



March 20, 2014

Ms. Ronda L. Blayer
Michigan Department of Environmental Quality (MDEQ)
Remediation Division
Constitution Hall – Atrium North
525 West Allegan Street
Lansing, Michigan 48933

**Remedial Investigation Report - Addendum No. 1
Supplemental Investigation – Former Waste Neoprene Landfill
and Former Basin Sludge Storage Area
DuPont Montague Works
Montague, Michigan**

Dear Ms. Blayer:

On behalf of E.I. du Pont de Nemours and Company (DuPont), URS is submitting three copies of this report, which presents the results of data collection from the Former Waste Neoprene Landfill and Former Basin Sludge Storage Area at the DuPont Montague site in Montague, Michigan. Supplemental investigation results conducted at Pierson Creek Landfill and Bury Pit Landfill will be presented under separate cover.

If you have any questions or comments, please contact me at 713.914.6363 or Thomas Stilley at 302.999.6209.

Sincerely,

A handwritten signature in blue ink, appearing to read "George Gregory III".

George E. Gregory III
Senior Geologist/Project Manager
URS Corporation

cc: T. Stilley (DuPont)
S. Buda (MDEQ)
D. Bridgford (MDEQ)
File: 507046



Memorandum

March 13, 2014

To: Tom Stille, DuPont CRG Project Director

DuPont Project No.: 507756

From: George Gregory and Dana McCue, URS

URS Project No.: 18984840

Subject: **Remedial Investigation Report - Addendum No. 1
Supplemental Investigation – Former Waste Neoprene Landfill
and Former Basin Sludge Storage Area
DuPont Montague Site, Montague, Michigan**

The DuPont Montague facility (site) is a former chemical manufacturing facility located in Muskegon County, Michigan (see Figure 1). This site is subject to corrective action under Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), and its administrative rules. To date, E.I. du Pont de Nemours and Company (DuPont) has been conducting corrective action at the facility on a voluntary basis with the Michigan Department of Environmental Quality (MDEQ), Waste and Hazardous Materials Division, providing oversight as necessary. The site investigations have been completed in accordance with the protection standards and relevant processes of MDEQ Part 201 to meet the corrective action obligations under Part 111.

A remedial investigation (RI) was conducted at the facility in October 2010 and in June and July 2011 (referred to here as the 2010/2011 RI). The purpose of the 2010/2011 RI was to address data gaps identified in the November 2006 Prioritization of Waste Management Units and Areas of Concern, DuPont Montague (DuPont Corporate Remediation Group (CRG), 2006). Activities conducted during the 2010 and 2011 fieldwork were proposed in the Remedial Investigation Work Plan for Waste Management Units and Areas of Concern, DuPont Montague Site (2007 RI Work Plan) submitted in February 2007.

Findings from the 2010-2011 work were documented in the DRAFT 2010/2011 Remedial Investigation Report (RI Report), which was submitted to MDEQ in June 2012. The RI Report recommended additional investigations to address data gaps identified in four areas: Bury Pit Landfill, Pierson Creek Landfill, Waste Neoprene Landfill, and Pierson Creek. In addition, MDEQ, in a letter to DuPont dated May 23, 2013, requested the collection of additional data at the Former Basin Sludge Storage Area and Former Neoprene Waste Landfill. The purpose of this memorandum is to present the findings of the investigations conducted at the Former Waste Neoprene Landfill and Former Basin Sludge Storage Area. Supplemental investigation results conducted at Pierson Creek Landfill and Bury Pit Landfill will be presented under separate cover.

2013 Remedial Investigation Activities

The purpose of the 2013 RI activities at the Former Waste Neoprene Landfill and Former Basin Sludge Storage Area was to address specific data gaps identified in the RI Report and based on feedback from MDEQ. The following data gaps relevant to the Former Waste Neoprene Landfill and Basin Sludge Storage Area were identified:

Waste Neoprene Landfill Objective: Collect surface and subsurface soil from within the footprint of the Former Waste Neoprene Landfill and analyze for a target analyte list, which includes constituents associated with neoprene (such as chlorinated butenes and copper), to further characterize site-related constituents within the landfill and evaluate whether there has been a potential for release from the unit. (URS, 2013).

MDEQ concurred with this objective during a June 25, 2013 conference call and asked that a data set of eight samples be obtained.

Former Basin Sludge Storage Area Objective:

To verify that no residual constituents of interest are present at concentrations exceeding applicable screening levels, the native soils underlying the Former Basin Sludge Area will be sampled for laboratory analysis. An evaluation of the analytical results will be performed to determine if the Former Basin Sludge Area has negatively impacted the underlying native soils. (URS, 2007).

The objective developed for the Former Basin Sludge Storage Area was developed after MDEQ commented during the June 25, 2013 conference call that three soil samples had been collected in June 2011 (as per the 2007 Work Plan) and asked that nine additional locations be randomly selected from within the footprint of the former unit. These soil samples were to be collected for the same analytical list as the three samples collected in June 2011. Field activities were completed using a track-mounted Geoprobe rig in two mobilizations: June 20th, 2013 (Former Waste Neoprene Landfill) and September 30 and October 1, 2013 (Former Basin Sludge Storage Area). The sampling locations are shown on Figure 2. Photographs taken during the fieldwork show the surface conditions of these areas (see Appendix A).

The following section provides a discussion of the methods used to complete these tasks, the analytical parameters, and any deviations to the intended scope of work.

Geoprobe Soil Sampling – Former Waste Neoprene Landfill

Figure 2 displays the locations of the eight Geoprobe borings performed on June 20, 2013 in the Former Waste Neoprene Landfill. The identification of each boring in this sampling program was prefixed with “2013FNL-”. These locations are on a 30-foot grid spacing with the grid axis rotated 60 degrees west of north. Each boring was advanced continuously using 5-foot long, 2-inch diameter macrocore equipment. A URS field geologist logged each core continuously for lithology and used a photoionization detector (PID) to screen soils for potential volatile organic compounds (VOC). Boring logs from these Geoprobe borings are included as Appendix B.

Initially, both surface and subsurface soil samples were planned to be collected from the footprint of the Former Waste Neoprene Landfill; however, all eight locations

had at least 1 foot of lime fill from the lime pile. For this reason, surface samples were not collected because there was no reason to expect constituents related to the Former Waste Neoprene Landfill to be present in the lime. After each soil boring had been confirmed to have reached native sandy soil (or refusal), soil sample intervals were selected. Samples were typically selected from the uppermost 1 to 2 feet of native sandy soil beneath fill layers (either lime or in some cases, sand with apparent rubber waste material). Native soil was frequently identifiable by evidence such as a buried soil profile (such as buried grass roots). After the soil boring was complete, the Geoprobe rig operator backfilled all borings with bentonite grout.

At one location (2013FNL-06), the rubber waste could not be completely penetrated, and the sample interval selected (5 to 10.5 feet) contained soil with waste rubber. It had previously been understood that the waste neoprene had been removed. This interval was selected for sampling to provide information for what material remains present under the lime.

Soil samples were collected by the URS field geologist, preserved on ice, and shipped to Eurofins Lancaster Laboratories (Lancaster) of Lancaster, Pennsylvania. Lancaster analyzed samples for constituents listed on “Table 4 - Summary of Laboratory Analytes Former Neoprene Landfill” of the 2013 Supplemental Remedial Investigation Sampling Plan.

Field notes were recorded in weather-resistant notebooks and are provided in Appendix C. Results from the laboratory analyses are presented in Appendix D.

Geoprobe Soil Sampling – Former Basin Sludge Storage Area

Figure 2 displays the locations of the nine Geoprobe borings performed September 30 to October 1, 2013 in the Former Basin Sludge Storage Area. The identification of each boring in this sampling program was prefixed with “2013BSS-”. Each boring was advanced continuously using 5-foot long, 2-inch diameter macrocore equipment. A URS field geologist logged each core continuously for lithology. Based on past findings in this unit, a PID was not used to screen soils for potential VOCs. Boring logs from these Geoprobe borings are included as Appendix E.

Similar to the former Waste Neoprene Landfill, the surface at this unit is a mix of sand and lime fill (as much as 7 feet at boring 2013BSS-01). Lime thicknesses were less as distance increased from the Lime Pile and location 2013BSS-07 had no evidence of lime fill.

After each soil boring reached native sandy soil (or refusal), soil sample intervals were selected. All borings with the exception of 2013BSS 01 (hit refusal at a depth of 9 feet) were completed to a depth of 10 feet below ground surface. Samples were selected from the uppermost 1 to 2 feet of native sandy soil beneath lime fill or other potential evidence of fill activity. After the soil boring was complete, the drill rig operator backfilled all borings with bentonite grout.

Soil samples were collected by the URS field geologist, preserved on ice, and shipped to Lancaster. Lancaster analyzed samples for constituents listed on “Table 3 – Freon and Neoprene Related Constituents” of the 2007 Remedial Investigation Work Plan for Waste Management Units and Areas of Concern.

Field notes were recorded in weather-resistant notebooks and are provided in Appendix F. Results from the laboratory analysis are presented in Appendix G.

Data Quality Assessment and Data Evaluation

Data Quality Assessment

Analytical data collected during June and October 2013 were reviewed in accordance with the DuPont In-House Data Review (DDR) process to determine data usability. The DDR process consisted of an evaluation of the data based on hold times, blank contamination, matrix spike (MS)/matrix spike duplicate (MSD) recoveries, MS/MSD relative percent differences, laboratory control spike/control spike duplicate (LCS/LCSD) recoveries, LCS/LCSD relative percent differences, and surrogate recoveries.

Based on the quality assurance (QA)/quality control (QC) data review, the sampling results presented in this memorandum are considered usable for the project objectives with some of the following data qualifiers:

- B – Not detected substantially above the level reported in the laboratory or field blanks.
- J – Analyte present; reported value may not be accurate or precise.
- U – Not detected at the stated reporting limit.
- UJ – Not detected. Reporting limit may not be accurate or precise.

Additional information regarding these qualifications is contained in the DDR narrative report(s) included with the analytical data in Appendices D and G. As detailed in the DDR narrative reports, no significant QC problems were noted during the data review. Overall, the data are acceptable for use with minor qualifications added during the data review process. These qualifications are listed in the DDR narrative.

Data Evaluation

The data evaluation process included a comparison of constituent concentrations to applicable Generic Cleanup Criteria as defined in the Part 201 Administrative Rules (R 299.1 to R 299.50). Each set of generic criteria corresponds to a specific exposure or migration pathway, including drinking water, direct contact, inhalation, groundwater protection, groundwater to surface-water interface, or protection of ecological receptors. Additionally, data were also compared to appropriate background concentrations. The quantitative comparison (i.e., data screening) was used to determine if a release from the waste management unit had occurred and whether this release presents a potential concern for human health or the environment.

The screening levels listed in the following paragraph were used during the evaluation presented herein. Exceedances of these screening levels do not in of themselves indicate that an unacceptable exposure exists. Rather, exceedances of the screening levels identifies constituents of potential concern (COPCs) and indicates

the need to further evaluate potential human and/or ecological exposure to these COPCs.

Future land use is anticipated to remain non-residential. Current site operations are limited to those involving the groundwater pump-and-treat system. During a conference call with MDEQ on January 23, 2014, a comparison to residential criteria was requested. As a result, constituents detected in soil were compared to both non-residential and residential values for the following applicable Generic Cleanup Criteria:

- Direct Contact Criteria
- Infinite Source Volatile Soil Inhalation Criteria
- Particulate Soil Inhalation Criteria
- Soil-to-Groundwater Protection Criteria for Drinking Water

Soil concentrations for inorganics were also compared to Statewide Background Default Levels. Inorganic constituents detected above applicable Generic Cleanup Criteria but below Statewide Background Default Levels were not considered an exceedance.

