groundwater
Tonawanda Plastics Site
Tonawanda, NY

0 37.5 75 Feet

1 inch equals 37 feet

C. Oneal	8/22/2015	
Revision: 8/22/2015	Figure No.: 6	Parsons Project No. 448965.01100

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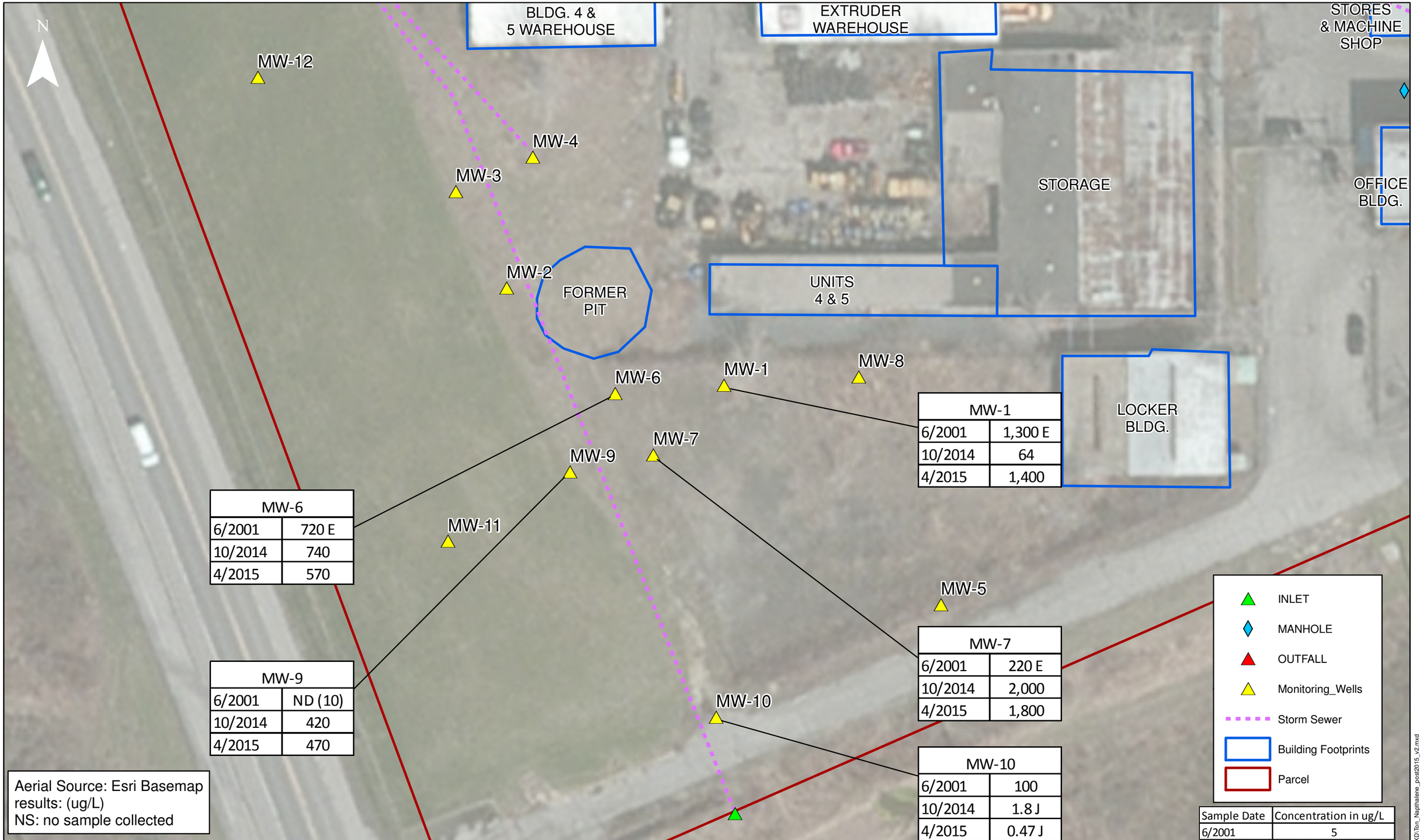

PARSONS

Napthalene Concentrations Exceeding
Class GA Guidance (10 ug/L) in Groundwater
Tonawanda Plastics Site
Tonawanda, NY

0 37.5 75 Feet

1 inch equals 37 feet

C. Oneal	8/22/2015	
Revision: 8/22/2015	Figure No.: 7	Parsons Project No. 448965.01100

File Name: Ton_Napthalene_post2015_v2.mxd

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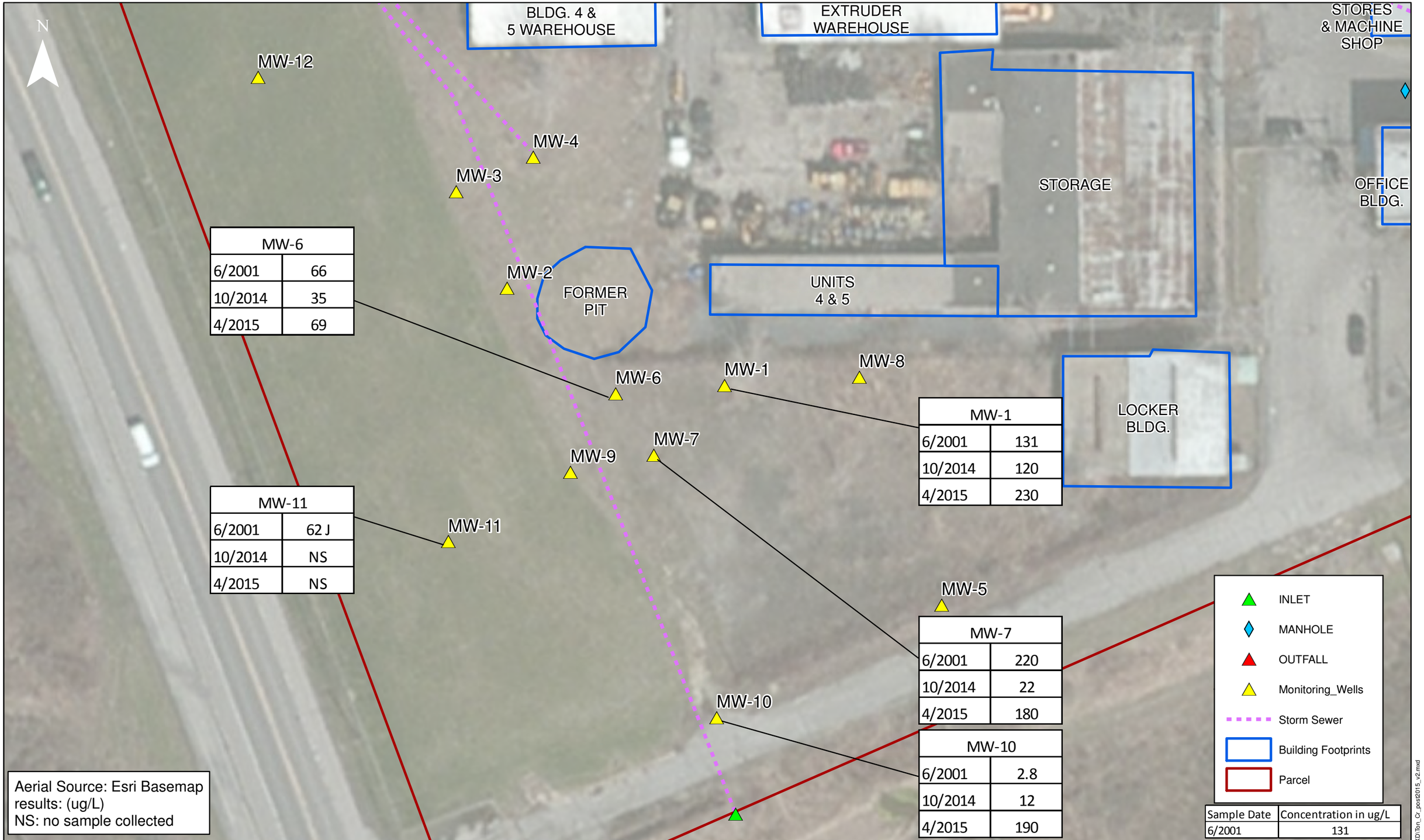

PARSONS

Chromium Concentrations Exceeding
Class GA Standard (50 ug/L) in Groundwater
Tonawanda Plastics Site
Tonawanda, NY

0 37.5 75 Feet

1 inch equals 37 feet

C. Oneal	8/22/2015	
Revision: 8/22/2015	Figure No.: 8	Parsons Project No. 448965.01100

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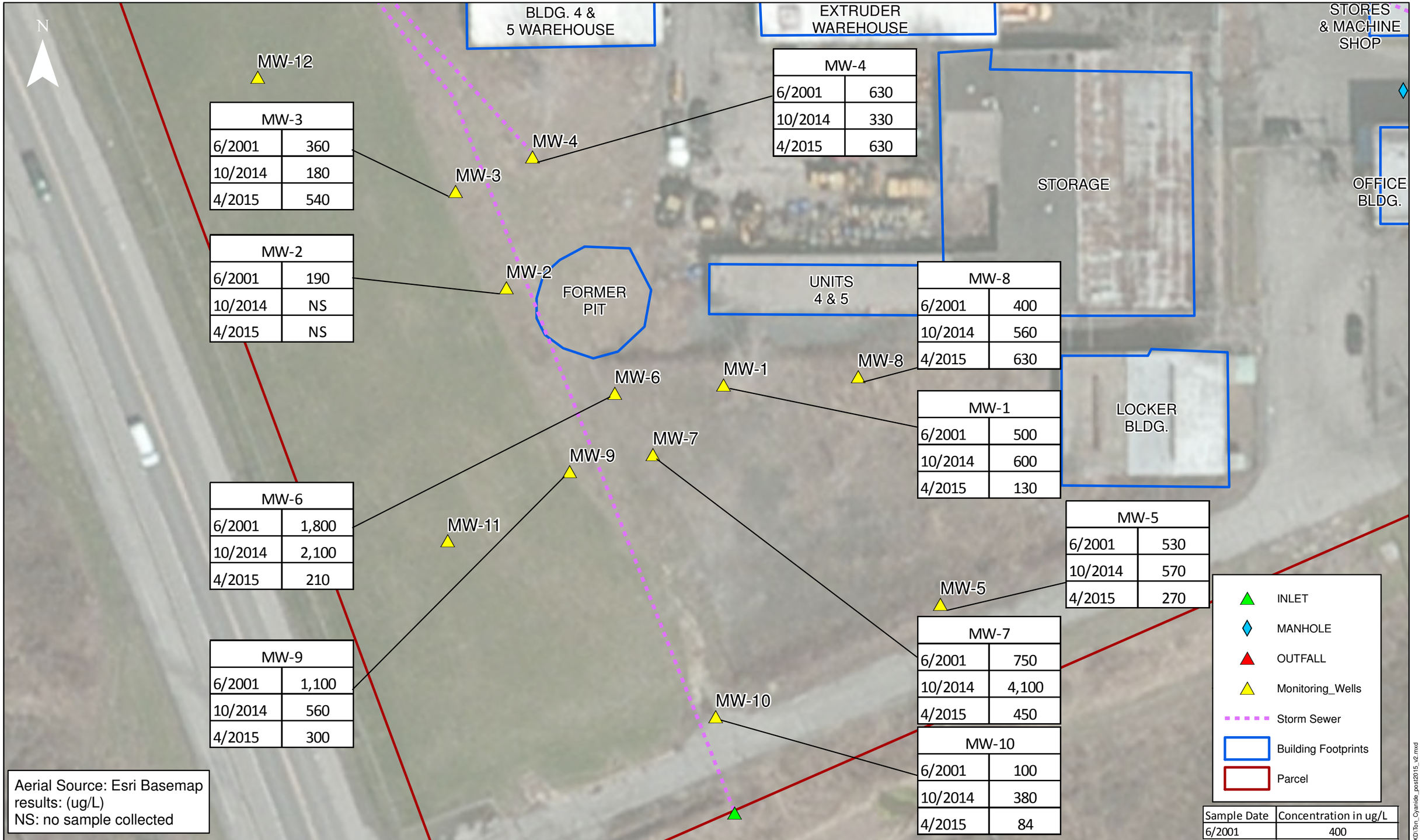

