The Dow Chemical Company
Midland, Michigan 48667
USA

December 1, 2012

CERTIFIED MAIL
7007 2680 0001 3708 8809

Elizabeth Browne, Chief
Office of Waste Management & Radiological Protection
Michigan Department of Environmental Quality
P.O. Box 30241
Lansing, MI 48909

cc: Cheryl Howe, MDEQ P.O. Box 30241 Lansing, MI 48909
Trisha Confer, MDEQ – Saginaw Bay District Office, 401 Ketchum Street, Suite B, Bay City, MI 48708

Subject: YEAR 1 IMPLEMENTATION ANNUAL REPORT
MIDLAND AREA SOILS
MID 000 724 724

Pursuant to Part XI.B of its Hazardous Waste Management Facility Operating License (License) and in accordance with the approved May 25, 2012 Interim Response Activity Plan Designed to Meet Criteria Work Plan approved by MDEQ on June 1, 2012, The Dow Chemical Company is providing the attached *Year 1 Implementation Annual Report.*

If you have any comments or questions related to the attached Annual Report, please contact me.

Steven C. Lucas
Sr. Remediation Leader
The Dow Chemical Company
1790 Building
Midland, MI 48674
(989) 638-6012

Enclosure
mdc

The Dow Chemical Company
Midland Area Soils
Year 1 Implementation Annual Report

December 1, 2012

Prepared by URS Corporation

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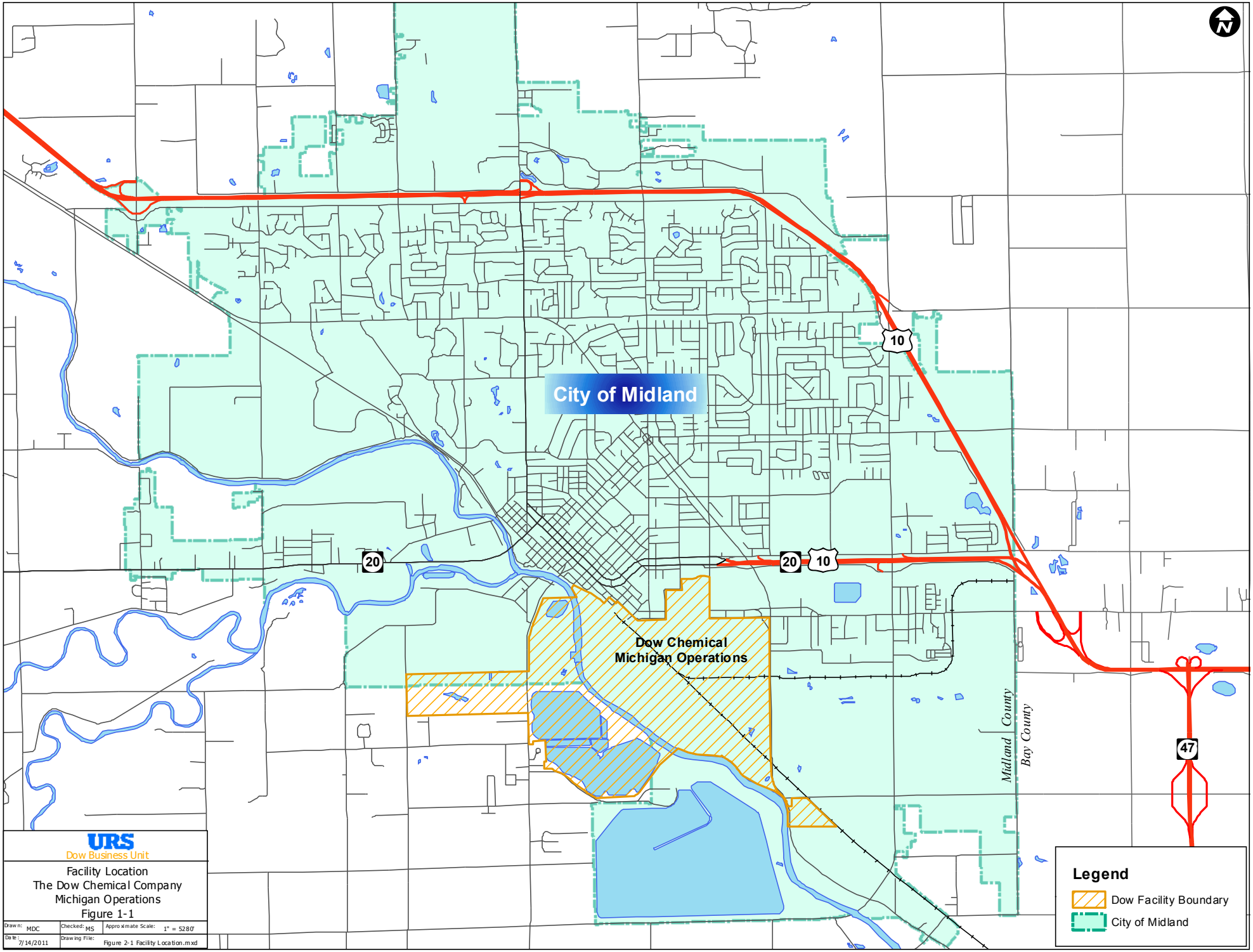
1.0 Introduction