Consistent with the conclusions of the RI, a comparison to ecological screening criteria was not conducted for either waste management unit. Potential ecological exposure pathways have not been identified.

2013 Remedial Investigation Results

Former Waste Neoprene Landfill

Unit Description

The Former Waste Neoprene Landfill is located due north of the Lime Pile (see Figure 1). The Former Waste Neoprene Landfill operated during the 1960s as a disposal unit for waste from site neoprene operations. This landfill was unlined and measured approximately 75 by 50 feet. In 1976, the neoprene waste material was removed, treated, and disposed of following appropriate regulations. The excavation was backfilled with lime and sand (DERS, 1997).

Summary of Previous Investigations

In 1996, the MDEQ contacted DuPont and requested that environmental samples be collected to determine if residual material of concern associated with this waste burial pit remained in the soils.

In 1996, three soil borings were installed in the Former Waste Neoprene Landfill area for sampling and lithologic characterization. Within two borings, soil samples were collected from the surface [0 to 1 foot below ground surface (bgs)] and at a depth of 4 to 5 feet bgs. All 1996 soil samples were analyzed for chloroprene, vinyl chloride, tetrahydrofuran, and toluene. None of the site-specific constituents were detected in the soil samples (URS, 2012).

2013 Results

As discussed earlier, eight borings were installed at the unit to confirm the absence of neoprene-related constituents (see Figure 2). Analytical results are summarized in Table 3 (residential) and Table 4 (non-residential).

As shown in the tables, eight VOCs, one semi-volatile organic compound (SVOC), 15 metals, cyanide, fluoride, and chloride were detected. However, chlorinated butenes, which were part of the expanded analyte list, were not detected in the soil samples. Copper, which is also a neoprene-related constituent, was not detected in the soil samples at concentrations above statewide background.

Only chloride was detected above generic cleanup criteria. Chloride was detected in boring 2013FNL-06 at a concentration of 993 mg/kg, which is above the residential direct contact screening criteria (500 mg/kg) and industrial direct contact screening criteria (500 mg/kg). While the screening criteria are for human health direct contact, the cleanup tables indicate that is was based on adverse impacts to plant life and phytotoxicity (rather than human health ingestion, for example). However, the sample was collected from a depth of 5 to 10.5 feet bgs, which is below the likely rooting depth of plant life. Chloride was not detected above screening criteria in any other sample and was not detected in collected shallow soil samples.

Conclusions and Recommendations

During the 2013 supplemental RI, subsurface soil samples were collected at the unit to verify that no residual COPCs were present at concentrations exceeding applicable screening levels. With the exception of chloride, none of the other constituents detected exceeded applicable screening criteria for residential or non-residential land uses (commercial/industrial). The chloride exceedance was observed at depth (5 to 10.5 feet bgs). Chloride was not detected above screening criteria in any other sample location.

No further investigation of the Former Neoprene Waste Landfill is recommended.

Former Basin Sludge Storage Area

Unit Description

The Former Basin Sludge Storage Area is located north of the Lime Pile (see Figure 1). This area was used during the early 1970s to contain various sludges and solid material generated from the neoprene operations. Waste material disposed in this area includes silicas, various salts, calcium carbonate, plastics, neoprene polymers, and other inert materials (DuPont, 1989).

A memorandum from the plant manager indicates that in 1976 this basin material was excavated and the excavation was backfilled (DuPont, 2006).

Summary of Previous Investigations

During the 2010/2011 RI, native soils (from a depth between 2 and 3 feet bgs) underlying the Former Basin Sludge Storage Area were collected from three hand auger boring locations. Locations were identified as 11BSSS-01(2'-3'), 11BSSS-02 (1.5'-2'), and 11BSSS-03 (2.5'-3.5') and are shown in Figure 3-5 in the RI

Report. Samples were analyzed for Freon and neoprene related constituents, which consists of site-specific VOCs, SVOCs, and inorganic constituents. None of the constituents detected in the subsurface soil samples exceeded applicable screening criteria for residential or non-residential land uses (commercial/industrial). Therefore, residual impact to underlying soil was not indicated.

2013 Results

As discussed earlier, nine borings were installed at the unit to augment the existing data set (see Figure 2). Analytical results are summarized in Tables 3 (residential) and 4 (non-residential). For completeness, results from the 2010/2011 RI are included as Tables 5 (residential) and 6 (non-residential).

As shown in Tables 1 and 2, four VOCs were detected in the 2013 samples. No SVOCs were detected. Eleven metals were detected in the subsurface soil samples. Of these, only arsenic was detected above generic cleanup criteria.

Arsenic was detected at an estimated concentration of 6.21 milligrams per kilogram (mg/kg) in boring 2013BSS-06, which is above the Statewide Background Default Level (5.8 mg/kg) and Soil-to-Groundwater Protection Criteria for Residential or Non-Residential Drinking Water (4.6 mg/kg). However, using the 2011 and 2013 data set, the 95 percent upper confidence limit of the arithmetic mean (95 % UCL) was 3.1 mg/kg, which is below the Statewide Background Default Level. The 95% UCL was calculated using EPA's ProUCL Software (version 5.0.00). The ProUCL output is provided in Appendix H.

Conclusions and Recommendations

Consistent with the 2010/2011 RI findings, residual impact to underlying soil is not indicated. No further investigation of the Former Basin Sludge Storage Area is recommended.

Path Forward

The purpose of the 2013 RI activities at the Former Waste Neoprene Landfill and Former Basin Sludge Storage Area was to address specific data gaps identified in the RI Report and based on feedback from MDEQ.

As concluded in this memorandum, the sampling objectives for each of the two waste management units were met, and no further investigation is recommended.

References

- DERS. 1997. *Pre-Remedial Action Plan Investigation*, DuPont Montague Facility, Montague Michigan. June.
- DuPont. 1989. *Facility Assessment of E.I. duPont de Nemours and Co., Montague Plant, Montague Michigan*. Engineering Services Division, Solid Waste and Geologic Engineering. June.

DuPont CRG. 2007. *Remedial Investigation Work Plan for Waste Management Units and Areas of Concern*. DuPont Montague Site, Montague, Michigan. February 2007.

DuPont CRG. 2006. *Prioritization of Waste Management Units and Areas of Concern at the DuPont Montague Site*, Montague Michigan. November 2006.

URS. 2013. *2013 Supplemental Remedial Investigation Sampling Plan*, DuPont Montague Works, Montague, Michigan. May.

URS. 2012. *DRAFT 2010/2011 Remedial Investigation Report*, DuPont Montague Works, Montague, Michigan. June.

Tables

Table 1
Summary of Soil Analytical Results - Former Basin Sludge Storage Area, Comparison to Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013BSS-01	2013BSS-02-6	2013BSS-03	2013BSS-04	2013BSS-05
		Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	Sample Date	10/01/2013	09/30/2013	10/01/2013	09/30/2013	10/01/2013
							Sample Depth	7-8 FEET	6-7 FEET	3.5-4.5 FEET	2-4 FEET	3.25-4.25 FEET
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>												
1,1,1-Trichloroethane	UG/KG		4000	3.8E+06	6.7E+10	5.0E+08		<1	<1	<1	<1	<1
1,1-Dichloroethane	UG/KG		18000	2.1E+06	3.3E+10	890000		<1	<1	<1	<1	<1
Benzene	UG/KG		100	13000	3.8E+08	180000		0.8 J	2 J	<0.6	<0.5	<0.5
Carbon Tetrachloride	UG/KG		100	3500	1.3E+08	96000		<1	<1	<1	<1	<1
Chlorodifluoromethane	UG/KG							<2	<2	<2	<2	<2
Chloroform	UG/KG		1600	45000	1.3E+09	1.2E+06		<1	<1	<1	<1	<1
Chloroprene	UG/KG							<1	<1	<1	<1	<1
cis-1,2 Dichloroethene	UG/KG		1400	180000	2.3E+09	2.5E+06		<1	<1	<1	<1	<1
Dichlorobutene	UG/KG							<1	<1	<1	<1	<1
Dichlorodifluoromethane	UG/KG		95000	5.3E+07	3.3E+12	5.2E+07		<2	<2	<2	<2	<2
Tetrachloroethene	UG/KG		100	170000	2.7E+09	200000		3 J	62	<1	<1	1 J
Tetrahydrofuran	UG/KG		1900	1.3E+07	3.9E+11	2.9E+06		<4	<4	<4	<4	<4
Toluene	UG/KG		16000	2.8E+06	2.7E+10	5.0E+07		2 J	21	<1	<1	<1
trans-1,2-Dichloroethene	UG/KG		2000	280000	4.7E+09	3.8E+06		<1	<1	<1	<1	<1
Trichloroethene	UG/KG		100	11000	1.3E+08	500000		<1	2 J	<1	<1	<1
Trichlorofluoromethane	UG/KG		52000	9.2E+07	3.8E+12	7.9E+07		<2	<2	<2	<2	<2
Vinyl Chloride	UG/KG		40	4200	3.5E+08	3800		<1	<1	<1	<1	<1
<i>Semivolatile Organic Compounds</i>												
Bis(2-Ethylhexyl)Phthalate	UG/KG				7.0E+08	2.8E+06		<81	<76	<73	<67	<70
N-Nitrosodiphenylamine	UG/KG		5400		2.2E+09	1.7E+06		<20	<19	<18	<17	<17
Phenanthrene	UG/KG		56000	160000	6.7E+06	1.6E+06		<4	<4	<4	<3	<3
<i>Inorganics</i>												
Antimony	MG/KG		4.3		13000	180		<0.866	<0.835	<0.800	<0.731	<0.755
Arsenic	MG/KG	5.8	4.6		720	7.6		1.75 J	1.94 J	1.71 J	1.41 J	1.72 J
Beryllium	MG/KG		51		1300	410		0.111 J	0.132 J	0.130 J	0.106 J	0.100 J
Cadmium	MG/KG	1.2	6		1700	550		<0.0889	<0.0858	<0.0821	<0.0751	<0.0776
Chromium	MG/KG							3.84 J	3.92 J	4.52 J	3.61 J	3.44 J
Copper	MG/KG	32	5800		130000	20000		1.67 J	1.64 J	9.87 J	2.09 J	1.60 J
Lead	MG/KG	21	700		100000	400		1.80 J	2.06 J	4.05 J	1.77 J	1.72 J
Mercury	MG/KG	0.13	1.7	52	20000	160		<0.0118	<0.0113	<0.0096	0.0184 J	0.0126 J
Nickel	MG/KG	20	100		13000	40000		2.22 J	2.36 J	2.06 J	2.53 J	2.09 J
Selenium	MG/KG	0.41	4		130000	2600		0.205 J	0.121 J	0.225 J	<0.0988	0.128 J
Silver	MG/KG	1	4.5		6700	2500		<0.199	<0.192	<0.184	<0.168	<0.174
Zinc	MG/KG	47	2400			170000		13.9 J	25.3 J	17.8 J	9.39 J	15.7 J
Percent Moisture	%							17.8	12.3	9.3	1.7	4.9

J- Estimated value

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

Footnotes:

1 - Formerly the Part 201 Generic CleanupCriteria and Screening Levels. Effective date December 30, 2013.