PARSONS

Cyanide Concentrations Exceeding
Class GA Standard (200 ug/L) in Groundwater
Tonawanda Plastics Site
Tonawanda, NY

0 37.5 75 Feet

1 inch equals 37 feet

C. Oneal	8/22/2015	
Revision: 8/22/2015	Figure No.: 9	Parsons Project No. 448965.01100

File Name: Ton_Cyanide_post2015_v2.mxd

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TABLES

TABLE 1
TONAWANDA PLASTICS
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2014, APRIL 2015
Volatile Organic Compounds

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-1 MW-1_2014-10-07 480-68758-2 TAL-BUFF 480-68758 WATER 6/5/2001	MW-1 MW-1_2014-10-07 480-68758-2 TAL-BUFF 480-68758 WATER 10/7/2014	MW-1 MW-1_2015-04-22 480-78955-4 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-2 MW-2-2015-04-23 480-79068-4 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-3 6/9/2001	MW-3 MW-3_2014-10-07 480-68758-4 TAL-BUFF 480-68758 WATER 10/7/2014	MW-3 MW-3_2015-04-22 480-78955-3 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-4 6/9/2001	MW-4 MW-4_2014-10-07 480-68758-9 TAL-BUFF 480-68758 WATER 10/7/2014	MW-4 MW-4-2015-04-23 480-79068-3 TAL-BUFF 480-79068-1 WATER 4/23/2015
CAS NO.	COMPOUND		UNITS:											
	VOLATILES													
	BTEX													
71-43-2	Benzene	1	ug/L	46 J	5.7	18	ND(1)	0.1 J	ND(4)	ND(1)	ND(0.5)	ND(4)	0.81 J
100-41-4	Ethylbenzene	5	ug/L	14 J	ND(4)	6.9	ND(1)	ND(0.5)	ND(4)	ND(1)	ND(0.5)	ND(4)	ND(1)
108-88-3	Toluene	5	ug/L	17 J	ND(4)	8.5	ND(1)	ND(0.5)	ND(4)	ND(1)	ND(0.5)	ND(4)	ND(1)
1330-20-7	Xylenes, Total	5	ug/L	86	ND(8)	46	ND(2)	ND(0.5)	ND(8)	ND(2)	ND(0.5)	ND(8)	ND(2)
	OTHER VOLATILES												
67-64-1	Acetone	50 (G)	ug/L	ND(1000)	20 J	6.8 J	ND(10)	6 J	ND(40)	ND(10)	3 J	ND(40)	ND(5)
75-15-0	Carbon disulfide	--	ug/L	15J	ND(4)	5.1 J	ND(1)	ND(0.5)	ND(4)	ND(1)	ND(0.5)	ND(4)	ND(1)
75-34-3	1,1-Dichloroethane	5	ug/L	-	ND(4)	ND(1)	ND(1)	-	ND(4)	ND(1)	-	ND(4)	ND(1)
107-06-2	1,2-Dichloroethane	0.6	ug/L	-	ND(4)	ND(1)	ND(1)	-	ND(4)	ND(1)	-	ND(4)	ND(1)
156-59-2	cis-1,2-Dichloroethene	5	ug/L	ND(50)	ND(4)	ND(1)	ND(1)	20	ND(4)	ND(1)	ND(0.5)	15	6
98-82-8	Isopropylbenzene	5	ug/L	-	ND(4)	1.2	ND(1)	-	ND(4)	ND(1)	-	ND(4)	ND(1)
110-82-7	Cyclohexane	--	ug/L	-	ND(4)	ND(1)	ND(1)	-	ND(4)	ND(1)	-	ND(4)	ND(1)
75-09-2	Methylene Chloride	5	ug/L	ND(200)	ND(4)	ND(1)	ND(1)	ND(2)	ND(4)	ND(1)	0.4 J	ND(4)	ND(1)
79-01-6	Trichloroethene	5	ug/L	ND(50)	ND(4)	0.57 J	ND(1)	6	ND(4)	ND(1)	ND(0.5)	ND(4)	0.53 J
75-01-4	Vinyl chloride	2	ug/L	ND(100)	ND(4)	ND(1)	ND(1)	0.7 J	ND(4)	ND(1)	ND(1)	ND(4)	2.1

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-5 MW-5_2014-10-07 480-68883-1 TAL-BUFF 480-68883 WATER 6/7/2001	MW-5 MW-5_2014-10-07 480-68883-1 TAL-BUFF 480-68883 WATER 10/7/2014	MW-5 MW-5_2014-10-07 480-68883-1 TAL-BUFF 480-68883 WATER 10/7/2014	MW-6 6/6/2001	MW-6 MW-6_2014-10-07 480-68758-5 TAL-BUFF 480-68758 WATER 10/7/2014	MW-6 MW-6_2015-04-22 480-78955-5 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-7 6/6/2001	MW-7 MW-7_2014_10_06 480-68673-1 TAL-BUFF 480-68673 WATER 10/6/2014	MW-7 MW-7-2015-04-23 480-79068-2 TAL-BUFF 480-79068-1 WATER 42117
CAS NO.	COMPOUND		UNITS:										
	VOLATILES												
	BTEX												
71-43-2	Benzene	1	ug/L	ND(0.5)	ND(1)	ND(1)	79	92	35	13	50	36	
100-41-4	Ethylbenzene	5	ug/L	ND(0.5)	ND(1)	ND(1)	17 J	26	16	2 J	8.8	7.2	
108-88-3	Toluene	5	ug/L	0.1 J	ND(1)	ND(1)	ND(50)	6.7	4.1	4 J	10	12	
1330-20-7	Xylenes, Total	5	ug/L	ND(0.5)	ND(2)	ND(2)	49 J	43	23	9	45	44	
	OTHER VOLATILES												
67-64-1	Acetone	50 (G)	ug/L	10 J	ND(10)	ND(10)	ND(1000)	ND(40)	ND(10)	14 J	18	ND(40)	
75-15-0	Carbon disulfide	--	ug/L	ND(0.5)	0.3 J	0.61 J	12 J	18	24 J	13	130	97	
75-34-3	1,1-Dichloroethane	5	ug/L	-	ND(1)	ND(1)	-	ND(4)	ND(1)	-	ND(4)	ND(4)	
107-06-2	1,2-Dichloroethane	0.6	ug/L	-	ND(1)	ND(1)	-	ND(4)	ND(1)	-	ND(4)	1.4J	
156-59-2	cis-1,2-Dichloroethene	5	ug/L	2	0.87 J	ND(1)	ND(50)	ND(4)	2.8	ND(5)	ND(4)	ND(4)	
98-82-8	Isopropylbenzene	5	ug/L	-	ND(1)	ND(1)	-	ND(4)	1.3	-	ND(4)	ND(4)	
110-82-7	Cyclohexane	--	ug/L	-	ND(1)	ND(1)	-	ND(4)	ND(1)	-	ND(4)	ND(4)	
75-09-2	Methylene Chloride	5	ug/L	ND(2)	ND(1)	ND(1)	14 J	ND(4)	ND(1)	2 J	ND(4)	ND(4)	
79-01-6	Trichloroethene	5	ug/L	0.7	0.96 J	2	ND(50)	4.1	3.6	ND (5)	ND(4)	ND(4)	
75-01-4	Vinyl chloride	2	ug/L	0.3 J	3.8	2.4	ND(100)	ND(4)	ND(1)	ND (10)	ND(4)	ND(4)	

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-8 MW-8_2014-10-07 480-68758-3 TAL-BUFF 480-68758 WATER 6/5/2001	MW-8 MW-8_2014-10-07 480-68758-3 TAL-BUFF 480-68758 WATER 10/7/2014	MW-8 MW-8-2015-04-23 480-79068-6 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-9 6/6/2001	MW-9 MW-9_2014_10_06 480-68673-2 TAL-BUFF 480-68673 WATER 10/6/2014	MW-9 MW-9_2015-04-22 480-78955-7 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-10 6/5/2001	MW-10 MW-10_2014-10-07 480-68758-1 TAL-BUFF 480-68758 WATER 10/7/2014	MW-10 MW-10_2015-04-22 480-78955-6 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-11 6/7/2001
CAS NO.	COMPOUND		UNITS:										
	VOLATILES												
	BTEX												
71-43-2	Benzene	1	ug/L	ND(5)	ND(4)	ND(1)	5	11	6.9	16	5.2	4.3	0.6
100-41-4	Ethylbenzene	5	ug/L	ND(5)	ND(4)	ND(1)	7	13	14	1 J	ND(4)	ND(1)	ND(5)
108-88-3	Toluene	5	ug/L	ND(5)	ND(4)	ND(1)	1 J	ND(4)	ND(4)	3 J	ND(4)	ND(1)	0.1J
1330-20-7	Xylenes, Total	5	ug/L	ND(5)	ND(8)	ND(2)	5	ND(8)	9.1	5	ND(8)	ND(2)	0.1J
	OTHER VOLATILES												
67-64-1	Acetone	50 (G)	ug/L	4 J	ND(40)	ND(10)	ND(20)	ND(40)	ND(40)	ND(100)	25	8.9 J	6J
75-15-0	Carbon disulfide	--	ug/L	ND(0.5)	ND(4)	ND(1)	ND(1)	ND(4)	ND(4) J	ND(5)	ND(4)	ND(1) J	ND(0.5)
75-34-3	1,1-Dichloroethane	5	ug/L		ND(4)	1.1	-	ND(4)	ND(4)	ND(5)	ND(4)	ND(1)	-
107-06-2	1,2-Dichloroethane	0.6	ug/L		ND(4)	ND(1)	-	ND(4)	ND(4)	ND(5)	ND(4)	ND(1)	-
156-59-2	cis-1,2-Dichloroethene	5	ug/L	0.8	ND(4)	0.98 J	8	13	8.9	ND(5)	ND(4)	ND(1)	1
98-82-8	Isopropylbenzene	5	ug/L		ND(4)	ND(1)	-	ND(4)	ND(4)	ND(5)	ND(4)	ND(1)	-
110-82-7	Cyclohexane	--	ug/L	NA	ND(4)	ND(1)	-	5.6	ND(4)	NA	ND(4)	ND(1)	-
75-09-2	Methylene Chloride	5	ug/L	ND(2)	ND(4)	ND(1)	0.4 J	ND(4)	ND(4)	ND(20)	ND(4)	ND(1)	0.1J
79-01-6	Trichloroethene	5	ug/L	0.2 J	ND(4)	ND(1)	2	ND(4)	1.9 J	ND(5)	ND(4)	ND(1)	2
75-01-4	Vinyl chloride	2	ug/L	ND(1)	ND(4)	ND(1)	5	7.1	6.7 J	ND(10)	ND(4)	ND(1)	0.3J

Notes:

	Indicates concentration exceeds standard or guidance value.
(G)	Indicates guidance value.
NS	No standard or guidance value available.
ND	Indicates compound was not detected.
J	Indicates an estimated concentration.
ug/L	Micrograms per liter
(1)	taken from NYSDEC TOGs 1.1.1

TABLE 2
TONAWANDA PLASTICS
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2014, APRIL 2015
Semivolatile Organic Compounds