Pursuant to Part XI.B of its Hazardous Waste Management Facility Operating License (License) and in accordance with the May 25, 2012 Interim Response Activity Plan Designed to Meet Criteria Work Plan (Work Plan) (URS, 2012) approved on June 1, 2012, The Dow Chemical Company (Dow), with oversight from the Michigan Department of Environmental Quality (MDEQ), has implemented Year 1 of the presumptive remedy for the City of Midland area soils. The purpose of this Annual Report is to provide a summary of the Year 1 implementation activities, including:

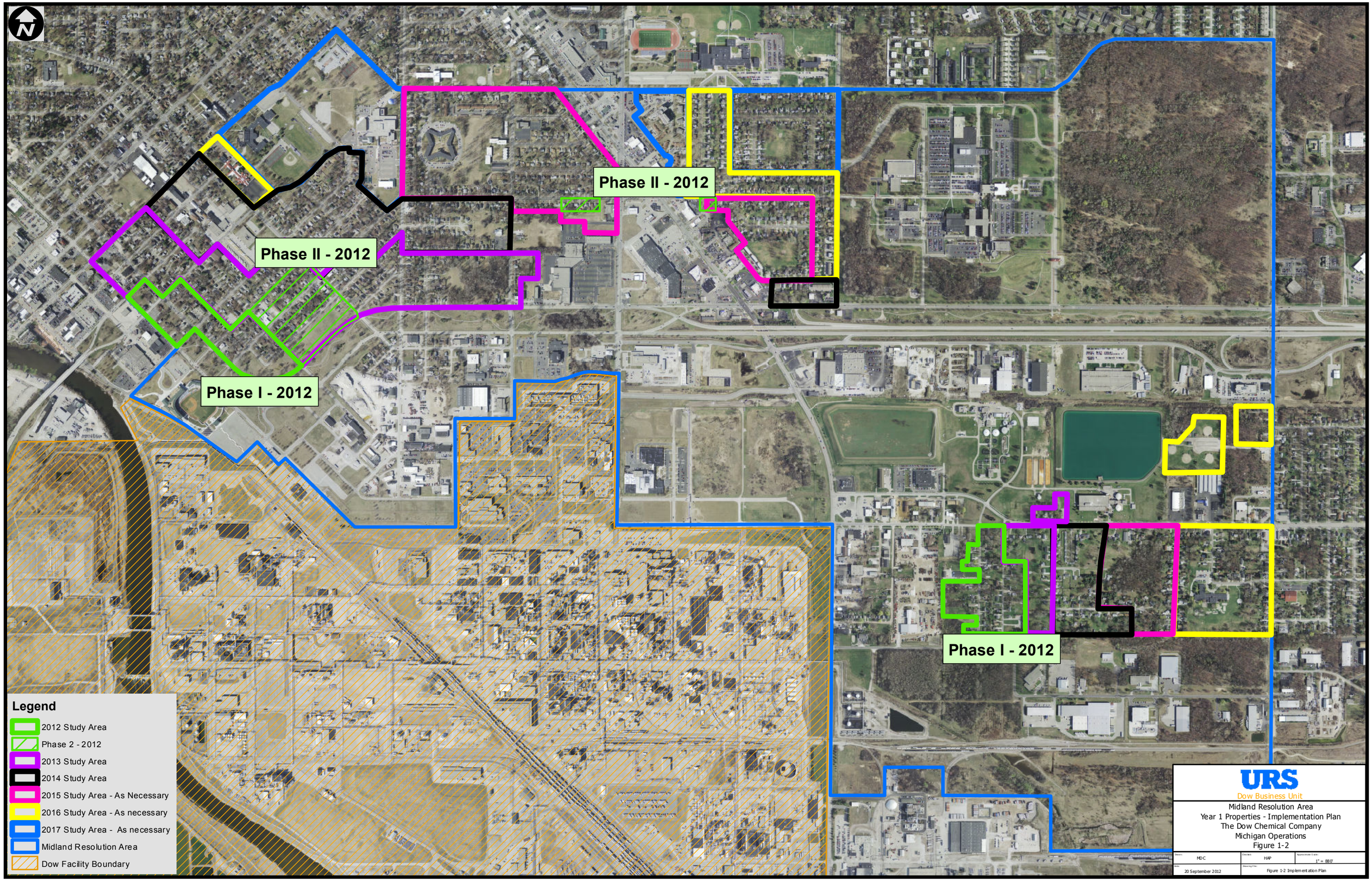
- Sample Collection;
- Analysis;
- Quality Assurance/Quality Control (QA/QC);
- Year 1 Analytical Results;
- Properties identified for No Further Action;
- Properties identified for Remedy;
- Implementation and Completion of Remedy;
- Construction Quality Assurance;
- Verification of Non-Residential Land Use; and
- Properties Identified for Land Use Monitoring.