Values greater than 1,000,000 shown as scientific notation

Exceeds background and groundwater protection criteria

Table 1
Summary of Soil Analytical Results - Former Basin Sludge Storage Area, Comparison to Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013BSS-05	2013BSS-06	2013BSS-07	2013BSS-08	2013BSS-09
		Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	Sample Date	10/01/2013	09/30/2013	09/30/2013	09/30/2013	09/30/2013
							Sample Depth	3.25-4.25 FEET	3-5 FEET	2-4 FEET	1-3 FEET	1.5-3 FEET
							Sample Purpose	Field Duplicate	Regular Sample	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>												
1,1,1-Trichloroethane	UG/KG		4000	3.8E+06	6.7E+10	5.0E+08	<1	<1	<1	<1	<1	
1,1-Dichloroethane	UG/KG		18000	2.1E+06	3.3E+10	890000	<1	<1	<1	<1	<1	
Benzene	UG/KG		100	13000	3.8E+08	180000	<0.5	1 J	<0.6	<0.5	<0.5	
Carbon Tetrachloride	UG/KG		100	3500	1.3E+08	96000	<1	<1	<1	<1	<1	
Chlorodifluoromethane	UG/KG						<2	<2	<2	<3	<2	
Chloroform	UG/KG		1600	45000	1.3E+09	1.2E+06	<1	<1	<1	<1	<1	
Chloroprene	UG/KG						<1	<1	<1	<1	<1	
cis-1,2 Dichloroethene	UG/KG		1400	180000	2.3E+09	2.5E+06	<1	<1	<1	<1	<1	
Dichlorobutene	UG/KG						<1	<1	<1	<1	<1	
Dichlorodifluoromethane	UG/KG		95000	5.3E+07	3.3E+12	5.2E+07	<2	<2	<2	<2	<2	
Tetrachloroethene	UG/KG		100	170000	2.7E+09	200000	1 J	6	<1	<1	<1	
Tetrahydrofuran	UG/KG		1900	1.3E+07	3.9E+11	2.9E+06	<4	<5	<5	<4	<4	
Toluene	UG/KG		16000	2.8E+06	2.7E+10	5.0E+07	<1	2 J	<1	<1	<1	
trans-1,2-Dichloroethene	UG/KG		2000	280000	4.7E+09	3.8E+06	<1	<1	<1	<1	<1	
Trichloroethene	UG/KG		100	11000	1.3E+08	500000	<1	<1	<1	<1	<1	
Trichlorofluoromethane	UG/KG		52000	9.2E+07	3.8E+12	7.9E+07	<2	<2	<2	<2	<2	
Vinyl Chloride	UG/KG		40	4200	3.5E+08	3800	<1	<1	<1	<1	<1	
<i>Semivolatile Organic Compounds</i>												
Bis(2-Ethylhexyl)Phthalate	UG/KG				7.0E+08	2.8E+06	<70	<82	<80	<69	<71	
N-Nitrosodiphenylamine	UG/KG		5400		2.2E+09	1.7E+06	<17	<20	<20	<17	<18	
Phenanthrene	UG/KG		56000	160000	6.7E+06	1.6E+06	<3	<4	<4	<3	<4	
<i>Inorganics</i>												
Antimony	MG/KG		4.3		13000	180	<0.778	2.02 J	<0.879	1.57 J	0.855 J	
Arsenic	MG/KG	5.8	4.6		720	7.6	1.55 J	[6.21 J]	1.42 J	2.46 J	3.03 J	
Beryllium	MG/KG		51		1300	410	0.114 J	0.0882 J	0.0808 J	0.0978 J	0.104 J	
Cadmium	MG/KG	1.2	6		1700	550	<0.0799	<0.0918	<0.0903	0.123 J	<0.0799	
Chromium	MG/KG						3.64 J	2.98 J	2.07 J	3.15 J	3.03 J	
Copper	MG/KG	32	5800		130000	20000	1.84 J	2.19 J	2.41 J	17.9 J	26.4 J	
Lead	MG/KG	21	700		100000	400	1.97 J	2.57 J	0.980 J	4.56 J	2.89 J	
Mercury	MG/KG	0.13	1.7	52	20000	160	0.0160 J	<0.0120	<0.0117	0.0179 J	<0.0103	
Nickel	MG/KG	20	100		13000	40000	2.43 J	3.52 J	1.60 J	2.25 J	2.53 J	
Selenium	MG/KG	0.41	4		130000	2600	0.107 J	0.196 J	<0.119	0.152 J	<0.105	
Silver	MG/KG	1	4.5		6700	2500	<0.179	<0.205	<0.202	<0.179	<0.179	
Zinc	MG/KG	47	2400			170000	15.2 J	11.4 J	4.49 J	24.9 J	17.1 J	
Percent Moisture	%						4.9	19.6	17.5	4.9	6.7	

J- Estimated value

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

Footnotes:

1 - Formerly the Part 201 Generic CleanupCriteria and Screening Levels. Effective date December 30, 2013.

Values greater than 1,000,000 shown as scientific notation

Exceeds background and groundwater protection criteria

Table 2
Summary of Soil Analytical Results - Former Basin Sludge Storage Area, Comparison to Non-Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013BSS-01	2013BSS-02	2013BSS-03	2013BSS-04	2013BSS-05
		Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria	Non-Residential Infinite Source Volatile Soil Inhalation Criteria	Non-Residential Particulate Soil Inhalation Criteria	Non-Residential Direct Contact Criteria	Sample Date	10/01/2013	09/30/2013	10/01/2013	09/30/2013	10/01/2013
							Sample Depth	7-8 FEET	6-7 FEET	3.5-4.5 FEET	2-4 FEET	3.25-4.25 FEET
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>												
1,1,1-Trichloroethane	UG/KG		4000	4.5E+06	2.9E+10	1.0E+09	<1	<1	<1	<1	<1	
1,1-Dichloroethane	UG/KG		50000	2.5E+06	1.5E+10	890000	<1	<1	<1	<1	<1	
Benzene	UG/KG		100	45000	4.7E+08	840000	0.8 J	2 J	<0.6	<0.5	<0.5	
Carbon Tetrachloride	UG/KG		100	12000	1.7E+08	440000	<1	<1	<1	<1	<1	
Chlorodifluoromethane	UG/KG						<2	<2	<2	<2	<2	
Chloroform	UG/KG		1600	150000	1.6E+09	5.5E+06	<1	<1	<1	<1	<1	
Chloroprene	UG/KG						<1	<1	<1	<1	<1	
cis-1,2 Dichloroethene	UG/KG		1400	210000	1.0E+09	8.0E+06	<1	<1	<1	<1	<1	
Dichlorobutene	UG/KG						<1	<1	<1	<1	<1	
Dichlorodifluoromethane	UG/KG		270000	6.3E+07	1.5E+12	1.0E+06	<2	<2	<2	<2	<2	
Tetrachloroethene	UG/KG		100	210000	1.2E+09	9.3E+05	3 J	62	<1	<1	1 J	
Tetrahydrofuran	UG/KG		5400	1.5E+07	1.7E+11	9.5E+06	<4	<4	<4	<4	<4	
Toluene	UG/KG		16000	3.3E+06	1.2E+10	1.6E+08	2 J	21	<1	<1	<1	
trans-1,2-Dichloroethene	UG/KG		2000	330000	2.1E+09	1.2E+07	<1	<1	<1	<1	<1	
Trichloroethene	UG/KG		100	14000	5.9E+07	660000	<1	2 J	<1	<1	<1	
Trichlorofluoromethane	UG/KG		150000	1.1E+08	1.7E+12	2.6E+08	<2	<2	<2	<2	<2	
Vinyl Chloride	UG/KG		40	29000	8.9E+08	34000	<1	<1	<1	<1	<1	
<i>Semivolatile Organic Compounds</i>												
Bis(2-Ethylhexyl)Phthalate	UG/KG				8.9E+08	1.2E+07	<81	<76	<73	<67	<70	
N-Nitrosodiphenylamine	UG/KG		22000		2.8E+09	7.8E+06	<20	<19	<18	<17	<17	
Phenanthrene	UG/KG		160000	190000	2.9E+06	5.2E+06	<4	<4	<4	<3	<3	
<i>Inorganics</i>												
Antimony	MG/KG		4.3		5900	670	<0.866	<0.835	<0.800	<0.731	<0.755	
Arsenic	MG/KG	5.8	4.6		910	37	1.75 J	1.94 J	1.71 J	1.41 J	1.72 J	
Beryllium	MG/KG		51		590	1600	0.111 J	0.132 J	0.130 J	0.106 J	0.100 J	
Cadmium	MG/KG	1.2	6		2200	2100	<0.0889	<0.0858	<0.0821	<0.0751	<0.0776	
Chromium	MG/KG						3.84 J	3.92 J	4.52 J	3.61 J	3.44 J	
Copper	MG/KG	32	5800		59000	73000	1.67 J	1.64 J	9.87 J	2.09 J	1.60 J	
Lead	MG/KG	21	700		44000	900	1.80 J	2.06 J	4.05 J	1.77 J	1.72 J	
Mercury	MG/KG	0.13	1.7	62	8800	580	<0.0118	<0.0113	<0.0096	0.0184 J	0.0126 J	
Nickel	MG/KG	20	100		16000	150000	2.22 J	2.36 J	2.06 J	2.53 J	2.09 J	
Selenium	MG/KG	0.41	4		59000	9600	0.205 J	0.121 J	0.225 J	<0.0988	0.128 J	
Silver	MG/KG	1	13		2900	9000	<0.199	<0.192	<0.184	<0.168	<0.174	
Zinc	MG/KG	47	5000			630000	13.9 J	25.3 J	17.8 J	9.39 J	15.7 J	

J- Estimated value

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

Footnotes:

1 - Formerly the Part 201 Generic CleanupCriteria and Screening Levels. Effective date December 30, 2013.