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-1 6/5/2001	MW-1 MW-1_2014-10-07 480-68758-2 TAL-BUFF 480-68758 WATER 10/7/2014	MW-1 MW-1_2015-04-22 480-78955-4 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-2 MW-2-2015-04-23 480-79068-4 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-3 6/9/2001	MW-3 MW-3_2014-10-07 480-68758-4 TAL-BUFF 480-68758 WATER 10/7/2014	MW-3 MW-3_2015-04-22 480-78955-3 TAL-BUFF 480-78955-1 WATER 4/22/2015
CAS NO.	COMPOUND		UNITS:							
	SEMIVOLATILES									
95-48-7	2-Methylphenol	1	ug/L	4 J	ND(4.6)	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
98-86-2	Acetophenone	--	ug/L	NA	ND(4.6)	ND(480)	ND(4.9)	NA	ND(4.7)	ND (4.8)
100-52-7	Benzaldehyde	--	ug/L	NA	ND(4.6)	ND(480) J	ND(4.9)	NA	ND(4.7)	ND (4.8)
92-52-4	Biphenyl	5	ug/L	NA	11	ND(480)	ND(4.9)	NA	ND(4.7)	ND (4.8)
117-81-7	Bis(2-ethylhexyl) phthalate	5	ug/L	ND(5)	ND (4.6)	ND(480)	ND(4.9)	14	ND(4.7)	ND (4.8)
86-74-8	Carbazole	--	ug/L	67	27	34 J	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
132-64-9	Dibenzofuran	--	ug/L	25	7.2 J	ND(970)	ND(9.7)	ND(5)	ND(9.5)	ND(9.5)
84-74-2	Di-n-butyl phthalate	50	ug/L	-	ND(4.6)	ND(480)	ND(4.9)	-	ND(4.7)	ND(4)
	PAHs									
91-57-6	2-Methylnaphthalene	--	ug/L	200E	6.3	120 J	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
83-32-9	Acenaphthene	20 (G)	ug/L	12	6.4	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
208-96-8	Acenaphthylene	--	ug/L	10J	8.2	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
120-12-7	Anthracene	50 (G)	ug/L	5J	4 J	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
56-55-3	Benzo(a)anthracene	0.002 (G)	ug/L	ND(5)	ND(4.6)	ND(480)	ND(4.9)	ND(5)	ND(4.7)	ND (4.8)
205-99-2	Benzo(b)fluoranthene	0.002 (G)	ug/L	ND(10)	ND(4.6)	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
191-24-2	Benzo(g,h,i)perylene	--	ug/L	ND(10)	ND(4.6)	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
206-44-0	Fluoranthene	50 (G)	ug/L	3J	1.7 J	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
86-73-7	Fluorene	50 (G)	ug/L	41	23	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
91-20-3	Naphthalene	10 (G)	ug/L	1300E	64	1400	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
85-01-8	Phenanthrene	50 (G)	ug/L	30	20	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)
129-00-0	Pyrene	50 (G)	ug/L	3J	1.9 J	ND(480)	ND(4.9)	ND(10)	ND(4.7)	ND (4.8)

TABLE 2
TONAWANDA PLASTICS
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2014, APRIL 2015
Semivolatile Organic Compounds

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-4 6/9/2001	MW-4 MW-4_2014-10-07 480-68758-9 TAL-BUFF 480-68758 WATER 10/7/2014	MW-4 MW-4-2015-04-23 480-79068-3 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-5 6/7/2001	MW-5 MW-5_2014-10-07 480-68883-1 TAL-BUFF 480-68883 WATER 10/7/2014	MW-5 MW-5_2014-10-07 480-68883-1 TAL-BUFF 480-68883 WATER 10/7/2014	MW-6 6/6/2001	MW-6 MW-6_2014-10-07 480-68758-5 TAL-BUFF 480-68758 WATER 10/7/2014	MW-6 MW-6_2015-04-22 480-78955-5 TAL-BUFF 480-78955-1 WATER 4/22/2015
CAS NO.	COMPOUND		UNITS:									
	SEMIVOLATILES											
95-48-7	2-Methylphenol	1	ug/L	ND(5)	ND(4.8)	ND(4.8)	ND(6)	ND(6.9)	ND(4.8)	ND(5)	ND(250)	ND(93)
98-86-2	Acetophenone	--	ug/L	NA	ND(4.8)	ND(4.8)	NA	ND(6.9)	ND(4.8)	NA	ND(250)	ND(93)
100-52-7	Benzaldehyde	--	ug/L	NA	ND(4.8)	ND(4.8)	NA	ND(6.9)	ND(4.8)	NA	ND(250)	ND(93) J
92-52-4	Biphenyl	5	ug/L	NA	ND(4.8)	ND(4.8)	NA	1 J	ND(4.8)	NA	ND(250)	25 J
117-81-7	Bis(2-ethylhexyl) phthalate	5	ug/L	10	ND(4.8)	ND(4.8)	4J	ND(6.9)	ND(4.8)	ND(5)	ND(250)	ND(93)
86-74-8	Carbazole	--	ug/L	ND(10)	ND(4.8)	ND(4.8)	15	ND(6.9)	ND(4.8)	15	ND(250)	14 J
132-64-9	Dibenzofuran	--	ug/L	ND(5)	ND(9.5)	ND (9.6)	9	ND(14)	ND(9.6)	5J	ND(490)	ND(190)
84-74-2	Di-n-butyl phthalate	50	ug/L	-	ND(4.8)	ND(4.8)	-	ND(6.9)	ND(4.8)	-	ND(250)	ND(93)
	PAHs											
91-57-6	2-Methylnaphthalene	--	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	ND(6.9)	ND(4.8)	ND(10)	73 J	72 J
83-32-9	Acenaphthene	20 (G)	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	ND(6.9)	ND(4.8)	1J	ND(250)	8.1 J
208-96-8	Acenaphthylene	--	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	ND(6.9)	ND(4.8)	3J	ND(250)	ND(93)
120-12-7	Anthracene	50 (G)	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	ND(6.9)	ND(4.8)	5J	ND(250)	ND(93)
56-55-3	Benzo(a)anthracene	0.002 (G)	ug/L	ND(5)	ND(4.8)	ND(4.8)	ND(6)	0.51 J	ND(4.8)	ND(5)	ND(250)	ND(93)
205-99-2	Benzo(b)fluoranthene	0.002 (G)	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	1.1 J	ND(4.8)	ND(10)	ND(250)	ND(93)
191-24-2	Benzo(g,h,i)perylene	--	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	0.66 J	ND(4.8)	ND(10)	ND(250)	ND(93)
206-44-0	Fluoranthene	50 (G)	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	0.77 J	ND(4.8)	3J	ND(250)	ND(93)
86-73-7	Fluorene	50 (G)	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	ND(6.9)	ND(4.8)	34	34 J	25 J
91-20-3	Naphthalene	10 (G)	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	ND(6.9)	ND(4.8)	720E	740	470
85-01-8	Phenanthrene	50 (G)	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	0.61 J	ND(4.8)	35	33 J	24 J
129-00-0	Pyrene	50 (G)	ug/L	ND(10)	ND(4.8)	ND(4.8)	ND(13)	0.76 J	ND(4.8)	3 J	ND(250)	ND(93)

TABLE 2
TONAWANDA PLASTICS
GROUNDWATER ANALYTICAL RESULTS
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Semivolatile Organic Compounds

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-7 6/6/2001	MW-7 MW-7_2014_10_06 480-68673-1 TAL-BUFF 480-68673 WATER 10/6/2014	MW-7 MW-7-2015-04-23 480-79068-2 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-8 6/5/2001	MW-8 MW-8_2014-10-07 480-68758-3 TAL-BUFF 480-68758 WATER 10/7/2014	MW-8 MW-8-2015-04-23 480-79068-6 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-9 6/6/2001	MW-9 MW-9_2014_10_06 480-68673-2 TAL-BUFF 480-68673 WATER 10/6/2014	MW-9 MW-9_2015-04-22 480-78955-7 TAL-BUFF 480-78955-1 WATER 4/22/2015
CAS NO.	COMPOUND		UNITS:									
	SEMIVOLATILES											
95-48-7	2-Methylphenol	1	ug/L	ND(5)	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	0.37 J	ND(240)
98-86-2	Acetophenone	--	ug/L	NA	ND(470)	ND(240)	NA	ND(100)	ND(4.7)	NA	0.56 J	ND(240)
100-52-7	Benzaldehyde	--	ug/L	NA	ND(470)	ND(240)	NA	ND(100)	ND(4.7)	NA	0.52 J	ND(240)
92-52-4	Biphenyl	5	ug/L	NA	ND(470)	ND(240)	NA	ND(100)	ND(4.7)	NA	0.86 J	ND(240)
117-81-7	Bis(2-ethylhexyl) phthalate	5	ug/L	ND(5)	ND(470)	ND(240)	ND(5)	ND(5)	ND(4.7)	ND(5)	ND(4.6)	ND(240)
86-74-8	Carbazole	--	ug/L	1J	ND(470)	18 J	ND(10)	ND(100)	ND(4.7)	1J	17	ND(240)
132-64-9	Dibenzofuran	--	ug/L	ND(5)	ND(950)	ND(480)	ND(5)	ND(250)	ND(9.4)	ND(5)	2.8 J	ND(480)
84-74-2	Di-n-butyl phthalate	50	ug/L	-	ND(470)	ND(240)	-	ND(100)	ND(4.7)	-	ND(4.6)	ND(240)
	PAHs											
91-57-6	2-Methylnaphthalene	--	ug/L	2J	80 J	100 J	ND(10)	ND(100)	ND(4.7)	ND(10)	1 J	ND(240)
83-32-9	Acenaphthene	20 (G)	ug/L	1J	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	8.5	ND(240)
208-96-8	Acenaphthylene	--	ug/L	ND(10)	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	0.38 J	ND(240)
120-12-7	Anthracene	50 (G)	ug/L	ND(10)	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	0.88 J	ND(240)
56-55-3	Benzo(a)anthracene	0.002 (G)	ug/L	ND(5)	ND(470)	ND(240)	ND(5)	ND(100)	ND(4.7)	ND(5)	ND(4.6)	ND(240)
205-99-2	Benzo(b)fluoranthene	0.002 (G)	ug/L	ND(10)	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	ND(4.6)	ND(240)
191-24-2	Benzo(g,h,i)perylene	--	ug/L	ND(10)	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	ND(4.6)	ND(240)
206-44-0	Fluoranthene	50 (G)	ug/L	ND(10)	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	1 J	ND(240)
86-73-7	Fluorene	50 (G)	ug/L	3J	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	4.3 J	ND(240)
91-20-3	Naphthalene	10 (G)	ug/L	220E	2000	1800	ND(10)	ND(100)	ND(4.7)	ND(10)	420	470
85-01-8	Phenanthrene	50 (G)	ug/L	2J	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	5	ND(240)
129-00-0	Pyrene	50 (G)	ug/L	ND(10)	ND(470)	ND(240)	ND(10)	ND(100)	ND(4.7)	ND(10)	0.61 J	ND(240)

TABLE 2
TONAWANDA PLASTICS
GROUNDWATER ANALYTICAL RESULTS
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Semivolatile Organic Compounds