URS
Dow Business Unit

Facility Location
The Dow Chemical Company
Michigan Operations
Figure 1-1

Drawn: MDC	Checked: MS	Approximate Scale: 1" = 5280'
Date: 7/14/2011	Drawing File: Figure 2-1 Facility Location.mxd	


Phase II - 2012
Phase II - 2012
Phase I - 2012
Phase I - 2012
Legend
2012 Study Area
Phase 2 - 2012
2013 Study Area
2014 Study Area
2015 Study Area - As Necessary
2016 Study Area - As necessary
2017 Study Area - As necessary
Midland Resolution Area
Dow Facility Boundary
URS
Dow Business Unit
Midland Resolution Area
Year 1 Properties - Implementation Plan
The Dow Chemical Company
Michigan Operations
Figure 1-2
Drawn: MDC
Checked: HAP
Approximate Scale: 1" = 880'
Date: 20 September 2012
Drawing File: Figure 1-2 Implementation Plan

2.0 Remedy Design for Year 1

Year 1 implementation began in June 2012 upon approval of the Work Plan. Work in Year 1 was implemented on a Decision Unit (DU)-by-DU basis. Year 1 focused on the properties closest to the Michigan Operations Midland Plant facility (Midland facility) within the Midland Resolution Area. The Year 1 implementation plan initially addressed 106 properties (Phase I); however, because the implementation effort was completed ahead of schedule, 57 additional properties were added in August 2012 (Phase II). The addition of Phase II was approved by MDEQ on July 23, 2012.

2012 Phase I encompassed the areas described below, with approximately 28 acres of property that is in residential (25 acres) or residential-like (3 acres) use. Roughly 2 acres in this area are in non-residential use. The aerial extent of the Phase I implementation area to the northwest of the Midland facility is:

- Bound to the north by Grove St. and Pine St.;
- Bound to the west by Cronkright St., George St., and Mill St.;
- Bound to the east by East Patrick St. and State St.; and
- Bound to the south by E. Indian St. and Buttles St.

The aerial extent of the Year 1 implementation area to the east of Midland facility is:

- Bound to the north by Bay City Road;
- Bound to the west by Kent Street;
- Bound to the east by Walter Street and a fenceline observed between Walter and Sam St.; and
- Bound to the south by Mark Putnam Rd.

2012 Phase II included the areas described below. This area included approximately 16 acres of property that is in residential (10 acres) and residential-like (6 acres) use. Roughly 2 acres in this area are in non-residential use. The aerial extent of the Phase II implementation area to the northwest of the Midland facility is:

- Bound to the north by Carpenter St.;
- Bound to the west by Mill St.;
- Bound to the east by East Patrick St.; and
- Bound to the south by Pine St.

In addition, eight (8) properties along East Haley Street were included in the Phase II efforts.

Table 2-1 presents the properties included in the Year 1 Implementation activities. These areas are also shown on Figures 2-1 and 2-2.

2.1 Project Work Summary for Year 1

Year 1 implementation began in June 2012 immediately following the approval of the Work Plan, with a second phase that started in August 2012. The following table provides a breakdown by land use and access metrics.