Values greater than 1,000,000 shown as scientific notation

Exceeds background and groundwater protection criteria

Table 2
Summary of Soil Analytical Results - Former Basin Sludge Storage Area, Comparison to Non-Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013BSS-05	2013BSS-06	2013BSS-07	2013BSS-08	2013BSS-09
		Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria	Non-Residential Infinite Source Volatile Soil Inhalation Criteria	Non-Residential Particulate Soil Inhalation Criteria	Non-Residential Direct Contact Criteria	Sample Date	10/01/2013	09/30/2013	09/30/2013	09/30/2013	09/30/2013
							Sample Depth	3.25-4.25 FEET	3-5 FEET	2-4 FEET	1-3 FEET	1.5-3 FEET
							Sample Purpose	Field Duplicate	Regular Sample	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>												
1,1,1-Trichloroethane	UG/KG		4000	4.5E+06	2.9E+10	1.0E+09		<1	<1	<1	<1	<1
1,1-Dichloroethane	UG/KG		50000	2.5E+06	1.5E+10	890000		<1	<1	<1	<1	<1
Benzene	UG/KG		100	45000	4.7E+08	840000		<0.5	1 J	<0.6	<0.5	<0.5
Carbon Tetrachloride	UG/KG		100	12000	1.7E+08	440000		<1	<1	<1	<1	<1
Chlorodifluoromethane	UG/KG							<2	<2	<2	<3	<2
Chloroform	UG/KG		1600	150000	1.6E+09	5.5E+06		<1	<1	<1	<1	<1
Chloroprene	UG/KG							<1	<1	<1	<1	<1
cis-1,2 Dichloroethene	UG/KG		1400	210000	1.0E+09	8.0E+06		<1	<1	<1	<1	<1
Dichlorobutene	UG/KG							<1	<1	<1	<1	<1
Dichlorodifluoromethane	UG/KG		270000	6.3E+07	1.5E+12	1.0E+06		<2	<2	<2	<2	<2
Tetrachloroethene	UG/KG		100	210000	1.2E+09	9.3E+05		1 J	6	<1	<1	<1
Tetrahydrofuran	UG/KG		5400	1.5E+07	1.7E+11	9.5E+06		<4	<5	<5	<4	<4
Toluene	UG/KG		16000	3.3E+06	1.2E+10	1.6E+08		<1	2 J	<1	<1	<1
trans-1,2-Dichloroethene	UG/KG		2000	330000	2.1E+09	1.2E+07		<1	<1	<1	<1	<1
Trichloroethene	UG/KG		100	14000	5.9E+07	660000		<1	<1	<1	<1	<1
Trichlorofluoromethane	UG/KG		150000	1.1E+08	1.7E+12	2.6E+08		<2	<2	<2	<2	<2
Vinyl Chloride	UG/KG		40	29000	8.9E+08	34000		<1	<1	<1	<1	<1
<i>Semivolatile Organic Compounds</i>												
Bis(2-Ethylhexyl)Phthalate	UG/KG				8.9E+08	1.2E+07		<70	<82	<80	<69	<71
N-Nitrosodiphenylamine	UG/KG		22000		2.8E+09	7.8E+06		<17	<20	<20	<17	<18
Phenanthrene	UG/KG		160000	190000	2.9E+06	5.2E+06		<3	<4	<4	<3	<4
<i>Inorganics</i>												
Antimony	MG/KG		4.3		5900	670		<0.778	2.02 J	<0.879	1.57 J	0.855 J
Arsenic	MG/KG	5.8	4.6		910	37		1.55 J	[6.21 J]	1.42 J	2.46 J	3.03 J
Beryllium	MG/KG		51		590	1600		0.114 J	0.0882 J	0.0808 J	0.0978 J	0.104 J
Cadmium	MG/KG	1.2	6		2200	2100		<0.0799	<0.0918	<0.0903	0.123 J	<0.0799
Chromium	MG/KG							3.64 J	2.98 J	2.07 J	3.15 J	3.03 J
Copper	MG/KG	32	5800		59000	73000		1.84 J	219 J	2.41 J	17.9 J	26.4 J
Lead	MG/KG	21	700		44000	900		1.97 J	2.57 J	0.980 J	4.56 J	2.89 J
Mercury	MG/KG	0.13	1.7	62	8800	580		0.0160 J	<0.0120	<0.0117	0.0179 J	<0.0103
Nickel	MG/KG	20	100		16000	150000		2.43 J	3.52 J	1.60 J	2.25 J	2.53 J
Selenium	MG/KG	0.41	4		59000	9600		0.107 J	0.196 J	<0.119	0.152 J	<0.105
Silver	MG/KG	1	13		2900	9000		<0.179	<0.205	<0.202	<0.179	<0.179
Zinc	MG/KG	47	5000			630000		15.2 J	11.4 J	4.49 J	24.9 J	17.1 J

J- Estimated value

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

Footnotes:

1 - Formerly the Part 201 Generic CleanupCriteria and Screening Levels. Effective date December 30, 2013.

Values greater than 1,000,000 shown as scientific notation

Exceeds background and groundwater protection criteria

Table 3
Summary of Historical Soil Analytical Results - Former Basin Sludge Storage Area, Comparison to Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	11BSSS-01	11BSSS-02	11BSSS-03
		Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	Sample Date	06/22/2011	06/22/2011	06/22/2011
							Sample Depth	2-3 FEET	1.5-2 FEET	2.5-3.5 FEET
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>										
1,1,1-Trichloroethane	UG/KG		4000	3800000	6.7E+10	5.0E+08		<6	<5	<6
1,1-Dichloroethane	UG/KG		18000	2100000	3.3E+10	890000		<6	<5	<6
Benzene	UG/KG		100	13000	3.8E+08	180000		<6	<5	<6
Carbon Tetrachloride	UG/KG		100	3500	1.3E+08	96000		<6	<5	<6
Chloroform	UG/KG		1600	45000	1.3E+09	1.2E+06		<6	<5	<6
Chloroprene	UG/KG							<6	<5	<6
cis-1,2 Dichloroethene	UG/KG		1400	180000	2.3E+09	2.5E+06		<6	<5	<6
Dichlorodifluoromethane	UG/KG		95000	5.3E+07	3.3E+12	1.0E+06		<6	<5	<6
Tetrachloroethene	UG/KG		100	170000	2.7E+09	200000		<6	<5	<6
Tetrahydrofuran	UG/KG		1900	1.3E+07	3.9E+11	2.9E+06		<6	<5	<6
Toluene	UG/KG		16000	2.8E+06	2.7E+10	5.0E+07		<6	<5	<6
trans-1,2-Dichloroethene	UG/KG		2000	280000	4.7E+09	3.8E+06		<6	<5	<6
Trichloroethene	UG/KG		100	11000	1.3E+08	500000		<6	<5	<6
Trichlorofluoromethane	UG/KG		52000	9.2E+07	3.8E+12	7.9E+07		<6	<5	<6
Vinyl Chloride	UG/KG		40	4200	3.5E+08	3800		<6	<5	<6
<i>Semivolatile Organic Compounds</i>										
Bis(2-Ethylhexyl)Phthalate	UG/KG				7.0E+08	2.8E+06		<350	<380	<390
N-Nitrosodiphenylamine	UG/KG		5400		2.2E+09	1.7E+06		<180	<190	<200
Phenanthrene	UG/KG		56000	160000	6.7E+06	1.6E+06		<180	<190	<200
<i>Inorganics</i>										
Antimony	MG/KG		4.3		13000	180		0.277	2.87	0.37
Arsenic	MG/KG	5.8	4.6		720	7.6		1.26 J	2.29 J	2.10 J
Beryllium	MG/KG		51		1300	410		<0.507	<0.565	<0.566
Cadmium	MG/KG	1.2	6		1700	550		<0.507	<0.565	<0.566
Chromium	MG/KG							4.6	5.86	7.02
Copper	MG/KG	32	5800		130000	20000		2.19 J	29.9 J	33.2 J
Lead	MG/KG	21	700		100000	400		2.18 J	2.17 J	2.13 J
Mercury	MG/KG	0.13	1.7	52	20000	160		<0.101	<0.112	<0.114
Nickel	MG/KG	20	100		13000	40000		2.97	4.17	3.98
Selenium	MG/KG	0.41	4		130000	2600		<2.03	<2.26	<2.26
Silver	MG/KG	1	4.5		6700	2500		<0.507	<0.565	<0.566
Zinc	MG/KG	47	2400			170000		12.5	13.9	13.1

J- Estimated value

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

Footnotes:

1 - Formerly the Part 201 Generic Cleanup Criteria and Screening Levels. Effective date December 30, 2013.

Values greater than 1,000,000 shown as scientific notation

Table 4
Summary of Historical Soil Analytical Results - Former Basin Sludge Storage Area, Comparison to Non-Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	11BSSS-01	11BSSS-02	11BSSS-03
		Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria	Non-Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Non-Residential Particulate Soil Inhalation Criteria	Non-Residential Direct Contact Criteria	Sample Date	06/22/2011	06/22/2011	06/22/2011
							Sample Depth	2-3 FEET	1.5-2 FEET	2.5-3.5 FEET
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>										
1,1,1-Trichloroethane	UG/KG		4000	4.5E+06	2.9E+10	1.0E+09		<6	<5	<6
1,1-Dichloroethane	UG/KG		50000	2.5E+06	1.5E+10	890000		<6	<5	<6
Benzene	UG/KG		100	45000	4.7E+08	840000		<6	<5	<6
Carbon Tetrachloride	UG/KG		100	12000	1.7E+08	440000		<6	<5	<6
Chloroform	UG/KG		1600	150000	1.6E+09	5.5E+06		<6	<5	<6
Chloroprene	UG/KG							<6	<5	<6
cis-1,2 Dichloroethene	UG/KG		1400	210000	1.0E+09	8.0E+06		<6	<5	<6
Dichlorodifluoromethane	UG/KG		270000	6.3E+07	1.5E+12	1.0E+06		<6	<5	<6
Tetrachloroethene	UG/KG		100	210000	1.2E+09	930000		<6	<5	<6
Tetrahydrofuran	UG/KG		5400	1.5E+07	1.7E+11	9.5E+06		<6	<5	<6
Toluene	UG/KG		16000	3.3E+06	1.2E+10	1.6E+08		<6	<5	<6
trans-1,2-Dichloroethene	UG/KG		2000	330000	2.1E+09	1.2E+07		<6	<5	<6
Trichloroethene	UG/KG		100	14000	5.9E+07	660000		<6	<5	<6
Trichlorofluoromethane	UG/KG		150000	1.1E+08	1.7E+12	2.6E+08		<6	<5	<6
Vinyl Chloride	UG/KG		40	29000	8.9E+08	34000		<6	<5	<6
<i>Semivolatile Organic Compounds</i>										
Bis(2-Ethylhexyl)Phthalate	UG/KG				8.9E+08	1.2E+07		<350	<380	<390
N-Nitrosodiphenylamine	UG/KG		22000		2.8E+09	7.8E+06		<180	<190	<200
Phenanthrene	UG/KG		160000	190000	2.9E+06	5.2E+06		<180	<190	<200
<i>Inorganics</i>										
Antimony	MG/KG		4.3		5900	670		0.277	2.87	0.37
Arsenic	MG/KG	5.8	4.6		910	37		1.26 J	2.29 J	2.10 J
Beryllium	MG/KG		51		590	1600		<0.507	<0.565	<0.566
Cadmium	MG/KG	1.2	6		2200	2100		<0.507	<0.565	<0.566
Chromium	MG/KG							4.6	5.86	7.02
Copper	MG/KG	32	5800		59000	73000		2.19 J	29.9 J	33.2 J
Lead	MG/KG	21	700		44000	900		2.18 J	2.17 J	2.13 J
Mercury	MG/KG	0.13	1.7	62	8800	580		<0.101	<0.112	<0.114
Nickel	MG/KG	20	100		16000	150000		2.97	4.17	3.98
Selenium	MG/KG	0.41	4		59000	9600		<2.03	<2.26	<2.26
Silver	MG/KG	1	13		2900	9000		<0.507	<0.565	<0.566
Zinc	MG/KG	47	5000			630000		12.5	13.9	13.1

J- Estimated value

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

Footnotes:

1 - Formerly the Part 201 Generic Cleanup Criteria and Screening Levels. Effective date December 30, 2013.