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-10 6/5/2001	MW-10 MW-10_2014-10-07 480-68758-1 TAL-BUFF 480-68758 WATER 10/7/2014	MW-10 MW-10_2015-04-22 480-78955-6 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-11 6/7/2001
CAS NO.	COMPOUND		UNITS:				
	SEMIVOLATILES						
95-48-7	2-Methylphenol	1	ug/L	ND(10)	ND(4.9)	ND(4.8)	ND(10)
98-86-2	Acetophenone	--	ug/L	NA	ND(4.9)	0.56 J	NA
100-52-7	Benzaldehyde	--	ug/L	NA	ND(4.9)	ND(4.8)	NA
92-52-4	Biphenyl	5	ug/L	NA	ND(4.9)	ND(4.8)	NA
117-81-7	Bis(2-ethylhexyl) phthalate	5	ug/L	1J	ND(4.9)	ND(4.8)	12
86-74-8	Carbazole	--	ug/L	ND(5)	18	2.8 J	ND(5)
132-64-9	Dibenzofuran	--	ug/L	1J	7.7 J	1.8 J	ND(5)
84-74-2	Di-n-butyl phthalate	50	ug/L	ND(5)	ND(4.9)	0.32 J	ND(5)
	PAHs						
91-57-6	2-Methylnaphthalene	--	ug/L	15	ND(4.9)	ND(4.8)	ND(11)
83-32-9	Acenaphthene	20 (G)	ug/L	19	20	6.2	ND(11)
208-96-8	Acenaphthylene	--	ug/L	5J	0.97 J	0.55 J	ND(11)
120-12-7	Anthracene	50 (G)	ug/L	3J	1.5 J	ND(4.8)	ND(11)
56-55-3	Benzo(a)anthracene	0.002 (G)	ug/L	ND(5)	ND(4.9)	ND(4.8)	ND(5)
205-99-2	Benzo(b)fluoranthene	0.002 (G)	ug/L	ND(10)	ND(4.9)	ND(4.8)	ND(11)
191-24-2	Benzo(g,h,i)perylene	--	ug/L	ND(10)	ND(4.9)	0.76 J	ND(11)
206-44-0	Fluoranthene	50 (G)	ug/L	3J	1.8 J	3 J	ND(11)
86-73-7	Fluorene	50 (G)	ug/L	19	8.9	6.4	ND(11)
91-20-3	Naphthalene	10 (G)	ug/L	100	1.8 J	1.2 J	ND(11)
85-01-8	Phenanthrene	50 (G)	ug/L	17	3.4 J	ND(4.8)	ND(11)
129-00-0	Pyrene	50 (G)	ug/L	2J	1.3 J	0.47 J	ND(11)

Notes:

	Indicates concentration exceeds standard or guidance value
(G)	Indicates guidance value
NS	No standard or guidance value available
ND	Indicates compound was not detected
J	Indicates an estimated concentration
ug/L	Micrograms per liter
(1)	taken from NYSDEC TOGs 1.1.1

TABLE 3
TONAWANDA PLASTICS
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2014, APRIL 2015
Inorganics

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-1 6/5/2001	MW-1 MW-1_2014-10-07 480-68758-2 TAL-BUFF 480-68758 WATER 10/7/2014	MW-1 MW-1_2015-04-22 480-78955-4 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-2 MW-2-2015-04-23 480-79068-4 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-3 6/9/2001	MW-3 MW-3_2014-10-07 480-68758-4 TAL-BUFF 480-68758 WATER 10/7/2014	MW-3 MW-3_2015-04-22 480-78955-3 TAL-BUFF 480-78955-1 WATER 4/22/2015
CAS NO.	COMPOUND		UNITS:							
	VOLATILES									
	INORGANICS									
7429-90-5	Aluminum	--	mg/L	22.6	13.4	40.2	ND	ND (0.0118)	ND	0.076 J
7440-38-2	Arsenic	0.025	mg/L	ND(0.0016)	0.02	0.13	ND	ND (0.0016)	ND	ND
7440-39-3	Barium	1	mg/L	0.0122 J	0.012	0.0085	0.025	0.03 J	0.073	0.077
7440-41-7	Beryllium	0.003 (G)	mg/L	0.0029 J	0.001 J	0.0031	ND	0.00097 J	ND	ND
7440-43-9	Cadmium	0.005	mg/L	0.00095 J	0.0015 J	0.0045	ND	ND (0.000076)	ND	ND
7440-70-2	Calcium	--	mg/L	294	385	182	387	115	198	206
7440-47-3	Chromium	0.05	mg/L	0.131	0.12	0.23	0.0013 J	0.0015 J	0.001 J	0.0015 J
7440-48-4	Cobalt	--	mg/L	ND(0.00093)	0.015	0.051	0.0016 J	ND(0.00093)	ND	0.00099 J
7440-50-8	Copper	0.2	mg/L	0.0012 J	0.019	0.017	0.002 J	0.00089 J	ND	0.0056 J
7439-89-6	Iron	0.3	mg/L	307	272	220	1.1	0.228	3.6	1.4
7439-92-1	Lead	0.025	mg/L	ND(0.00066)	0.016	0.094	ND	0.00087 J	0.0032 J	ND
7439-95-4	Magnesium	35 (G)	mg/L	100	269	44.1 J	73.3	14.8	35.5	30.7
7439-96-5	Manganese	0.3	mg/L	4.52	12.4	2.2	1.2	0.363	1.2	0.21
7440-02-0	Nickel	0.1	mg/L	0.04 J	0.1	0.57 J	0.0028 J	0.00097 J	0.0013 J	0.0025 J
7440-09-7	Potassium	--	mg/L	4.37 J	4.5	3.5	3.1	5.69	6.8	14.2
7440-23-5	Sodium	20	mg/L	37.4	94.2	12.6	54.4	9.77	98.7	90.1
7440-62-2	Vanadium	--	mg/L	0.0075 J	0.0046 J	0.04	ND	0.00071 J	ND	0.0024 J
7440-66-6	Zinc	2 (G)	mg/L	0.277	0.55	1.2 J	0.0034 J	0.0032 J	ND(0.01)	0.0074 J
57-12-5	Cyanide, Total	0.2	mg/L	0.5	0.6	0.13	1.9	0.36	0.18	0.54

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-4 6/9/2001	MW-4 MW-4_2014-10-07 480-68758-9 TAL-BUFF 480-68758 WATER 10/7/2014	MW-4 MW-4-2015-04-23 480-79068-3 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-5 6/7/2001	MW-5 MW-5_2014-10-07 480-68883-1 TAL-BUFF 480-68883 WATER 10/7/2014	MW-5 MW-5_2014-10-07 480-68883-1 TAL-BUFF 480-68883 WATER 10/7/2014	MW-6 6/6/2001	MW-6 MW-6_2014-10-07 480-68758-5 TAL-BUFF 480-68758 WATER 10/7/2014	MW-6 MW-6_2015-04-22 480-78955-5 TAL-BUFF 480-78955-1 WATER 4/22/2015
CAS NO.	COMPOUND		UNITS:									
	VOLATILES											
	INORGANICS											
7429-90-5	Aluminum	--	mg/L	ND (0.0118)	ND	ND	ND (0.0118)	0.42	0.29	13.2	3.2	23.9
7440-38-2	Arsenic	0.025	mg/L	0.0078	ND	ND	0.002 J	ND	0.011 J	ND (0.0016)	ND	ND
7440-39-3	Barium	1	mg/L	0.0572 J	0.04	0.07	0.0626 J	0.037	0.041	0.0112 J	0.019	0.019
7440-41-7	Beryllium	0.003 (G)	mg/L	ND (0.000076)	ND	ND	ND (0.000076)	ND	ND	0.0017 J	0.00063 J	0.0024
7440-43-9	Cadmium	0.005	mg/L	ND (0.00024)	ND	ND	ND (0.00024)	ND	0.00091 J	ND (0.0024)	ND	ND
7440-70-2	Calcium	--	mg/L	290	121	289	170	116	150	490	220	329
7440-47-3	Chromium	0.05	mg/L	0.0036 J	ND	ND	0.0057 J	0.0038 J	0.0061	0.0661	0.035	0.069
7440-48-4	Cobalt	--	mg/L	ND (0.00093)	ND	0.0016 J	0.0026 J	0.004	0.0091	ND (0.00093)	0.0037 J	0.00079 J
7440-50-8	Copper	0.2	mg/L	ND (0.00049)	ND	ND	0.0056 J	ND	0.0078 J	ND (0.00049)	ND	ND
7439-89-6	Iron	0.3	mg/L	8	3.3	3.8	0.549	5.7	10.4	77.6	10.4	53.9
7439-92-1	Lead	0.025	mg/L	ND (0.00066)	0.0034 J	ND	0.0024 J	0.013	0.011	0.0013 J	0.0073 J	ND
7439-95-4	Magnesium	35 (G)	mg/L	43.8	23.8	51.9	182	209	107	5.1	28.7	41.6
7439-96-5	Manganese	0.3	mg/L	1.7	0.52	1.3	3.57	1	2.4	0.961	0.46	2.6
7440-02-0	Nickel	0.1	mg/L	0.0021 J	ND	0.0019 J	0.0447 J	0.022	0.037	0.0029 J	0.0018 J	0.011
7440-09-7	Potassium	--	mg/L	3.25 J	7.5	4.7	2.66 J	1.5	3	9.36	5.2	10.3
7440-23-5	Sodium	20	mg/L	56	17.2	32.3	66.5	74.2	18.3	30	18.8	16.6
7440-62-2	Vanadium	--	mg/L	0.0011 J	ND	ND	0.0029 J	ND	0.0029 J	0.0141 J	0.0055	0.011
7440-66-6	Zinc	2 (G)	mg/L	ND (0.00097)	ND(0.01)	0.0099 J	ND (0.00097)	0.019	0.012	0.0326	0.026	0.1
57-12-5	Cyanide, Total	0.2	mg/L	0.63	0.33	0.63	0.53	0.57	0.27	1.8	2.1	0.21

TABLE 3
TONAWANDA PLASTICS
GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2014, APRIL 2015
Inorganics

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-7 6/6/2001	MW-7 MW-7_2014_10_06 480-68673-1 TAL-BUFF 480-68673 WATER 10/6/2014	MW-7 MW-7-2015-04-23 480-79068-2 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-8 6/5/2001	MW-8 MW-8_2014-10-07 480-68758-3 TAL-BUFF 480-68758 WATER 10/7/2014	MW-8 MW-8-2015-04-23 480-79068-6 TAL-BUFF 480-79068-1 WATER 4/23/2015	MW-9 6/6/2001	MW-9 MW-9_2014_10_06 480-68673-2 TAL-BUFF 480-68673 WATER 10/6/2014	MW-9 MW-9_2015-04-22 480-78955-7 TAL-BUFF 480-78955-1 WATER 4/22/2015
CAS NO.	COMPOUND		UNITS:									
	VOLATILES											
	INORGANICS											
7429-90-5	Aluminum	--	mg/L	18.6	1.4	30	0.734	ND	ND	0.0162 J	0.16 J	0.099 J
7440-38-2	Arsenic	0.025	mg/L	0.044	0.096	0.019	0.0021 J	ND	ND	0.0021 J	0.01 J	ND
7440-39-3	Barium	1	mg/L	0.0081 J	0.017	0.0084	0.0317 J	0.067	0.043	0.0648 J	0.62	0.48
7440-41-7	Beryllium	0.003 (G)	mg/L	0.0027 J	0.00032 J	0.0026	ND 0.000076)	ND	ND	ND (0.000076)	ND	ND
7440-43-9	Cadmium	0.005	mg/L	0.0024 J	ND	0.00097 J	ND (0.00024)	0.00051 J	ND	ND (0.00024)	ND	ND
7440-70-2	Calcium	--	mg/L	309	233	252	91.2	97.5	123	246	110	49.8
7440-47-3	Chromium	0.05	mg/L	0.22	0.022	0.18	0.0068 J	ND	ND	0.0031 J	0.0017 J	0.0014 J
7440-48-4	Cobalt	--	mg/L	0.0297 J	0.023	0.0091	ND (0.00093)	0.0024 J	0.0011 J	ND (0.00093)	0.00078 J	0.00076 J
7440-50-8	Copper	0.2	mg/L	0.0096 J	0.0038 J	0.0066 J	0.0017 J	ND	ND	0.00091 J	0.003 J	0.0018 J
7439-89-6	Iron	0.3	mg/L	272	9.4	133	2.04	1.7	1.9	2.96	1.2	1
7439-92-1	Lead	0.025	mg/L	0.143	0.01	0.1	ND (0.00066)	ND	ND	0.00084 J	ND	ND
7439-95-4	Magnesium	35 (G)	mg/L	34.1	53.1	49.5	198	230	238	40.9	18.2	15.7
7439-96-5	Manganese	0.3	mg/L	2.15	0.25	2.1	0.105	0.33	0.56	2.72	0.5	0.18
7440-02-0	Nickel	0.1	mg/L	0.259	0.0045 J	0.1	0.003 J	0.0051 J	0.0031 J	0.0046 J	0.0029 J	0.004 J
7440-09-7	Potassium	--	mg/L	7.1	4.7	5.9	3.92 J	3.8	2.4	18.9	21	15.4
7440-23-5	Sodium	20	mg/L	12.8	66.2	40.9	131	142	142	36	104	112
7440-62-2	Vanadium	--	mg/L	0.0154	ND	0.0095	0.0021 J	ND	ND	0.00072 J	0.0017 J	0.0021 J
7440-66-6	Zinc	2 (G)	mg/L	0.597	0.014	0.53	ND (0.00097)	ND	0.009 J	ND (0.00097)	ND	0.0044 J
57-12-5	Cyanide, Total	0.2	mg/L	0.75	4.1	0.45	0.4	0.56	0.63	1.1	0.56	0.3