Year 1 Totals	Number of Properties
Verified Non-Residential Properties	11
Residential or Residential-like Properties	163
Total Year 1 Properties	***174***
Signed Access Agreements*	148
Properties Sampled	139
Declined to Participate	3
No Response from Property Owner	13

*Access agreements received late for nine (9) Year 1 properties. These are being sampled with Early Start to 2013. Results for these properties will be discussed in the 2013 Annual Report.

Table 2-2 provides additional information on each property, including size of parcel and land use.

2.1.1 Sample Collection

Sample collection activities were completed in accordance with Section 7 of the approved Work Plan. Sampling was based on current land use, physical attributes of the property, and DU area size. Individual DUs that were in residential use include both single and multi-family dwellings. Properties that were treated as residential-like include such categories as parks, schools for

children, daycare centers, and playground areas, as presented in the approved Work Plan, and other public areas on a case-by-case basis.

Samples obtained from an individual DU were collected using the incremental composite sampling technique. Soil was collected from a number of locations (increments) and combined into a single sample (composite) representative of the entire DU. The increment collection locations within each DU were generated using a systematic random approach. The increment collection locations were created in Geographic Information System (GIS) in advance of the sampling activity. Three replicate incremental composite samples were obtained from each DU, with the number of increments based on its area (determined as the area not covered by buildings, large immovable features such as decks or pools, and paved areas). The completed increment collection locations by property are presented in Attachment A.

The following parcels were divided into two DUs based on the presence of woodlands (a wooded area greater than 7,200 square feet [sq ft]) or two different residential-like land uses:

- 14-23-60-164;
- 14-23-60-168;
- 14-23-60-170;
- 14-23-60-172;
- 14-23-60-176; and
- 14-21-10-290.

At each DU, actual conditions may have differed from the initial sample plan. The field team made best efforts to sample at the planned locations but, in some cases, had to make adjustments. In addition, some properties had increment locations moved because access was not obtained for the outlawn area. Table 2-3 provides the justification for any increment adjustments.

In addition, if property owners provided information that the existing lawn was significantly landscaped or fill was placed across much of the property, an additional composite sample was

collected from 0 - 12" of soil. Ten (10) properties included in the Year 1 activities were included in this category.

In accordance with Section 2.2 of the QAPP, samples will be retained until remedial decisions have been made or the end of the calendar year in which the samples were collected, whichever is longer. Based on this, all Year 1 soil samples will not be retained beyond December 31, 2012.

2.1.2 Analysis

A total of 139 properties were sampled and evaluated in Year 1. Nine properties granted access late in the year, and results will be provided early in 2013. The primary samples collected at each DU were analyzed by Method 8280 Midland Area Soils (MAS) Site-Specific Fast Analysis method. When the primary sample result was greater than 220 parts per trillion (ppt) but less than 280 ppt, EPA Method 1613b (with additional chromatographic column confirmation) was performed on the primary sample and two replicates. The results of the analysis are presented in Attachment B.

In accordance with decision rules approved in the approved Work Plan, properties with primary sample Fast Analysis results that fell within the range of > 220 ppt to < 280 ppt triggered the analysis of two replicates and the primary sample using EPA Method 1613b. The three results were used to calculate a 95% UCL for use in remedial decisions. A total of 26 properties (7 properties to the east of the Midland facility and 19 to the north of the Midland facility) had primary sample results that triggered the analysis of replicates, meeting the QA/QC frequency of replicate analysis of 10%, with replicates equally representative of samples in both the North and East Areas. Attachment C provides a complete description of data validation evaluations.

2.1.3 Year 1 Analytical Results

The analytical results provided to property owners (to two significant figures) are presented in Table 2-4. The soil raw data summary tables for Phase I and Phase II for both the Fast Analysis results and the 1613b confirmation sample results are provided in Attachment B.

Quality assurance data for soil testing (including replicate and split sampling procedures) were used to validate analytical methods. Specific procedures are outlined within the Quality Assurance Project Plan (QAPP) (Attachment C of the approved Work Plan). The Data were

validated, and no quality issues affecting remedial decisions were identified. The Validation Report for 2012 is included as Attachment C.

The overall results from the Year 1 sampling activities are presented in the table below.