Values greater than 1,000,000 shown as scientific notation

Table 5
Summary of Soil Analytical Results - Former Waste Neoprene Landfill, Comparison to Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013FNL-01	2013FNL-02	2013FNL-03	2013FNL-04	2013FNL-05
		Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	Sample Date	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013
							Sample Depth	3-5 Feet	6-8 Feet	1-3 Feet	6-8 Feet	4-6 Feet
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>												
1,1,1-Trichloroethane	UG/KG		4000	3.80E+06	6.70E+10	5.00E+08	<1	<1	<1	<1	<1	
1,1-Dichloroethane	UG/KG		18000	2.10E+06	3.30E+10	2.70E+07	<1	<1	<1	<1	<1	
2,3,4-Trichloro-1-Butene	UG/KG						<1	<1	<1	<1	<1	
2,3-Dichloro-1,3 Butadiene	UG/KG						<1	<1	<1	<1	<1	
3,4-Dichloro-1-Butene	UG/KG						<1	<1	<1	<1	<1	
Acetaldehyde	UG/KG		19000	170000	6.00E+08	2.90E+07	710 J	1300 J	<600 UJ	690 J	<6800 UJ	
Acetone	UG/KG		15000	1.30E+08	3.90E+11	2.30E+07	19 J	17 J	21	14 J	23	
Benzene	UG/KG		100	13000	3.80E+08	180000	<0.6	<0.5	<0.5	<0.5	<0.6	
Carbon Tetrachloride	UG/KG		100	3500	1.30E+08	96000	<1	<1	<1	<1	<1	
Chlorodifluoromethane	UG/KG						<2	<2	<2	<2	<2	
Chloroform	UG/KG		1600	45000	1.30E+09	1.20E+06	<1	<1	<1	<1	<1	
Chloroprene	UG/KG						<1	<1	<1	<1	<1	
cis-1,2 Dichloroethene	UG/KG		1400	180000	2.30E+09	2.50E+06	<1	<1	<1	<1	<1	
cis-1,2,3-Trichlorobutene-2	UG/KG						<1	<1	<1	<1	<1	
Dichlorobutene	UG/KG						<1	<1	<1	<1	<1	
Dichlorodifluoromethane	UG/KG		95000	5.30E+07	3.3E+12	5.20E+07	<2	<2	<2	<2	<2	
Ethylbenzene	UG/KG		1500	720000	1.00E+10	2.20E+07	<1	<1	<1	<1	<1	
Methyl Methacrylate	UG/KG						<1	<1	<1	<1	<1	
Methylene Chloride	UG/KG		100	210000	6.60E+09	1.30E+06	<2	<2	<2	<2	<2	
Styrene	UG/KG		2700	970000	5.50E+09	400000	<1	<1	<1	<1	<1	
Tetrachloroethene	UG/KG		100	170000	2.70E+09	2.00E+05	<1	<1	<1	<1	<1	
Tetrahydrofuran	UG/KG		1900	1.30E+07	3.9E+11	2900000	<5	<4	<4	<4	<5	
Toluene	UG/KG		16000	2.80E+06	2.70E+10	5.00E+07	<1	<1	<1	<1	<1	
trans-1,2,3-Trichlorobutene-2	UG/KG						<1	<1	<1	<1	<1	
trans-1,2-Dichloroethene	UG/KG		2000	280000	4.70E+09	3.80E+06	<1	<1	<1	<1	<1	
Trichloroethene	UG/KG		100	11000	1.30E+08	500000	<1	<1	<1	<1	<1	
Trichlorofluoromethane	UG/KG		52000	9.20E+07	3.80E+12	7.90E+07	<2	<2	<2	<2	<2	
Vinyl Chloride	UG/KG		40	4200	3.50E+08	3800	<1	<1	<1	<1	<1	
Xylenes	UG/KG		5600	4.60E+07	2.9E+11	4.10E+08	<1	<1	<1	<1	<1	
<i>Semivolatile Organic Compounds</i>												
1,2,4-Trichlorobenzene	UG/KG		4200	2.80E+07	2.50E+10	9.90E+05	<1	<1	<1	<1	<1	
2,4-Dimethylphenol	UG/KG		7400		4.70E+09	1.10E+07	<17	<17	<17	<17	<19	
2-Methylnaphthalene	UG/KG		57000	1.50E+06	6.70E+08	8.10E+06	<3	<3	<3	<3	<4	
2-Methylphenol (O-Cresol)	UG/KG						<17	<17	<17	<17	<19	
4-Chloro-3-Methylphenol	UG/KG		5800			4.50E+06	<17	<17	<17	<17	<19	
4-Methylphenol (P-Cresol)	UG/KG						<17	<17	<17	<17	<19	
Acenaphthene	UG/KG		300000	8.10E+07	1.40E+10	4.10E+07	<3	<3	<3	<3	<4	
Acetophenone	UG/KG		30000	4.40E+07	3.30E+10	1.10E+06	<17	<17	<17	<17	<19	
Anthracene	UG/KG		41000	1.40E+09	6.70E+10	2.30E+08	<3	<3	<3	<3	<4	
Benzo(A)Anthracene	UG/KG					20000	<3	<3	<3	<3	<4	
Benzo(B)Fluoranthene	UG/KG					20000	<3	<3	4 J	<3	<4	
Benzo(G,H,I)Perylene	UG/KG				8.00E+08	2.50E+06	<3	<3	<3	<3	<4	
Benzo(A)Pyrene	UG/KG				1.50E+06	2000	<3	<3	<3	<3	<4	
Benzyl Alcohol	UG/KG		200000		3.30E+11	5.80E+06	<170	<170	<170	<170	<190	
Bis(2-Ethylhexyl)Phthalate	UG/KG				7.00E+08	2.80E+06	<69	<68	<69	<69	<75	
Chrysene	UG/KG					2.00E+06	<3	<3	<3	<3	<4	
Dibenzofuran	UG/KG			130000	6.70E+06		<17	<17	<17	<17	<19	

Table 5
Summary of Soil Analytical Results - Former Waste Neoprene Landfill, Comparison to Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013FNL-01	2013FNL-02	2013FNL-03	2013FNL-04	2013FNL-05
		Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	Sample Date	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013
							Sample Depth	3-5 Feet	6-8 Feet	1-3 Feet	6-8 Feet	4-6 Feet
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample	Regular Sample	Regular Sample
Di-N-Butyl Phthalate	UG/KG		760000		3.30E+09	2.70E+07		<69	<68	<69	<69	<75
Fluoranthene	UG/KG		730000	7.40E+08	9.30E+09	4.60E+07		<3	<3	<3	<3	<4
Fluorene	UG/KG		390000	1.30E+08	9.30E+09	2.70E+07		<3	<3	<3	<3	<4
Hexachlorobutadiene	UG/KG		26000	130000	1.40E+08	100000		<17	<17	<17	<17	<19
Hexachloroethane	UG/KG		430	550000	2.30E+08	230000		<34	<34	<34	<34	<38
Indeno (1,2,3-CD) Pyrene	UG/KG					20000		<3	<3	<3	<3	<4
Naphthalene	UG/KG		35000	300000	2.00E+08	1.60E+07		<3	<3	<3	<3	<4
N-Dioctyl Phthalate	UG/KG		1.00E+08		3.10E+10	6.90E+06		<69	<68	<69	<69	<75
N-Nitrosodiethylamine	UG/KG							<17	<17	<17	<17	<19
N-Nitrosodimethylamine	UG/KG							<69	<68	<69	<69	<75
N-Nitrosodiphenylamine	UG/KG		5400		2.20E+09	1.70E+06		<17	<17	<17	<17	<19
Phenanthrene	UG/KG		56000	160000	6.70E+06	1.60E+06		<3	<3	<3	<3	<4
Pyrene	UG/KG		480000	6.50E+08	6.70E+09	2.90E+07		<3	<3	4 J	<3	<4
<i>Inorganics</i>												
Antimony	MG/KG		4.3		13000	180		<0.0863	<0.0860	0.229	<0.0869	<0.0939
Arsenic	MG/KG	5.8	4.6		720	7.6		0.578 J	0.505 J	1.82 J	0.758 J	0.603 J
Barium	MG/KG	75	1300		330000	37000		4.55	2.1	18.1	4.59	2.98
Beryllium	MG/KG		51		1300	410		<0.0672	<0.0670	0.101 J	<0.0677	<0.0731
Cadmium	MG/KG	1.2	6		1700	550		<0.0762	<0.0760	<0.0769	<0.0768	<0.0829
Chromium	MG/KG							1.85	1.33 J	3.94	2.12	1.69
Cobalt	MG/KG	6.8	0.8		13000	2600		0.524	0.443 J	[0.872]	0.774	0.536 J
Copper	MG/KG	32	5800		130000	20000		1.11	1.42	6.35	1.03	0.784 J
Lead	MG/KG	21	700		100000	400		1.02	0.782	4.43	0.998	0.931
Mercury	MG/KG	0.13	1.7	52	20000	160		<0.0098	<0.0102	0.0117 J	<0.0101	<0.0111
Nickel	MG/KG	20	100		13000	40000		1.39 J	1.18 J	4.56 J	2.02 J	1.45 J
Selenium	MG/KG	0.41	4		130000	2600		<0.100	<0.100	0.129 J	<0.101	<0.109
Silver	MG/KG	1	4.5		6700	2500		<0.0261	<0.0260	<0.0263	<0.0263	<0.0284
Thallium	MG/KG		2.3		13000	35		<0.0301	<0.0300	0.0491 J	<0.0303	<0.0327
Tin	MG/KG							1.59 B	1.60 B	1.74 B	1.65 B	1.67 B
Vanadium	MG/KG		72			750		3.13	2.44	6.18	5.72	4.35
Zinc	MG/KG	47	2400			170000		3.16	2.48	15.5	4.41	2.33
<i>Miscellaneous Compounds</i>												
Ammonia	UG/KG				6.70E+09			<439000	<438000	<443000	<442000	<482000
Cyanide	UG/KG	390	4000		250000	12000		<190	<180	<190	<190	<200
Chloride	MG/KG		5000			500 (F)		<5.2	17.5	<5.2	<5.2	<5.6
Fluoride	MG/KG							1.0 J	<0.82 UJ	2.2 J	<0.83 UJ	<0.90 UJ
Sulfide	MG/KG							<23	<23	<23	<28	<23
Percent Moisture	%							3.2	2.9	4	3.9	11.9

J- Estimated value

mg/kg - milligrams per kilogram

B - Detected in associated laboratory or field blank

ug/kg - micrograms per kilogram

UJ - Non-detect at estimated detection limit

Footnotes:

1 - Formerly the Part 201 Generic CleanupCriteria and Screening Levels. Effective date December 30, 2013.

(F) R 299.49 - Criterion is based on adverse impacts to plant life and phytotoxicity

Values greater than 1,000,000 shown as scientific notation

Exceeds direct contact criteria

Table 5
Summary of Soil Analytical Results - Former Waste Neoprene Landfill, Comparison to Residential Criteria