Honeywell - Tonawanda Plastics Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-10 6/5/2001	MW-10 MW-10_2014-10-07 480-68758-1 TAL-BUFF 480-68758 WATER 10/7/2014	MW-10 MW-10_2015-04-22 480-78955-6 TAL-BUFF 480-78955-1 WATER 4/22/2015	MW-11 6/7/2001
CAS NO.	COMPOUND		UNITS:				
	VOLATILES						
	INORGANICS						
7429-90-5	Aluminum	--	mg/L	5.9	1.3	82.2	0.0128 J
7440-38-2	Arsenic	0.025	mg/L	ND (0.0016)	0.0096 J	ND	0.0016 J
7440-39-3	Barium	1	mg/L	0.0288 J	0.019	0.0053	0.332
7440-41-7	Beryllium	0.003 (G)	mg/L	0.0023 J	ND	0.0086	ND (0.000076)
7440-43-9	Cadmium	0.005	mg/L	0.0030 J	ND	0.002	ND (0.00024)
7440-70-2	Calcium	--	mg/L	491	177	249	85.8
7440-47-3	Chromium	0.05	mg/L	0.00285	0.012	0.19	0.062 J
7440-48-4	Cobalt	--	mg/L	ND (0.00093)	0.0024 J	0.053	ND (0.00093)
7440-50-8	Copper	0.2	mg/L	0.0056 J	0.011	0.11	0.0043 J
7439-89-6	Iron	0.3	mg/L	885 E	22.8	357	0.0312 J
7439-92-1	Lead	0.025	mg/L	ND (0.00066)	0.0031 J	ND	ND (0.00066)
7439-95-4	Magnesium	35 (G)	mg/L	204	61.5	84.8	177
7439-96-5	Manganese	0.3	mg/L	36.6 E	3	9.3	0.914
7440-02-0	Nickel	0.1	mg/L	ND (0.00071)	0.0086 J	0.43	0.1142 J
7440-09-7	Potassium	--	mg/L	16	12.2	7.5	12.5
7440-23-5	Sodium	20	mg/L	23.1	166	114	34.4
7440-62-2	Vanadium	--	mg/L	0.0049 J	0.0038 J	0.029	0.0024 J
7440-66-6	Zinc	2 (G)	mg/L	0.358	0.041	1.3	ND (0.0097)
57-12-5	Cyanide, Total	0.2	mg/L	0.1	0.38	0.084	0.022

Notes:

	Indicates concentration exceeds standard or guidance value.
(G)	Indicates guidance value.
NS	No standard or guidance value available.
ND	Indicates compound was not detected.
J	Indicates an estimated concentration.
ug/L	Micrograms per liter
(1)	taken from NYSDEC TOGs 1.1.1

TABLE 4
TONAWANDA PLASTICS
SURFACE WATER ANALYTICAL RESULTS
OCTOBER 2014

Honeywell - Tonawanda Plastics Surface Water Analytical Data Detected Compound Summary		NYSDEC Class A Surface Water Standards/Guidance Values [1]	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SW-36 INF SW-36 INF100714 480-68758-7 TAL-BUFF 480-68758 WATER 10/7/2014	SW-36 INF duplicate SW-200 INF100714 480-68758-11 TAL-BUFF 480-68758 WATER 10/7/2014	SW-36 EFF SW-36 EFF100714 480-68758-6 TAL-BUFF 480-68758 WATER 10/7/2014	SW-48 INF SW-48 INF100714 480-68758-8 TAL-BUFF 480-68758 WATER 10/7/2014
CAS NO.	COMPOUND		UNITS:				
	VOLATILES						
	OTHER VOLATILES						
75-15-0	Carbon disulfide	--	ug/L	ND(4)	ND(4)	1.1 J	ND(1)
156-59-2	cis-1,2-Dichloroethene	5	ug/L	ND(4)	ND(4)	4	ND(1)
	SEMIVOLATILES						
	PAHs						
91-20-3	Naphthalene	10	ug/L	ND(5.1)	ND(5.1)	5	ND(4.7)
	INORGANICS						
7429-90-5	Aluminum	0.1	mg/L	0.27	0.18 J	ND	5.9
7440-39-3	Barium	1	mg/L	0.083	0.08	0.061	0.049
7440-41-7	Beryllium	0.003 (G)	mg/L	0.00077 J	ND	ND	ND
7440-43-9	Cadmium	0.005	mg/L	0.0011 J	ND	ND	ND
7440-70-2	Calcium	--	mg/L	115	111	102	27.5
7440-47-3	Chromium	0.05	mg/L	0.0026 J	0.0015 J	0.0019 J	0.0062
7440-48-4	Cobalt	0.005	mg/L	0.0015 J	ND	ND	0.0013 J
7439-89-6	Iron	0.3	mg/L	2.3	2.1	1.2	4.5
7439-92-1	Lead	0.050	mg/L	0.005 J	0.0032 J	0.0031 J	0.008 J
7439-95-4	Magnesium	35	mg/L	26	25.4	22.5	6.4
7439-96-5	Manganese	0.3	mg/L	0.55	0.52	0.38	0.097
7440-02-0	Nickel	0.1	mg/L	0.0028 J	0.0017 J	0.0018 J	0.0045 J
7440-09-7	Potassium	--	mg/L	8.7	8.6	8.1	3.6
7440-23-5	Sodium	20	mg/L	43.5	42.1	36.8	7.2
7440-62-2	Vanadium	0.014	mg/L	ND	ND	ND	0.0097
7440-66-6	Zinc	2 (G)	mg/L	ND	ND	ND	0.036
57-12-5	Cyanide, Total	0.2	mg/L	0.0057 J	ND	0.037	ND

Notes:

	Indicates concentration exceeds standard or guidance value.
(G)	Indicates guidance value.
NS	No standard or guidance value available.
ND	Indicates compound was not detected.
J	Indicates an estimated concentration.
ug/L	Micrograms per liter
(1)	taken from NYSDEC TOGs 1.1.1

TABLE 5
TONAWANDA PLASTICS
SEDIMENT ANALYTICAL RESULTS
OCTOBER 2014

Honeywell - Tonawanda Plastics Sediment Analytical Data 2014 Sampling Event SDG: 480-68673, 481-68758, 480-68883		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS-36 INF SS-36 INF100714 480-68758-12 TAL-BUFF 480-68758 SOIL 10/7/2014 11:45	
CAS NO.	COMPOUND	UNITS:		
	VOLATILES			
67-64-1	Acetone	ug/Kg	18	J
	SEMIVOLATILES			
56-55-3	Benzo(a)anthracene	ug/Kg	1800	J
205-99-2	Benzo(b)fluoranthene	ug/Kg	1700	J
206-44-0	Fluoranthene	ug/Kg	3400	J
85-01-8	Phenanthrene	ug/Kg	1600	J
	INORGANICS			
7429-90-5	Aluminum	mg/Kg	4480	
7440-38-2	Arsenic	mg/Kg	7	
7440-39-3	Barium	mg/Kg	90.5	
7440-41-7	Beryllium	mg/Kg	0.4	
7440-43-9	Cadmium	mg/Kg	0.37	
7440-70-2	Calcium	mg/Kg	33800	B
7440-47-3	Chromium	mg/Kg	55.9	
7440-48-4	Cobalt	mg/Kg	4.4	
7440-50-8	Copper	mg/Kg	19.6	
7439-89-6	Iron	mg/Kg	18100	B
7439-92-1	Lead	mg/Kg	24	
7439-95-4	Magnesium	mg/Kg	8740	B
7439-96-5	Manganese	mg/Kg	1690	B
7439-97-6	Mercury	mg/Kg	0.012	J
7440-02-0	Nickel	mg/Kg	21.1	
7440-09-7	Potassium	mg/Kg	795	
7782-49-2	Selenium	mg/Kg	1	J
7440-23-5	Sodium	mg/Kg	147	J
7440-28-0	Thallium	mg/Kg	1.1	J
7440-62-2	Vanadium	mg/Kg	9.5	
7440-66-6	Zinc	mg/Kg	81.4	B

APPENDIX A
WELL INSPECTION REPORTS

MONITORING WELL INTEGRITY CHECKLIST

September 17, 2014

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-1

PERSONNEL: JSP
DJC

WELL LOCATION
northing 42.97891
easting -78.93290

TOC elev 585.39

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	27"		
Well Construction	(PVC)		Stainless Steel
Well Diameter	2-inch	(4-inch)	Other_____
Depth to groundwater (TOC)	9.35		
Measured depth to bottom (TOC)	11.66		
Installed depth to bottom (TOC)	11.6		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure? BROKEN LID / New lock	(yes)	(no)
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition? NO PAD	~~yes~~ N.A	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	~~yes~~	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	(yes)	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

- PID Reading 63 ppm
- well plug does not fit
- broken things on casing lid

MONITORING WELL INTEGRITY CHECKLIST

September 17, 2014

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-2

PERSONNEL: JSP
DJC

WELL LOCATION
northing 42.98119
easting -78.93271

TOC elev 583.78

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	22"		
Well Construction	(PVC)		Stainless Steel
Well Diameter	2-inch	(4-inch)	Other_____
Depth to groundwater (TOC)	10.21		
Measured depth to bottom (TOC)	11.92		
Installed depth to bottom (TOC)	11.8		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure? New lock	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	(yes)	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID - 6.2 ppm

MONITORING WELL INTEGRITY CHECKLIST

September 17, 2014

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-3

PERSONNEL: GSO
DJC

WELL LOCATION
northing 42.97922
easting -78.93366

TOC elev 582.51

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	11"		
Well Construction	(PVC)		Stainless Steel
Well Diameter	2-inch	(4-inch)	Other_____
Depth to groundwater (TOC)	8.10		
Measured depth to bottom (TOC)	11.65		
Installed depth to bottom (TOC)	11.6		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure? New lock.	(yes)	no
3. Is the well stand pipe vertically aligned and secure? bent casing	yes	(no)
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition? no (1)	yes	(no)
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space? flowing into the well	(yes)	no
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	(yes)	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID = 150 ppm

(1) Bent steel stick-up casing

September 17, 2014

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-4

PERSONNEL: JSO
DJC

WELL LOCATION
northing 42.97425
easting -78.93333

TOC_{elev} = 583.87

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	29"		
Well Construction	(PVC)		Stainless Steel
Well Diameter	2-inch	(4-inch)	Other_____
Depth to groundwater (TOC)	5.77		
Measured depth to bottom (TOC)	12.01		
Installed depth to bottom (TOC)	11.9		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure? New Lock	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	(yes)	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID = 2.1 ppm