Totals	Number of Properties
Year 1 Properties Sampled	139*
Number of Properties with No Further Action	118
Number of Properties Requiring Remedy	22
Properties that Granted Access Late and will be Sampled During the Early Start to 2013	9

*Access agreements received late for nine (9) additional Year 1 properties. These are being sampled with Early Start to 2013, making a total of 148. Results for these properties will be discussed in the 2013 Annual Report.

Dow provided written notification of the results of soil sampling to the individual property owners in a timely manner. The written communication briefly described the next steps for the property owner based on the sampling results, as described below. The notification included contact information for both MDEQ and Dow representatives that were available to discuss the information reported to the property owners.

2.1.4 Properties with No Further Action

Based on the sampling results, no further action was warranted for 118 properties included in the Year 1 activities. These property owners were notified that no further action was necessary on their property by Dow. MDEQ has reviewed the information provided and sent letters confirming no further action is necessary for these properties.

Site B-001

Site B-001 is located to the north of the Midland facility within primarily non-residential area and was sampled as part of the Year 1 efforts. Consistent with the site B-001 sampling plan presented in Attachment H of the approved Work Plan, Dow obtained property access and collected one incremental composite sample and two replicate samples from the parcels identified on Figure 2-3. Each of the parcels are currently zoned 1A Industrial, and site use is consistent with that zoning. Two of the three parcels (14-21-20-014 and 14-21-20-010) were treated as individual DUs. Parcel 14-21-20-032 consisted of two DUs:

- The first DU was approximately 60-ft wide by 200-ft long buffer roughly centered along the former rail line; and
- The second DU consisted of the remaining property for that parcel.

Table 2-5 presents a summary of the reported results for Site B-001. All three replicates from the former rail line DU were tested by 1613b and a 95% UCL was determined for that DU. All dioxin and furan toxic equivalents (TEQ) concentrations identified on these properties were less than the generic MDEQ non-residential direct contact criterion; therefore, no further investigation is required to address Site B-001. The soil raw data summary tables for both the Fast Analysis results and the 1613b confirmation sample results are provided in Attachment B. An additional line of evaluation was considered with regards to the potential source of the impacts at these four DUs. The previously remediated soils from site B-001 on Dow property were characterized by relatively elevated fractions (10 - 20% of total TEQ) of 2,3,4,7,8-PCDF and 2,3,4,6,7,8-HxCDF, and roughly 10% of total TEQ of 1,2,3,6,7,8-HxCDF. Soils from the B-001 DUs investigated as part of this study all contain 5% or less of the total TEQ for these isomers, and the distribution of isomers is consistent with those identified in other areas, indicating that the source of the elevated dioxins and furans at Site B-001 on Dow property does not extend beyond the property boundary. This completes the work for the Site B-001 remedy.

2.1.5 Properties with Remedy

Analytical results for 22 properties indicated that remedy was necessary. Section 3 describes the remedy activities that were completed at these properties.

Parcel 14-16-50-096

The analytical result for the primary sample collected for Parcel 14-16-50-096 was an order of magnitude higher than results for properties in the surrounding area. The relative congener distribution (fingerprint) is atypical and not consistent with other soils in this area, and is not likely a result of aerial distribution. In addition to analyzing the replicate samples, additional samples were collected to confirm the result. A review of property history revealed that a home was recently demolished at the property. Additional samples were collected in the recent fill (placed on the property after demolition activities were completed) and the outlawn (or the relatively undisturbed portion). The results of the samples indicated that the recent fill material

was not impacted and that the detected TEQ concentrations were historical in nature. In addition, depth-discrete samples from 0 - 12”, 12” - 24”, and 24” - 36” were obtained to design remedy at this site, because the congener pattern was inconsistent with what is typically observed for the aerial dispersion transport mechanism. Based on the information above, the more likely source is historic soil relocation. The results of the depth-discrete samples supported that a remedy to a depth of 12” was appropriate. A remedy was completed on the property, and is discussed further below.