Remedial Investigation Report - Addendum No. 1
 DuPont Montague Site
 Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013FNL-05	2013FNL-06	2013FNL-07	2013FNL-08
		Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	Sample Date	06/20/2013	06/20/2013	06/20/2013	06/20/2013
							Sample Depth	4-6 Feet	5-10.5 Feet	3.5-5.5 Feet	4-6 Feet
							Sample Purpose	Field Duplicate	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>											
1,1,1-Trichloroethane	UG/KG		4000	3.80E+06	6.70E+10	5.00E+08		<1	5 J	1 J	<1
1,1-Dichloroethane	UG/KG		18000	2.10E+06	3.30E+10	2.70E+07		<1	<1	<1	<1
2,3,4-Trichloro-1-Butene	UG/KG							<1	<1	<1	<1
2,3-Dichloro-1,3 Butadiene	UG/KG							<1	<1	<1	<1
3,4-Dichloro-1-Butene	UG/KG							<1	<1	<1	<1
Acetaldehyde	UG/KG		19000	170000	6.00E+08	2.90E+07		950 J	1800 J	810 J	660 J
Acetone	UG/KG		15000	1.30E+08	3.90E+11	2.30E+07		25	34	60	9 J
Benzene	UG/KG		100	13000	3.80E+08	180000		<0.5	0.8 J	<0.5	<0.5
Carbon Tetrachloride	UG/KG		100	3500	1.30E+08	96000		<1	<1	<1	<1
Chlorodifluoromethane	UG/KG							<2	<3	<2	<2
Chloroform	UG/KG		1600	45000	1.30E+09	1.20E+06		<1	<1	<1	<1
Chloroprene	UG/KG							<1	1 J	<1	<1
cis-1,2 Dichloroethene	UG/KG		1400	180000	2.30E+09	2.50E+06		<1	<1	<1	<1
cis-1,2,3-Trichlorobutene-2	UG/KG							<1	<1	<1	<1
Dichlorobutene	UG/KG							<1	<1	<1	<1
Dichlorodifluoromethane	UG/KG		95000	5.30E+07	3.3E+12	5.20E+07		<2	<3	<2	<2
Ethylbenzene	UG/KG		1500	720000	1.00E+10	2.20E+07		<1	<1	<1	<1
Methyl Methacrylate	UG/KG							<1	<1	<1	<1
Methylene Chloride	UG/KG		100	210000	6.60E+09	1.30E+06		<2	<3	<2	<2
Styrene	UG/KG		2700	970000	5.50E+09	400000		<1	<1	<1	<1
Tetrachloroethene	UG/KG		100	170000	2.70E+09	2.00E+05		<1	<1	21 J	<1
Tetrahydrofuran	UG/KG		1900	1.30E+07	3.9E+11	2900000		<4	<5	<4	<4
Toluene	UG/KG		16000	2.80E+06	2.70E+10	5.00E+07		<1	2 J	<1	<1
trans-1,2,3-Trichlorobutene-2	UG/KG							<1	<1	<1	<1
trans-1,2-Dichloroethene	UG/KG		2000	280000	4.70E+09	3.80E+06		<1	<1	<1	<1
Trichloroethene	UG/KG		100	11000	1.30E+08	500000		<1	<1	<1	<1
Trichlorofluoromethane	UG/KG		52000	9.20E+07	3.80E+12	7.90E+07		<2	<3	<2	<2
Vinyl Chloride	UG/KG		40	4200	3.50E+08	3800		<1	<1	<1	<1
Xylenes	UG/KG		5600	4.60E+07	2.9E+11	4.10E+08		<1	<1	<1	<1
<i>Semivolatile Organic Compounds</i>											
1,2,4-Trichlorobenzene	UG/KG		4200	2.80E+07	2.50E+10	9.90E+05		<1	<1	<1	<1
2,4-Dimethylphenol	UG/KG		7400		4.70E+09	1.10E+07		<17	<200	<17	<17
2-Methylnaphthalene	UG/KG		57000	1.50E+06	6.70E+08	8.10E+06		<3	<40	<3	<3
2-Methylphenol (O-Cresol)	UG/KG							<17	<200	<17	<17
4-Chloro-3-Methylphenol	UG/KG		5800			4.50E+06		<17	<200	<17	<17
4-Methylphenol (P-Cresol)	UG/KG							<17	<200	<17	<17
Acenaphthene	UG/KG		300000	8.10E+07	1.40E+10	4.10E+07		<3	<40	<3	<3
Acetophenone	UG/KG		30000	4.40E+07	3.30E+10	1.10E+06		<17	<200	<17	<17
Anthracene	UG/KG		41000	1.40E+09	6.70E+10	2.30E+08		<3	<40	<3	<3
Benzo(A)Anthracene	UG/KG					20000		<3	<40	<3	<3
Benzo(B)Fluoranthene	UG/KG					20000		<3	<40	<3	4 J
Benzo(G,H,I)Perylene	UG/KG				8.00E+08	2.50E+06		<3	<40	<3	<3
Benzo(A)Pyrene	UG/KG				1.50E+06	2000		<3	<40	<3	<3
Benzyl Alcohol	UG/KG		200000		3.30E+11	5.80E+06		<170	<2000	<170	<170
Bis(2-Ethylhexyl)Phthalate	UG/KG				7.00E+08	2.80E+06		<69	<790	<68	<69
Chrysene	UG/KG					2.00E+06		<3	<40	<3	<3
Dibenzofuran	UG/KG			130000	6.70E+06			<17	<200	<17	<17

Table 6
Summary of Soil Analytical Results - Former Waste Neoprene Landfill, Comparison to Non-Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013FNL-01	2013FNL-02	2013FNL-03	2013FNL-04	2013FNL-05	2013FNL-05
		Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria	Non-Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Non-Residential Particulate Soil Inhalation Criteria	Non-Residential Direct Contact Criteria	Sample Date	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013
							Sample Depth	3-5 Feet	6-8 Feet	1-3 Feet	6-8 Feet	4-6 Feet	4-6 Feet
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample	Regular Sample	Regular Sample	Field Duplicate
<i>Volatile Organic Compounds</i>													
1,1,1-Trichloroethane	UG/KG		4000	4.50E+06	2.90E+10	1.00E+09		<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	UG/KG		50000	2.50E+06	1.50E+10	8.70E+07		<1	<1	<1	<1	<1	<1
2,3,4-Trichloro-1-Butene	UG/KG							<1	<1	<1	<1	<1	<1
2,3-Dichloro-1,3 Butadiene	UG/KG							<1	<1	<1	<1	<1	<1
3,4-Dichloro-1-Butene	UG/KG							<1	<1	<1	<1	<1	<1
Acetaldehyde	UG/KG		54000	210000	2.60E+08	9.50E+07		710 J	1300 J	<600 UJ	690 J	<6800 UJ	950 J
Acetone	UG/KG		42000	1.60E+08	1.70E+11	7.30E+07		19 J	17 J	21	14 J	23	25
Benzene	UG/KG		100	45000	4.70E+08	840000		<0.6	<0.5	<0.5	<0.5	<0.6	<0.5
Carbon Tetrachloride	UG/KG		100	12000	1.70E+08	440000		<1	<1	<1	<1	<1	<1
Chlorodifluoromethane	UG/KG							<2	<2	<2	<2	<2	<2
Chloroform	UG/KG		1600	150000	1.60E+09	5.50E+06		<1	<1	<1	<1	<1	<1
Chloroprene	UG/KG							<1	<1	<1	<1	<1	<1
cis-1,2 Dichloroethene	UG/KG		1400	210000	1.00E+09	8.00E+06		<1	<1	<1	<1	<1	<1
cis-1,2,3-Trichlorobutene-2	UG/KG							<1	<1	<1	<1	<1	<1
Dichlorobutene	UG/KG							<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	UG/KG		270000	6.30E+07	1.50E+12	1.70E+08		<2	<2	<2	<2	<2	<2
Ethylbenzene	UG/KG		1500	2.40E+06	1.30E+10	7.10E+07		<1	<1	<1	<1	<1	<1
Methyl Methacrylate	UG/KG							<1	<1	<1	<1	<1	<1
Methylene Chloride	UG/KG		100	700000	8.30E+09	2.30E+06		<2	<2	<2	<2	<2	<2
Styrene	UG/KG		2700	3.30E+06	6.90E+09	520000		<1	<1	<1	<1	<1	<1
Tetrachloroethene	UG/KG		100	210000	1.20E+09	930000		<1	<1	<1	<1	<1	<1
Tetrahydrofuran	UG/KG		5400	1.50E+07	1.70E+11	9.50E+06		<5	<4	<4	<4	<5	<4
Toluene	UG/KG		16000	3.30E+06	1.20E+10	1.60E+08		<1	<1	<1	<1	<1	<1
trans-1,2,3-Trichlorobutene-2	UG/KG							<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	UG/KG		2000	330000	2.10E+09	1.20E+07		<1	<1	<1	<1	<1	<1
Trichloroethene	UG/KG		100	14000	5.90E+07	660000		<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	UG/KG		150000	1.10E+08	1.70E+12	2.60E+08		<2	<2	<2	<2	<2	<2
Vinyl Chloride	UG/KG		40	29000	8.90E+08	34000		<1	<1	<1	<1	<1	<1
Xylenes	UG/KG		5600	5.40E+07	1.30E+11	1.00E+09		<1	<1	<1	<1	<1	<1
<i>Semivolatile Organic Compounds</i>													
1,2,4-Trichlorobenzene	UG/KG		4200	3.40E+07	1.10E+10	5.80E+06		<1	<1	<1	<1	<1	<1
2,4-Dimethylphenol	UG/KG		20000		2.10E+09	3.60E+07		<17	<17	<17	<17	<19	<17
2-Methylnaphthalene	UG/KG		170000	1.80E+06	2.90E+08	2.60E+07		<3	<3	<3	<3	<4	<3
2-Methylphenol (O-Cresol)	UG/KG							<17	<17	<17	<17	<19	<17
4-Chloro-3-Methylphenol	UG/KG		16000			1.50E+07		<17	<17	<17	<17	<19	<17
4-Methylphenol (P-Cresol)	UG/KG							<17	<17	<17	<17	<19	<17
Acenaphthene	UG/KG		880000	9.70E+07	6.20E+09	1.30E+08		<3	<3	<3	<3	<4	<3
Acetophenone	UG/KG		88000	5.20E+07	1.40E+10	1.10E+06		<17	<17	<17	<17	<19	<17
Anthracene	UG/KG		41000	1.60E+09	2.90E+10	7.30E+08		<3	<3	<3	<3	<4	<3
Benzo(A)Anthracene	UG/KG					80000		<3	<3	<3	<3	<4	<3
Benzo(B)Fluoranthene	UG/KG					80000		<3	<3	4 J	<3	<4	<3
Benzo(G,H,I)Perylene	UG/KG				3.50E+08	7.00E+06		<3	<3	<3	<3	<4	<3
Benzo(A)Pyrene	UG/KG				1.90E+06	8000		<3	<3	<3	<3	<4	<3
Benzyl Alcohol	UG/KG		580000		1.5E+11	5.80E+06		<170	<170	<170	<170	<190	<170
Bis(2-Ethylhexyl)Phthalate	UG/KG				8.90E+08	1.20E+07		<69	<68	<69	<69	<75	<69
Chrysene	UG/KG					8.00E+06		<3	<3	<3	<3	<4	<3
Dibenzofuran	UG/KG			160000	2.90E+06			<17	<17	<17	<17	<19	<17

Table 6
Summary of Soil Analytical Results - Former Waste Neoprene Landfill, Comparison to Non-Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013FNL-01	2013FNL-02	2013FNL-03	2013FNL-04	2013FNL-05	2013FNL-05
		Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria	Non-Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Non-Residential Particulate Soil Inhalation Criteria	Non-Residential Direct Contact Criteria	Sample Date	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013
							Sample Depth	3-5 Feet	6-8 Feet	1-3 Feet	6-8 Feet	4-6 Feet	4-6 Feet
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample	Regular Sample	Regular Sample	Field Duplicate
Di-N-Butyl Phthalate	UG/KG		760000		1.50E+09	8.70E+07	<69	<68	<69	<69	<75	<69	
Fluoranthene	UG/KG		730000	8.90E+08	4.10E+09	1.30E+08	<3	<3	<3	<3	<4	<3	
Fluorene	UG/KG		890000	1.50E+08	4.10E+09	8.70E+07	<3	<3	<3	<3	<4	<3	
Hexachlorobutadiene	UG/KG		72000	460000	1.80E+08	470000	<17	<17	<17	<17	<19	<17	
Hexachloroethane	UG/KG		1200	660000	1.00E+08	730000	<34	<34	<34	<34	<38	<34	
Indeno (1,2,3-CD) Pyrene	UG/KG					80000	<3	<3	<3	<3	<4	<3	
Naphthalene	UG/KG		100000	350000	8.80E+07	5.20E+07	<3	<3	<3	<3	<4	<3	
N-Dioctyl Phthalate	UG/KG		1.40E+08		1.40E+10	2.00E+07	<69	<68	<69	<69	<75	<69	
N-Nitrosodiethylamine	UG/KG						<17	<17	<17	<17	<19	<17	
N-Nitrosodimethylamine	UG/KG						<69	<68	<69	<69	<75	<69	
N-Nitrosodiphenylamine	UG/KG		22000		2.80E+09	7.80E+06	<17	<17	<17	<17	<19	<17	
Phenanthrene	UG/KG		160000	190000	2.90E+06	5.20E+06	<3	<3	<3	<3	<4	<3	
Pyrene	UG/KG		480000	7.80E+08	2.90E+09	8.40E+07	<3	<3	4 J	<3	<4	<3	
<i>Inorganics</i>													
Antimony	MG/KG		4.3		5900	670	<0.0863	<0.0860	0.229	<0.0869	<0.0939	<0.0872	
Arsenic	MG/KG	5.8	4.6		910	37	0.578 J	0.505 J	1.82 J	0.758 J	0.603 J	0.691 J	
Barium	MG/KG	75	1300		150000	130000	4.55	2.1	18.1	4.59	2.98	3.06	
Beryllium	MG/KG		51		590	1600	<0.0672	<0.0670	0.101 J	<0.0677	<0.0731	<0.0679	
Cadmium	MG/KG	1.2	6		2200	2100	<0.0762	<0.0760	<0.0769	<0.0768	<0.0829	<0.0771	
Chromium	MG/KG						1.85	1.33 J	3.94	2.12	1.69	1.31 J	
Cobalt	MG/KG	6.8	2		5900	9000	0.524	0.443 J	0.872	0.774	0.536 J	0.613	
Copper	MG/KG	32	5800		59000	73000	1.11	1.42	6.35	1.03	0.784 J	0.720 J	
Lead	MG/KG	21	700		44000	900	1.02	0.782	4.43	0.998	0.931	0.722	
Mercury	MG/KG	0.13	1.7	62	8800	580	<0.0098	<0.0102	0.0117 J	<0.0101	<0.0111	<0.0097	
Nickel	MG/KG	20	100		16000	150000	1.39 J	1.18 J	4.56 J	2.02 J	1.45 J	1.19 J	
Selenium	MG/KG	0.41	4		59000	9600	<0.100	<0.100	0.129 J	<0.101	<0.109	<0.101	
Silver	MG/KG	1	13		2900	9000	<0.0261	<0.0260	<0.0263	<0.0263	<0.0284	<0.0264	
Thallium	MG/KG		2.3		5900	130	<0.0301	<0.0300	0.0491 J	<0.0303	<0.0327	<0.0304	
Tin	MG/KG						1.59 B	1.60 B	1.74 B	1.65 B	1.67 B	1.53 B	
Vanadium	MG/KG		990			5500	3.13	2.44	6.18	5.72	4.35	2.71	
Zinc	MG/KG	47	5000			630000	3.16	2.48	15.5	4.41	2.33	2.61	
<i>Miscellaneous Compounds</i>													
Ammonia	UG/KG				2.90E+09		<439000	<438000	<443000	<442000	<482000	<440000	
Cyanide	UG/KG	390	4000		250000	250000	<190	<180	<190	<190	<200	<190	
Chloride	MG/KG		5000			500 (F)	<5.2	17.5	<5.2	<5.2	<5.6	<5.2	
Fluoride	MG/KG						1.0 J	<0.82 UJ	2.2 J	<0.83 UJ	<0.90 UJ	<0.83 UJ	
Sulfide	MG/KG						<23	<23	<23	<28	<23	<23	
Percent Moisture	%						3.2	2.9	4	3.9	11.9	3.3	