September 17, 2014

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-5

PERSONNEL: DSC

WELL LOCATION
northing 42.97882
easting -78.93262

TOC elev = 586.47

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	23"		
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____
Depth to groundwater (TOC)	8.31		
Measured depth to bottom (TOC)	11.16		
Installed depth to bottom (TOC)	11.1		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure?	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition? No Pad	(yes)	no
5. Are soils surrounding the well pad in good condition? N	(yes)	(no)
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space?	(yes)	no
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	(yes)	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID = 4.4 ppm

MONITORING WELL INTEGRITY CHECKLIST

September 17, 2014

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-6

PERSONNEL: JBC
DSC

WELL LOCATION
northing 42.97900
easting -78.93311

Toc elev = 584.62

WELL SPECIFICATIONS

Protective Casing	~~Above Ground~~		Flush Mounted
if above ground - stick up lenth	2.9'		
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other_____
Depth to groundwater (TOC)	8.86		
Measured depth to bottom (TOC)	11.46		
Installed depth to bottom (TOC)	11.4		

WELL INTEGRITY

1. Well identification clearly marked?	~~yes~~	no
2. Well covers and locks in good condition and secure? New lock	~~yes~~	no
3. Is the well stand pipe vertically aligned and secure?	~~yes~~	no
4. Are the concrete pad and surface seal in good condition?	~~yes~~	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition?	yes	no
7. is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

PID = 0 ppm

MONITORING WELL INTEGRITY CHECKLIST

September 17, 2014

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-7

PERSONNEL: JBC, DJC

WELL LOCATION

northing 42.97890
easting -78.93294

TOC elev = 585.24

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	4/2"		
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____
Depth to groundwater (TOC)	10.22		
Measured depth to bottom (TOC)	11.85		
Installed depth to bottom (TOC)	11.8		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure? new body	(yes)	no
3. Is the well stand pipe vertically aligned and secure? not vertical	yes	(no)
4. Are the concrete pad and surface seal in good condition?	yes	(no)
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	(yes)	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID = 20.3 ppm

S/u casing loose and at an angle

broken well pad

MONITORING WELL INTEGRITY CHECKLIST

September 17, 2014

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-8

PERSONNEL: DJE

WELL LOCATION
northing 42.97902
easting 78.93282 TOC elev 586.08

WELL SPECIFICATIONS

Protective Casing	Above Ground		Flush Mounted
if above ground - stick up lenth	24"		
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other_____
Depth to groundwater (TOC)	7.35		
Measured depth to bottom (TOC)	15.27		
Installed depth to bottom (TOC)	15.12		

WELL INTEGRITY

1. Well identification clearly marked?	yes	no
2. Well covers and locks in good condition and secure? New locks	yes	no
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition? cracked pad	yes	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition?	yes	no
7. is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

PID = 1.3 ppm

MONITORING WELL INTEGRITY CHECKLIST

September 17, 2014

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-9

PERSONNEL: JSD DJC

WELL LOCATION

northing 42.97898
easting -78.93320

TOC elev 585.13

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	35"		
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____
Depth to groundwater (TOC)	8.51		
Measured depth to bottom (TOC)	12.9		
Installed depth to bottom (TOC)	12.9		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure? new lock	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	(yes)	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID Reading = 1.2 ppm

September 17, 2014

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-10

PERSONNEL: JSS DSC

WELL LOCATION

northing 42.97900
easting -78.93254

TOC elev 586.28

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	32"		
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____
Depth to groundwater (TOC)	10.00		
Measured depth to bottom (TOC)	12.65		
Installed depth to bottom (TOC)	12.6		

WELL INTEGRITY

1. Well identification clearly marked? new dode	(yes)	no
2. Well covers and locks in good condition and secure?	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked? notch	(yes)	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	(yes)	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID = 95 ppm
removed old sample tubing

September 17, 2014

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-11

PERSONNEL: JBO
DPC

WELL LOCATION
northing 42.97892
easting -78.93334
Toc elev 584.80

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	2.1'		
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____
Depth to groundwater (TOC)	17.17		
Measured depth to bottom (TOC)	21.40		
Installed depth to bottom (TOC)	11.4		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure? new lock	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition? no pad	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	~~yes~~	(no) (1)
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	yes	(no)
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID = 0

PVC Casw was melted and bent above ground in the steel casing - still accessible

September 17, 2014

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-12

PERSONNEL: JSD
DPC

WELL LOCATION
northing 42.97936
easting -78.93362

TOC 581.48 ?
before bem extention

WELL SPECIFICATIONS

Protective Casing	~~Above Ground~~ 36"		Flush Mounted
if above ground - stick up lenth			
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other_____
Depth to groundwater (TOC)	—		
Measured depth to bottom (TOC)	—		
Installed depth to bottom (TOC)	12.12		

WELL INTEGRITY

1. Well identification clearly marked?	yes	no
2. Well covers and locks in good condition and secure? new locks	yes	no
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition? new concrete	yes	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition? (1)	yes	no
7. is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

PID = 0.8 ppm

(1) PVC casing had been melted within 1' TOC but is still accessible

- Blocked at 10' below TOC - dry

April 22, 2015

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-1

PERSONNEL: R. Pivnick

WELL LOCATION
northing
easting

WELL SPECIFICATIONS

Protective Casing	Above Ground		Flush Mounted
if above ground - stick up lenth	~2.0'		
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other_____
Depth to groundwater (TOC)	7.47		
Measured depth to bottom (TOC)	11.54		
Installed depth to bottom (TOC)			

WELL INTEGRITY

1. Well identification clearly marked?	yes	no
2. Well covers and locks in good condition and secure?	yes	no
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition?	yes	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition?	yes	no
7. Is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

PID = 0.0 ppm

MONITORING WELL INTEGRITY CHECKLIST

April 22, 2015

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-2

PERSONNEL: DH

WELL LOCATION

northing

easting

WELL SPECIFICATIONS

Protective Casing	Above Ground		Flush Mounted
if above ground - stick up lenth	1.9		
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other

Depth to groundwater (TOC)

Measured depth to bottom (TOC)

Installed depth to bottom (TOC)

WELL INTEGRITY

1. Well identification clearly marked?	yes	no
2. Well covers and locks in good condition and secure?	yes	no
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition?	yes	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition?	yes	no
7. is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

April 22, 2015

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-3

PERSONNEL: DU

WELL LOCATION
northing
easting

WELL SPECIFICATIONS

Protective Casing	Above Ground		Flush Mounted
if above ground - stick up lenth	1.25		
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other_____
Depth to groundwater (TOC)	3.96		
Measured depth to bottom (TOC)			
Installed depth to bottom (TOC)			

WELL INTEGRITY

1. Well identification clearly marked?	yes	no
2. Well covers and locks in good condition and secure?	yes	no
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition?	yes	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition?	yes	no
7. is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

MONITORING WELL INTEGRITY CHECKLIST

April 22, 2015

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-3j

PERSONNEL: JM

WELL LOCATION

northing

easting

WELL SPECIFICATIONS

Protective Casing	Above Ground		Flush Mounted
if above ground - stick up lenth	2.65		
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other_____

Depth to groundwater (TOC)

Measured depth to bottom (TOC)

Installed depth to bottom (TOC)

WELL INTEGRITY

1. Well identification clearly marked?	yes	no
2. Well covers and locks in good condition and secure?	yes	no
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition?	yes	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition?	yes	no
7. is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

April 22, 2015

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-5

PERSONNEL: DM

WELL LOCATION

northing

easting

WELL SPECIFICATIONS

Protective Casing	Above Ground		Flush Mounted
if above ground - stick up lenth	2.4		
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other_____
Depth to groundwater (TOC)	7.76		
Measured depth to bottom (TOC)			
Installed depth to bottom (TOC)			

WELL INTEGRITY

1. Well identification clearly marked?	yes	no
2. Well covers and locks in good condition and secure?	yes	no
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition?	yes	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition?	yes	no
7. is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

April 22, 2015

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-6

PERSONNEL: R. Purch

WELL LOCATION

northing

easting

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	~1.5 FT		
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____
Depth to groundwater (TOC)	8.21		
Measured depth to bottom (TOC)	11.35		
Installed depth to bottom (TOC)			

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure?	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	yes	(no)
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID = 0.0 ppm - CASING HEADSPACE

MONITORING WELL INTEGRITY CHECKLIST

April 22, 2015

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-7

PERSONNEL: R. Piura

WELL LOCATION

northing

easting

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	~ 3'		
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____
Depth to groundwater (TOC)	9.37		
Measured depth to bottom (TOC)	11.75		
Installed depth to bottom (TOC)			

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure?	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	yes	(no)
4. Are the concrete pad and surface seal in good condition?	yes	(no)
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	yes	(no)
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID HEADSPACE = 0.0 ppm in casing

April 22, 2015

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW - 8

PERSONNEL: R. Pivec

WELL LOCATION
northing
easting

WELL SPECIFICATIONS

Protective Casing	Above Ground		Flush Mounted
if above ground - stick up lenth	~ 1.5'		
Well Construction	PVC		Stainless Steel
Well Diameter	2-inch	4-inch	Other_____
Depth to groundwater (TOC)	3.38		
Measured depth to bottom (TOC)	15.20		
Installed depth to bottom (TOC)			

WELL INTEGRITY

1. Well identification clearly marked?	yes	no
2. Well covers and locks in good condition and secure?	yes	no
3. Is the well stand pipe vertically aligned and secure?	yes	no
4. Are the concrete pad and surface seal in good condition?	yes	no
5. Are soils surrounding the well pad in good condition?	yes	no
6. Is the casing in good condition?	yes	no
7. is the measuring point on the casing well marked?	yes	no
8. Is there standing water in the annular space?	yes	no
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	no

COMMENTS/RECOMMENDATIONS:

PID = 0.0 ppm

PAD CRACKED.

April 22, 2015

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-9

PERSONNEL: A. Purin

WELL LOCATION
northing
easting

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth			
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____
Depth to groundwater (TOC)	6.72		
Measured depth to bottom (TOC)	12.58		
Installed depth to bottom (TOC)			

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure?	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PID = 0.0 ppm - CAS. G HEADSPACE

April 22, 2015

MONITORING WELL INTEGRITY CHECKLIST

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-13

PERSONNEL: DU

WELL LOCATION

northing _____

easting _____

WELL SPECIFICATIONS

Protective Casing	(Above Ground)		Flush Mounted
if above ground - stick up lenth	2.50		
Well Construction	(PVC)		Stainless Steel
Well Diameter	(2-inch)	4-inch	Other_____

Depth to groundwater (TOC) _____

Measured depth to bottom (TOC) _____

Installed depth to bottom (TOC) _____

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure?	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	(yes)	no
7. is the measuring point on the casing well marked?	(yes)	no
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	no
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

MONITORING WELL INTEGRITY CHECKLIST

April 22, 2015

SITE NAME: Tonawanda Plastics **WELL IDENTIFICATION:** MW-11

PERSONNEL: R. Pucket

WELL LOCATION
northing ______
easting ______

WELL SPECIFICATIONS

Protective Casing	(Above Ground)	Flush Mounted	
if above ground - stick up lenth	~1.5'		
Well Construction	(PVC)	Stainless Steel	
Well Diameter	(2-inch)	4-inch	Other______
Depth to groundwater (TOC)	15.22		
Measured depth to bottom (TOC)	21.35		
Installed depth to bottom (TOC)	______		

WELL INTEGRITY

1. Well identification clearly marked?	(yes)	no
2. Well covers and locks in good condition and secure?	(yes)	no
3. Is the well stand pipe vertically aligned and secure?	(yes)	no
4. Are the concrete pad and surface seal in good condition?	(yes)	no
5. Are soils surrounding the well pad in good condition?	(yes)	no
6. Is the casing in good condition?	yes	(no)
7. is the measuring point on the casing well marked?	yes	(no)
8. Is there standing water in the annular space?	yes	(no)
9. Is the stand pipe vented at the base to allow drainage?	yes	(no)
10. Does the total sounded depth correspond to the well completion depth?	yes	no
11. Is the access down the well impeded or blocked?	yes	(no)

COMMENTS/RECOMMENDATIONS:

PVC CASING MOVES WITHIN PRO-CASING
PID = 0.0

APPENDIX B
WELL DEPTH AND
DEPTH TO WATER MEASUREMENTS

ATTACHMENT 2
TONAWANDA PLASTICS SITE
Well Elevation and Depth Measurements

Monitoring Well	TOC Elevation (ft-AMSL)	GS Elevation (ft-AMSL)	Latitude	Longitude	Measured Well Depth (feet) (9/17/2014)	DTW (feet) (9/17/2014)	GW Elev. (feet) (9/17/2014)	DTW (feet) 10/6/2014	GW Elev. (feet) 10/6/2014	DTW (feet) 4/22/2015	GW Elev. (feet) 4/22/2015
MW-1	585.39	583.14	42.97891	78.93290	11.66	9.35	576.04	9.50	575.89	7.47	577.92
MW-2	583.78	581.95	42.98119	78.93271	11.92	10.21	573.57	10.53	573.25	4.61	579.17
MW-3	582.51	581.59	42.97922	78.93366	11.65	8.10	574.41	8.44	574.07	3.95	578.56
MW-4	583.87	581.45	42.97925	78.93333	12.01	5.77	578.10	5.75	578.12	5.69	578.18
MW-5	586.47	584.55	42.97882	78.93262	11.16	8.31	578.16	8.43	578.04	6.02	580.45
MW-6	584.62	582.29	42.97900	78.93311	11.45	8.86	575.76	8.82	575.80	8.26	576.36
MW-7	585.24	581.74	42.97890	78.93294	11.85	10.22	575.02	9.26	575.98	7.50	577.74
MW-8	586.08	584.08	42.97902	78.93282	15.27	7.35	578.73	7.59	578.49	3.41	582.67
MW-9	585.13	582.21	42.97898	78.93320	12.90	8.51	576.62	8.61	576.52	6.75	578.38
MW-10	586.28	583.61	42.97900	78.93256	12.65	10.00	576.28	10.14	576.14	7.91	578.37
MW-11(1)	594.80		42.97892	78.93334	21.40	17.17	577.63	17.22	577.58	15.15	579.65
MW-12(2)			42.97936	78.93362		well is blocked at 10 feet					

(1) located on the new berm, casing was extended by 10 feet (TOC elevation estimated)
(2) located on the new berm, casing was extended by an undetermined length

APPENDIX C
SUMMARIES OF FIELD SAMPLING DATA

TONAWANDA PLASTICS
FIELD SAMPLING DATA
OCTOBER 2014

Well	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (celsius)	Oxidation Reduction Potential (mv)	Total Dissolved Solids (g/l)	Date	Time Sampled
MW-1	5.01	4.09	1483	0	16.96	-125	2.62	10/7/2014	9:30
MW-2	not sampled								
MW-3	6.93	2.39	1666	0	17.21	-326	1.53	10/8/2014	11:30
MW-4	7.17	0.59	-61	0	18.26	-153	0.378	10/7/2014	14:50
MW-5	7	2.5	15.4	2.01	15.13	-109	1.29	10/7/2014	10:25
MW-6	4.98	1.36	2.57	0.59	15.26	-133	0.872	10/7/2014	13:05
MW-7	4.61	1.99	2.57	0.4	16.36	-183	1.27	10/6/2014	15:05
MW-8	7.19	0.48	7.19	0.48	13.33	-318	1.48	10/7/2014	11:45
MW-9	8.3	0.563	15.4	0	15.91	-328	0.36	10/6/2014	15:40
MW-10	6.83	2.3	>9999	1.18	13.83	-130	1.47	10/7/2014	10:00
MW-11	not sampled								
MW-12	not sampled								

Notes:

Wells MW-2 and MW-11 were purged dry and did not recover sufficiently to sample the next day
Well MW-12 has a blockage 10 feet down from the top of casing

TONAWANDA PLASTICS
FIELD SAMPLING DATA
APRIL 2015

Well	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (celsius)	Oxidation Reduction Potential (mv)	Total Dissolved Solids (g/l)	Date	Time Sampled
MW-1	2.63	3.11	0	0	8.48	285	1.98	4/22/2015	17:30
MW-2	7.07	2.06	0	0	5.73	4	1.34	4/22/2015	12:50
MW-3	8.35	1.45	0	1.49	8.97	-22	0.827	4/22/2015	12:20
MW-4	7.29	1.53	0	0	6.43	0.117	0.978	4/23/2015	11:25
MW-5	7.99	1.84	0	0.48	9.26	0.53	1.18	4/23/2015	13:45
MW-6	4.06	1.79	0	0	9.5	93	1.14	4/22/2015	14:20
MW-7	2.37	2.76	0	0.63	6.35	166	1.77	4/23/2015	10:50
MW-8	8.33	2.23	0	0.68	7.48	-65	1.43	4/23/2015	14:25
MW-9	7.73	0.668	29.3	0	8.18	-205	0.427	4/22/2015	15:45
MW-10	2.89	3.36	0	0.45	8.07	344	2.15	4/22/2015	15:40
MW-11	not sampled								
MW-12	not sampled								

Notes:

MW-11 was purged dry and did not recover sufficiently to sample the next day
Well MW-12 has a blockage 10 feet down from the top of casing

APPENDIX D
WASTE MANIFESTS

VEOLIA ENVIRONMENTAL SERVICES

SHIPPING DOCUMENT	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Shipping Document Tracking Number
	[illegible]	1	[illegible]	ZZ 00346196

5. Generator's Name and Mailing Address

HONEYWELL
[illegible] RIVER ROAD
TONAWANDA, NY [illegible]

Generator's Phone: [illegible]

Generator's Site Address (if different than mailing address)

SAME

6. Transporter 1 Company Name: [illegible] — U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: [illegible] — U.S. EPA ID Number: [illegible]

8. Designated Facility Name and Site Address

VEOLIA ES TECHNICAL SOLUTIONS
[illegible] INFIRMARY ROAD
WEST CARROLLTON, OH 45449

Facility's Phone: [illegible] — U.S. EPA ID Number: [illegible]

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Codes
	1. NON REGULATED LIQUID	2	DM	[illegible]	F	NONE
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

[illegible]

15. 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: [illegible] Signature: [illegible] Month Day Year: [illegible]

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Shipment

Transporter 1 Printed/Typed Name: [illegible] Signature: [illegible] Month Day Year: [illegible]

Transporter 2 Printed/Typed Name: Signature: Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Shipping Document Tracking Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Report Management Method Codes (i.e., codes for treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of shipment except as noted in Item 18a

Printed/Typed Name Signature Month Day Year

GENERATOR / SHIPPER'S INITIAL COPY

VEOLIA
ENVIRONMENTAL SERVICES

PACKING SUMMARY

Generator Number: 619087
HONEYWELL
3021 RIVER ROAD
TONAWANDA, NY 14150
Attn: MARK SWEITZER
EPA ID: NYD[illegible]

Manifest Number: ZZ00340196
Field System ID: TO
Work Order Number: 2145305000
Date Shipped: 01/06/2015

Container#: T0-2143305000-001 | Waste Area: | Manifest Page/Line: 01 / 1

WP: 710137 | Disposal Code: SRRWTELIQHIH | PHY State: L

Date Accumulated: 01/05/2015 | Gen Drum ID:

Shipping Name: NON REGULATED LIQUID

No. of Containers: 02 | Outer Container: 051A1[illegible]DM | Inner Container:

Primary Waste Codes: NONE,B | PCB Serial #: | OOS Date: / /

Total Cntns Wt: 800 | SIC: 2869 | Source: G39 | Form: W113 | System: H141 | Cubic Ft: 7.36

Individual Container Weights: 400; 400 (POUNDS)

Units	Container Size	Net Weight	Chemical Name	EPA/State Codes
1	55 GAL		BENZENE [92B] NAPHTHALENE [200B] CYANIDE [4.1B] WATER [100%]	NONE,B

FORM# VES-6

VEOLIA
ENVIRONMENTAL SERVICES

SHIPPING DOCUMENT	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Shipping Document Tracking Number
				ZZ 00346343

GENERATOR

5. Generator's Name and Mailing Address

HONEYWELL
3621 RIVER ROAD
TONAWANDA NY

Generator's Site Address (if different than mailing address)

SAME

Generator's Phone:

6. Transporter 1 Company Name

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

VEOLIA ES TECHNICAL SOLUTIONS
4401 DARROW ROAD
WEST CARROLLTON, OH

U.S. EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Codes
	1. NON REGULATED LIQUID		DM			NONE
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

15. **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

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Shipment

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Shipping Document Tracking Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month | Day | Year

19. Report Management Method Codes (i.e., codes for treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of shipment except as noted in Item 18a

Printed/Typed Name | Signature | Month | Day | Year

GENERATOR / SHIPPER'S INITIAL COPY

VEOLIA

Activity Report

JOB NO: 2346675000 WO NO: 2346675000
BILL DOC NO YU5061270A
GENERATOR NO 619067 EPA ID: NYD051816262

BILL TO: HONEYWELL
101 COLUMBIA ROAD
MORRISTOWN, NJ 07962
(973) 455-3931

JOB SITE: HONEYWELL
3821 RIVER ROAD
TONAWANDA, NY 14150
(215) 807-5453

CONTACT: ACCOUNTS PAYABLE

CONTACT: MARK SWEITZER

MANIFEST NUMBER(S):
Non-Disposals

CUSTOMER P.O. NUMBER	PROJECT NUMBER	SHIP DATE	TERR.
		06/12/2015	NY2

DESCRIPTION	# CONT.	CONT./CODE	QTY	UOM	PG/LN	WASTE AREA
06/16/2015 Manpwr - MATERIAL PICK-UP CHARGE		989	1@1	EACH	/	
06/16/2015 Misc - ENERGY & SECURITY SURCHARGE		3129	1	PERCNT	/	
06/16/2015 Misc - STATE REGULATORY FEES		4419	1	EACH	/	

Total Hours: 0

Comments:

Signature:

Print Name:

Veolia Environmental Solutions is permitted for and has capacity to accept waste listed above in container quantities.

FORM# VES-6

APPENDIX E
TECHNICAL MEMORANDUM

TECHNICAL MEMORANDUM

DATE: DECEMBER 15, 2015

TO: TONAWADA PLASTICS TEAM

FROM: PARSONS

Overview

This memorandum summarizes a basic analytical fate and transport model describing potential volatile organic compounds (VOCs) in shallow groundwater at the Tonawanda Plastics Site (Site). The purpose of the model is to provide an estimate of transport potential at the Site with presently available groundwater data.

The results presented in this memorandum indicate the plume is steady state (no longer growing) and has reached a maximum length of approximately 100 feet from the source area. Given the conservative nature of this model, the plume is likely less than 100 feet long. The closest offsite potential receptor is the drainage ditch (outfall ditch), approximately 450 north of the plume.

Site Characteristics

Available data show the site-specific soils consist of a thin layer of silt, slag and fill (averaging 8 feet thick) overlying glaciolacustrine silt and clay (OBG, 2002). VOCs (mainly benzene toluene, ethylbenzene and xylenes (BTEX) have been detected in shallow groundwater. The groundwater, relevant to the chemicals of concern (COCs) and this analysis, is a thin, saturated lens on top of the low permeability clay and is presumably perched water (i.e. hydraulically disconnected from the regional water bearing zone). The silt and clay rest on top of the Camillus Shale (ERM, 1992 in OBG 2002). This water bearing zone of interest is not a potable source and is reported to be hydraulically isolated from bedrock (OBG, 2002). Local water supplies are supplied by municipal water authorities, therefore there are no known drinking water receptors.