J- Estimated value

mg/kg - milligrams per kilogram

B - Detected in associated laboratory or field blank

ug/kg - micrograms per kilogram

UJ - Non-detect at estimated detection limit

Footnotes:

1 - Formerly the Part 201 Generic CleanupCriteria and Screening Levels. Effective date December 30, 2013.

(F) R 299.49 - Criterion is based on adverse impacts to plant life and phytotoxicity

Values greater than 1,000,000 shown as scientific notation

Exceeds direct contact criteria

Table 6
Summary of Soil Analytical Results - Former Waste Neoprene Landfill, Comparison to Non-Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013FNL-06	2013FNL-07	2013FNL-08
		Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria	Non-Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Non-Residential Particulate Soil Inhalation Criteria	Non-Residential Direct Contact Criteria	Sample Date	06/20/2013	06/20/2013	06/20/2013
							Sample Depth	5-10.5 Feet	3.5-5.5 Feet	4-6 Feet
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample
<i>Volatile Organic Compounds</i>										
1,1,1-Trichloroethane	UG/KG		4000	4.50E+06	2.90E+10	1.00E+09		5 J	1 J	<1
1,1-Dichloroethane	UG/KG		50000	2.50E+06	1.50E+10	8.70E+07		<1	<1	<1
2,3,4-Trichloro-1-Butene	UG/KG							<1	<1	<1
2,3-Dichloro-1,3 Butadiene	UG/KG							<1	<1	<1
3,4-Dichloro-1-Butene	UG/KG							<1	<1	<1
Acetaldehyde	UG/KG		54000	210000	2.60E+08	9.50E+07		1800 J	810 J	660 J
Acetone	UG/KG		42000	1.60E+08	1.70E+11	7.30E+07		34	60	9 J
Benzene	UG/KG		100	45000	4.70E+08	840000		0.8 J	<0.5	<0.5
Carbon Tetrachloride	UG/KG		100	12000	1.70E+08	440000		<1	<1	<1
Chlorodifluoromethane	UG/KG							<3	<2	<2
Chloroform	UG/KG		1600	150000	1.60E+09	5.50E+06		<1	<1	<1
Chloroprene	UG/KG							1 J	<1	<1
cis-1,2 Dichloroethene	UG/KG		1400	210000	1.00E+09	8.00E+06		<1	<1	<1
cis-1,2,3-Trichlorobutene-2	UG/KG							<1	<1	<1
Dichlorobutene	UG/KG							<1	<1	<1
Dichlorodifluoromethane	UG/KG		270000	6.30E+07	1.50E+12	1.70E+08		<3	<2	<2
Ethylbenzene	UG/KG		1500	2.40E+06	1.30E+10	7.10E+07		<1	<1	<1
Methyl Methacrylate	UG/KG							<1	<1	<1
Methylene Chloride	UG/KG		100	700000	8.30E+09	2.30E+06		<3	<2	<2
Styrene	UG/KG		2700	3.30E+06	6.90E+09	520000		<1	<1	<1
Tetrachloroethene	UG/KG		100	210000	1.20E+09	930000		<1	21 J	<1
Tetrahydrofuran	UG/KG		5400	1.50E+07	1.70E+11	9.50E+06		<5	<4	<4
Toluene	UG/KG		16000	3.30E+06	1.20E+10	1.60E+08		2 J	<1	<1
trans-1,2,3-Trichlorobutene-2	UG/KG							<1	<1	<1
trans-1,2-Dichloroethene	UG/KG		2000	330000	2.10E+09	1.20E+07		<1	<1	<1
Trichloroethene	UG/KG		100	14000	5.90E+07	660000		<1	<1	<1
Trichlorofluoromethane	UG/KG		150000	1.10E+08	1.70E+12	2.60E+08		<3	<2	<2
Vinyl Chloride	UG/KG		40	29000	8.90E+08	34000		<1	<1	<1
Xylenes	UG/KG		5600	5.40E+07	1.30E+11	1.00E+09		<1	<1	<1
<i>Semivolatile Organic Compounds</i>										
1,2,4-Trichlorobenzene	UG/KG		4200	3.40E+07	1.10E+10	5.80E+06		<1	<1	<1
2,4-Dimethylphenol	UG/KG		20000		2.10E+09	3.60E+07		<200	<17	<17
2-Methylnaphthalene	UG/KG		170000	1.80E+06	2.90E+08	2.60E+07		<40	<3	<3
2-Methylphenol (O-Cresol)	UG/KG							<200	<17	<17
4-Chloro-3-Methylphenol	UG/KG		16000			1.50E+07		<200	<17	<17
4-Methylphenol (P-Cresol)	UG/KG							<200	<17	<17
Acenaphthene	UG/KG		880000	9.70E+07	6.20E+09	1.30E+08		<40	<3	<3
Acetophenone	UG/KG		88000	5.20E+07	1.40E+10	1.10E+06		<200	<17	<17
Anthracene	UG/KG		41000	1.60E+09	2.90E+10	7.30E+08		<40	<3	<3
Benzo(A)Anthracene	UG/KG					80000		<40	<3	<3
Benzo(B)Fluoranthene	UG/KG					80000		<40	<3	4 J
Benzo(G,H,I)Perylene	UG/KG				3.50E+08	7.00E+06		<40	<3	<3
Benzo(A)Pyrene	UG/KG				1.90E+06	8000		<40	<3	<3
Benzyl Alcohol	UG/KG		580000		1.5E+11	5.80E+06		<2000	<170	<170
Bis(2-Ethylhexyl)Phthalate	UG/KG				8.90E+08	1.20E+07		<790	<68	<69
Chrysene	UG/KG					8.00E+06		<40	<3	<3
Dibenzofuran	UG/KG			160000	2.90E+06			<200	<17	<17

Table 6
Summary of Soil Analytical Results - Former Waste Neoprene Landfill, Comparison to Non-Residential Criteria

Remedial Investigation Report - Addendum No. 1

DuPont Montague Site

Montague, Michigan

Analyte	Units	Cleanup Criteria Requirements for Response Activity ¹					Location	2013FNL-06	2013FNL-07	2013FNL-08
		Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria	Non-Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Non-Residential Particulate Soil Inhalation Criteria	Non-Residential Direct Contact Criteria	Sample Date	06/20/2013	06/20/2013	06/20/2013
							Sample Depth	5-10.5 Feet	3.5-5.5 Feet	4-6 Feet
							Sample Purpose	Regular Sample	Regular Sample	Regular Sample
Di-N-Butyl Phthalate	UG/KG		760000		1.50E+09	8.70E+07		<790	<68	<69
Fluoranthene	UG/KG		730000	8.90E+08	4.10E+09	1.30E+08		<40	<3	<3
Fluorene	UG/KG		890000	1.50E+08	4.10E+09	8.70E+07		<40	<3	<3
Hexachlorobutadiene	UG/KG		72000	460000	1.80E+08	470000		<200	<17	<17
Hexachloroethane	UG/KG		1200	660000	1.00E+08	730000		<400	<34	<34
Indeno (1,2,3-CD) Pyrene	UG/KG					80000		<40	<3	<3
Naphthalene	UG/KG		100000	350000	8.80E+07	5.20E+07		<40	<3	<3
N-Dioctyl Phthalate	UG/KG		1.40E+08		1.40E+10	2.00E+07		<790	<68	<69
N-Nitrosodiethylamine	UG/KG							<200	<17	<17
N-Nitrosodimethylamine	UG/KG							<790	<68	<69
N-Nitrosodiphenylamine	UG/KG		22000		2.80E+09	7.80E+06		<200	<17	<17
Phenanthrene	UG/KG		160000	190000	2.90E+06	5.20E+06		<40	<3	<3
Pyrene	UG/KG		480000	7.80E+08	2.90E+09	8.40E+07		<40	<3	<3
<i>Inorganics</i>										
Antimony	MG/KG		4.3		5900	670		0.120 J	<0.0882	<0.0874
Arsenic	MG/KG	5.8	4.6		910	37		0.544 J	0.631 J	0.567 J
Barium	MG/KG	75	1300		150000	130000		6.66	5.22	3.1
Beryllium	MG/KG		51		590	1600		0.111 J	<0.0687	<0.0681
Cadmium	MG/KG	1.2	6		2200	2100		<0.0878	<0.0780	<0.0772
Chromium	MG/KG							4.84	2.14	1.43 J
Cobalt	MG/KG	6.8	2		5900	9000		0.506 J	0.672	0.501 J
Copper	MG/KG	32	5800		59000	73000		2.67	1.16	0.693 J
Lead	MG/KG	21	700		44000	900		1.49	1.1	0.776
Mercury	MG/KG	0.13	1.7	62	8800	580		<0.0114	<0.0102	<0.0102
Nickel	MG/KG	20	100		16000	150000		2.56 J	1.82 J	1.37 J
Selenium	MG/KG	0.41	4		59000	9600		0.118 J	<0.103	<0.102
Silver	MG/KG	1	13		2900	9000		<0.0300	<0.0267	<0.0264
Thallium	MG/KG		2.3		5900	130		<0.0347	<0.0308	<0.0305
Tin	MG/KG							1.92 B	1.53 B	1.60 B
Vanadium	MG/KG		990			5500		3.68	3.81	3.47
Zinc	MG/KG	47	5000			630000		4.73	3.2	2.04
<i>Miscellaneous Compounds</i>										
Ammonia	UG/KG				2.90E+09			<511000	<440000	<440000
Cyanide	UG/KG	390	4000		250000	250000		260 J	<180	<180
Chloride	MG/KG		5000			500 (F)		[993]	<5.2	<5.2
Fluoride	MG/KG							<0.96 UJ	<0.83 UJ	<0.82 UJ
Sulfide	MG/KG							<24	<23	<23
Percent Moisture	%							16.8	3.5	3.5

J- Estimated value

mg/kg - milligrams per kilogram

B - Detected in associated laboratory or field blank

ug/kg - micrograms per kilogram

UJ - Non-detect at estimated detection limit

Footnotes:

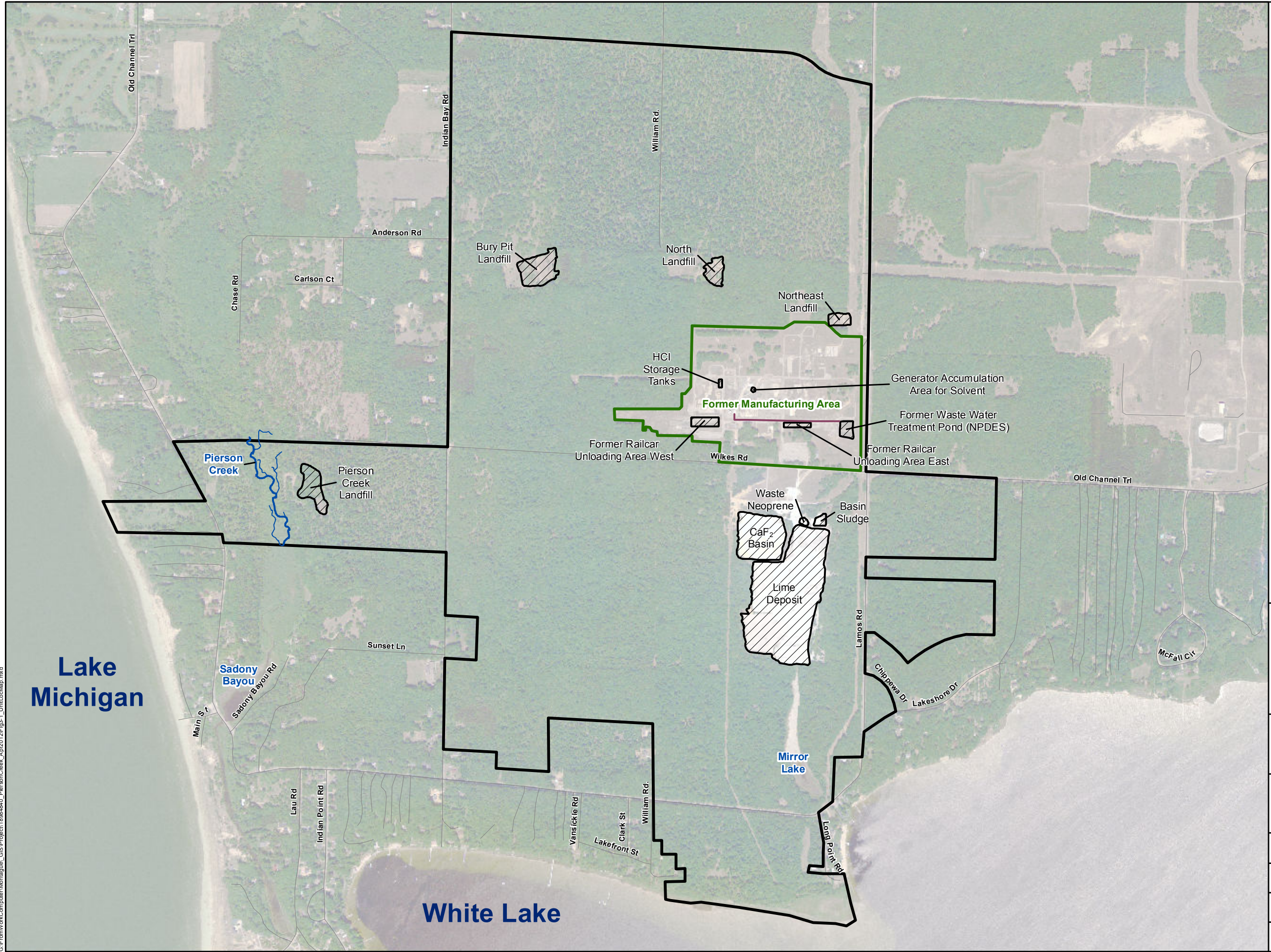
1 - Formerly the Part 201 Generic CleanupCriteria and Screening Levels. Effective date December 30, 2013.

(F) R 299.49 - Criterion is based on adverse impacts to plant life and phytotoxicity

Values greater than 1,000,000 shown as scientific notation

Exceeds direct contact criteria

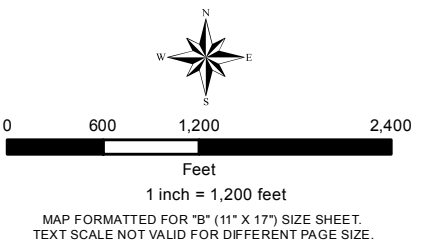
Figures



Legend

- DuPont Property Line (from DuPont Real Estate)
- Road Centerline
- Pierson Creek - Main
- Pierson Creek - Tributary
- Waste Water Ditch
- Former Manufacturing Area
- Waste Management Unit (WMU) or Area of Concern (AOC)

2005 Aerial Credit: Remote Sensing & GIS Research and Outreach Services (RS&GIS), USDA-FSA Aerial Photography Field Office



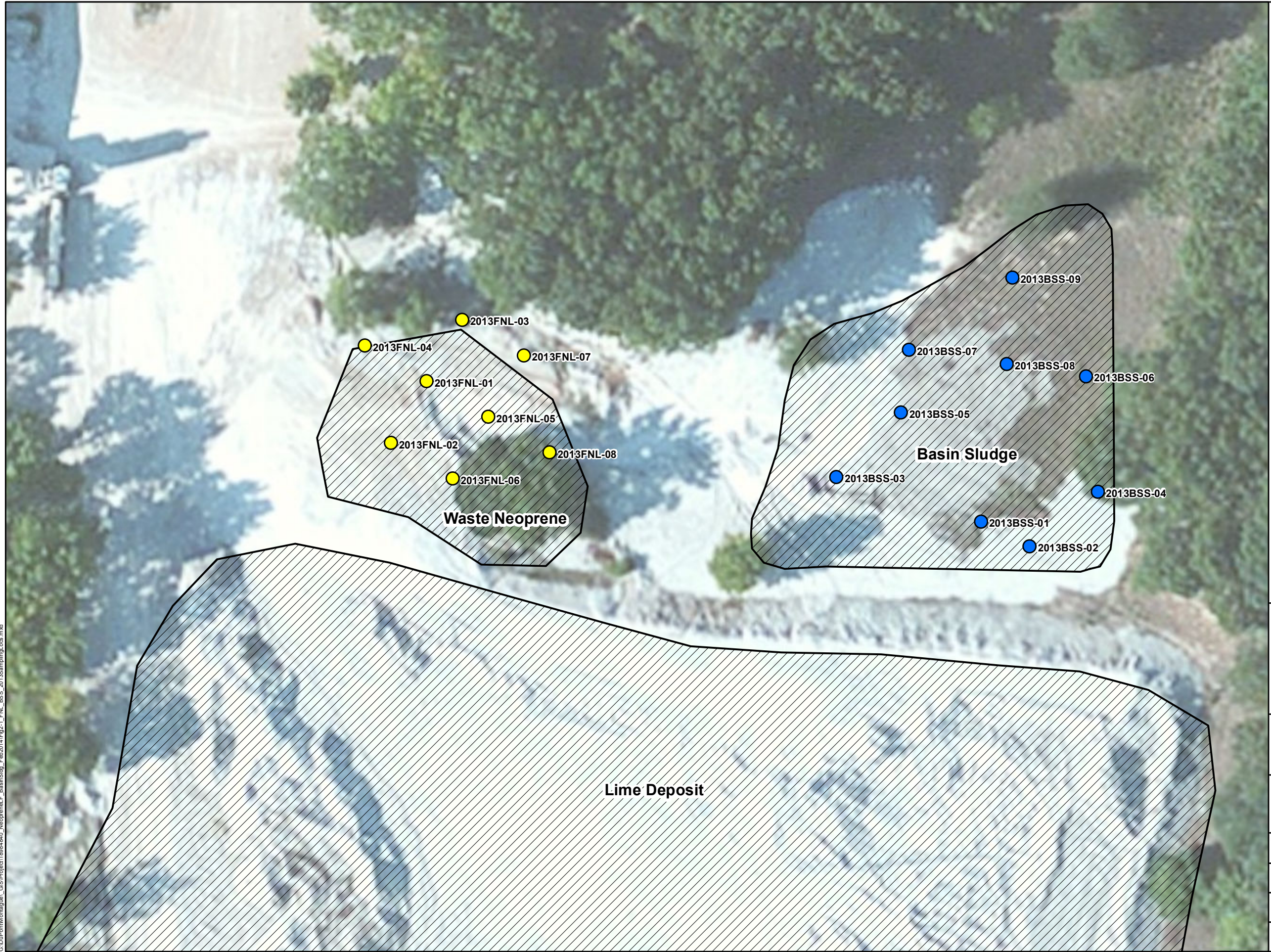
URS Corporation
 Iron Hill Corporate Center
 4051 Ogletown Road, Suite 300
 Newark, DE 19713

UNIT LOCATION MAP

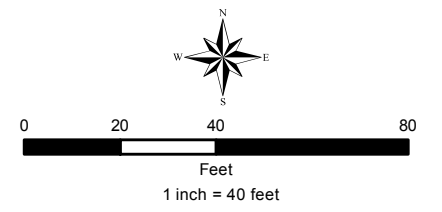
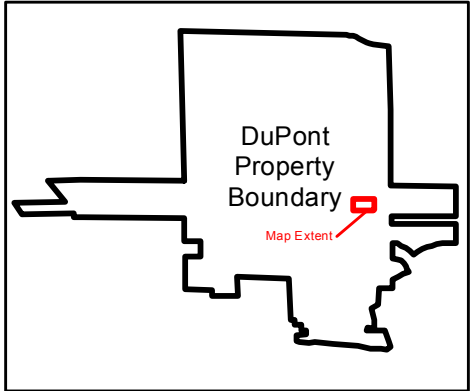
**DuPont Montague Facility
 Montague, Michigan**

FILE NUMBER:	PROJECT NUMBER: 18984840
DESIGNED BY: GEG	DATE: 06/11/2012
DRAWN BY: CAA	FIGURE NUMBER: 1
DATA QUALITY CHECK BY: GEG	

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- Legend**
- 2013 Neoprene Sample Location
 - 2013 Basin Sludge Storage Area Sampling Location
 - Waste Management Unit (WMU) or Area of Concern (AOC)



URS Corporation
 Iron Hill Corporate Center
 4051 Ogletown Road, Suite 300
 Newark, DE 19713

**NEOPRENE LANDFILL AND
 BASIN SLUDGE STORAGE AREA
 2013 SAMPLING LOCATIONS**

DuPont Montague Facility
 Montague, Michigan

FILE NUMBER:	PROJECT NUMBER: 18984840
DESIGNED BY: GEG	DATE: 02/12/2014
DRAWN BY: CAD	FIGURE NUMBER: 2
DATA QUALITY CHECK BY: GEG	

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