Model Solver

This model was developed using BIOSCREEN-AT (an open source code developed by GSI), which is nearly identical to BIOSCREEN (distributed by USEPA), with the exception of the mathematical solution. BIOSCREEN-AT utilizes a mathematically exact solution (ATRANS) for the solute transport equation, thereby avoiding the use of the Domenico model (used in BIOSCREEN) which is a mathematic approximation. The difference between the two models (BIOSCREEN-AT versus BIOSCREEN) was determined to be negligible during the Site model development; however, the more robust version (BIOSCREEN-AT) was used and its results are reported herein.

Model Inputs

The model was established using conservative values for each required input parameter, in order to produce a scenario that avoids under-predicting COC transport. Site concentrations from monitoring wells were used to guide the selection of parameters and produce a reasonable fit between the calculated result and actual plume concentrations. A formal calibration, however, was not completed. To provide a reasonable match between the Site

data and the simulation, the solute half-life was adjusted, as this parameter lumps several input values together (e.g. dispersivity, sorption, biodegradation, etc.) (USEPA, 1996).

The following table lists the relevant values used in the model. Note that benzene was selected to represent Site COCs, as it is likely to be the contaminant that travels furthest and is, therefore, the most conservative parameter in terms of potential transport and potential risk.

Table 1 Summary of BIOSCREEN-AT values

Parameter	Model Value	Published range	Remarks
Hydraulic Conductivity	5.0×10^{-5} cm/sec	1.0 x 10-4 to 1.0 x 10-6	Fetter (1994). Note: OBG report lists the clay as 10-7, but this model assumes transport is within higher permeability silt and fill above the clay.
Gradient	0.023	NA	Measured from OBG map, near the high end of typical range
Porosity	20%	15- 30%	NA
Retardation Factor	1.1 (unitless)	1 – 2	BIOSCREEN Manual (USEPA)
Solute half life	1 year	0.2 – 2 years	BIOSCREEN Manual (USEPA) Adjusted to fit data
Source Concentration	100 µg/L	NA	Higher than all well concentrations
Source decay	None	NA	Infinite source mass

Results

The model and results of the BIOSCREEN-AT calculations are presented in Figures 1 and 2. The following key observations are provided to assess the level of impacts from the VOC plume:

- Comparison between three measured concentrations (projected to centerline) and simulated concentrations indicates the model effectively simulates observed conditions (see Figure 2),
- Conservative benzene transport rates suggest that concentrations above 1 µg/l extend approximately a maximum of 100 feet downgradient of the source area, and
- Provided the degradation rate and time from release, the model suggests that the plume has reached steady-state conditions; therefore no further migration of the COCs is expected.

The observations of the benzene transport model are reasonable based on typical transport rates of benzene in a low groundwater velocity environment.

Assumptions

The following assumptions are made regarding the analysis:

- Use of benzene as an analog for other groundwater constituents is appropriate.
- The source area has a relatively low groundwater concentration (100 µg/l located approximately 30 feet up gradient of MW-6 and MW-7).
- The source is a finite area and does not exist downgradient
- The hydraulic conductivity is estimated at 5×10^{-5} cm/sec; this value is considered conservative when compared to published conductivity ranges for similar grain size material.
- Degradation of benzene follows a 1^{st} order decay mechanisms.
- Groundwater flow is lateral and in the direction of the potentiometric contour map.
- This analysis does not consider groundwater discharging to the sewer lines, or other anthropogenic conduits.
- Minor concentrations of chlorinated solvent VOCs have been detected at the site, but are slightly above the groundwater standard and assumed to be negligible and related to undetermined sources in this industrial area.

Conclusions

The Site COCs exist in the shallow, perched, low hydraulic conductivity zone above the glaciolacustrine silt and clay. The transport mechanisms are slow due to the low permeability of the soils and the typical degradation rates of the COCs. Using a conservative approach to model the parameters, a sufficient and acceptable fit to Site data was achieved. The results indicate the plume is in a steady state (no longer growing) and has reached a maximum length of approximately 100 feet from the source area. Given the conservative nature of this model, the plume is likely less than 100 feet long. The closest offsite potential receptor is the drainage ditch (outfall ditch), approximately 450 north of the plume.

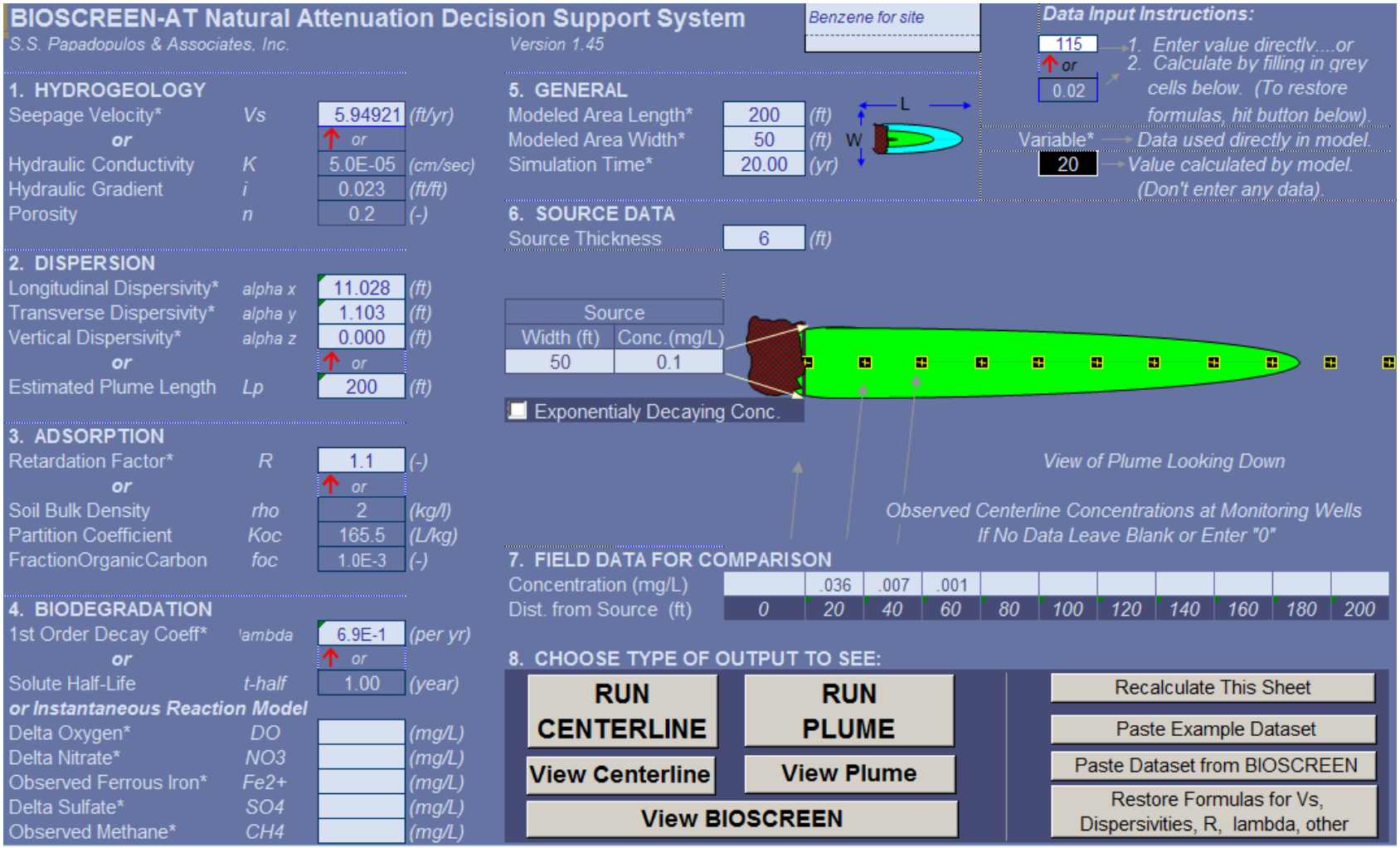

Figure 1: BIOSCREEN-AT Model interface with input parameters

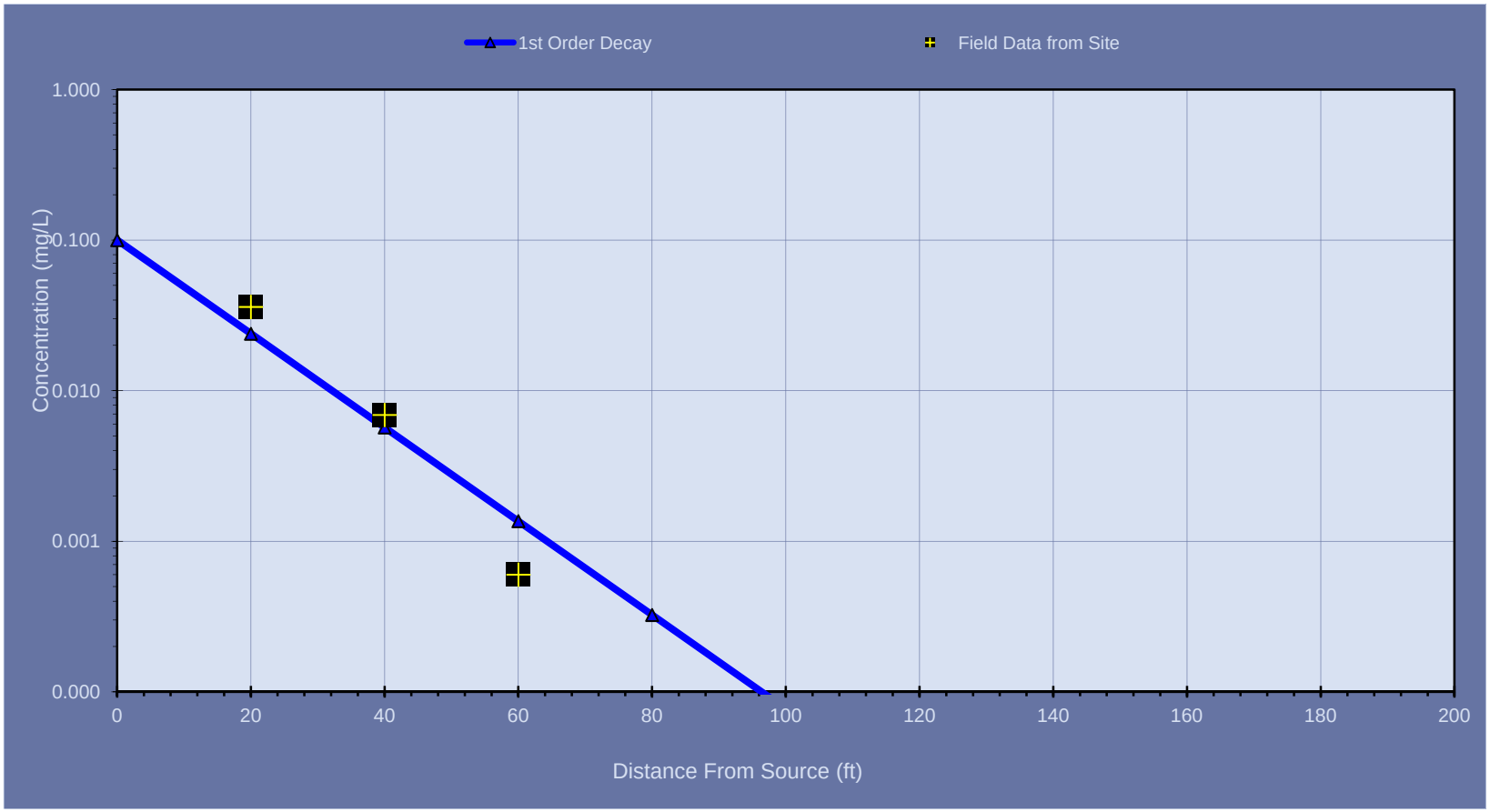

Figure 2 BIOSCREEN-AT results and site concentration data showing actual and simulated benzene concentrations