Table 2-1
Identification of Year 1 Properties
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Owner Address	Owner City	Owner State	Owner Zip	ZONING	Property ID Number	Property Acreage
Phase I								
501 STATE ST	48640	717 E INDIAN / P O Box 183	MIDLAND	MI	48640-0183	MULT	14-21-10-622	0.99
704 E GROVE ST	48640	704 E GROVE ST	MIDLAND	MI	48640-5279	RB	14-21-10-630	0.17
615 E INDIAN ST	48640	5414 GARDENBROOK DR	MIDLAND	MI	48642-3237	OS	14-16-50-064	0.35
611 E INDIAN ST	48640	804 VANCE RD	MIDLAND	MI	48640-4170	OS	14-16-50-063	0.14
502 GEORGE ST	48640	804 VANCE RD	MIDLAND	MI	48640	OS	14-16-50-062	0.13
508 GEORGE ST	48640	608 SYLVAN LN	MIDLAND	MI	48640-2903	OS	14-16-50-060	0.13
612 E GROVE ST	48640	612 E GROVE	MIDLAND	MI	48640	RB	14-16-40-410	0.17
512 GEORGE ST	48640	608 SYLVAN LN	MIDLAND	MI	48640	RB	14-16-50-058	0.15
516 GEORGE ST	48640	5800 SWEDE AVE	MIDLAND	MI	48642	RB	14-16-50-056	0.15
616 E GROVE ST	48640	616 E GROVE ST	MIDLAND	MI	48640-5225	RB	14-16-40-406	0.27
515 E BUTTLES ST	48640	PO BOX 1010	MIDLAND	MI	48641-1010	OS	14-16-50-096	0.16
509 E BUTTLES ST	48640	1111 MICHIGAN AVE STE 201	EAST LANSING	MI	48823	OS	14-16-50-095	0.17
411 GEORGE ST	48640	1111 MICHIGAN AVE STE 201	EAST LANSING	MI	48823	OS	14-16-50-065	0.17
505 E BUTTLES ST	48640	1111 MICHIGAN AVE STE 201	EAST LANSING	MI	48823	OS	14-16-50-094	0.17
415 GEORGE ST	48640	110 N MICHIGAN AVE	SAGINAW	MI	48602-4234	OS	14-16-50-066	0.17
501 E BUTTLES ST	48640	1111 MICHIGAN AVE STE 200	EAST LANSING	MI	48823	OS	14-16-50-092	0.17
412 CRONKRIGHT ST	48640	1111 MICHIGAN AVE STE 201	EAST LANSING	MI	48823	OS	14-16-50-090	0.17
416 CRONKRIGHT ST	48640	416 CRONKRIGHT	MIDLAND	MI	48640	OS	14-16-50-088	0.17
1010 E GROVE ST	48640	P O BOX 1647	MIDLAND	MI	48641-1647	RB	14-21-10-410	1.31
1015 E GROVE ST	48640	1015 E GROVE ST	MIDLAND	MI	48640-5203	RB	14-21-10-408	0.17
915 E INDIAN ST	48640	P O BOX 2455	MIDLAND	MI	48641-2455	OS	14-21-10-536	0.17
1011 E GROVE ST	48640	1011 E GROVE ST	MIDLAND	MI	48640-5203	RB	14-21-10-406	0.17
909 E INDIAN ST	48640	P O BOX 2455	MIDLAND	MI	48641-2455	OS	14-21-10-534	0.17
609 FOURNIE ST	48640	609 FOURNIE ST	MIDLAND	MI	48640	RB	14-21-10-346	0.17
602 HALEY ST	48640	602 HALEY ST	MIDLAND	MI	48640	RB	14-21-10-404	0.17
916 E GROVE ST	48640	829 PAWTUCKET DR	HOPE	MI	48628-9716	RB	14-21-10-520	0.17
613 FOURNIE ST	48640	613 FOURNIE ST	MIDLAND	MI	48640	RB	14-21-10-350	0.17
606 HALEY ST	48640	606 HALEY ST	MIDLAND	MI	48640-5310	RB	14-21-10-402	0.17
914 E GROVE ST	48640	914 E GROVE ST	MIDLAND	MI	48640	RB	14-21-10-522	0.17
901 E INDIAN ST	48640	901 E INDIAN ST	MIDLAND	MI	48640-5233	OS	14-21-10-530	0.33
510 MILL ST	48640	3310 JEFFERSON AVE	MIDLAND	MI	48640-3502	RB	14-21-10-528	0.13
612 HALEY ST	48640	612 HALEY ST	MIDLAND	MI	48640	RB	14-21-10-400	0.21
614 HALEY ST	48640	4878 BAILEY BRIDGE	FREELAND	MI	48623-9801	RB	14-21-10-398	0.12
516 MILL ST	48640	516 MILL	MIDLAND	MI	48642	RB	14-21-10-524	0.20
915 E GROVE ST	48640	406 IRELAND	AUBURN	MI	48611	RB	14-21-10-554	0.17
913 E GROVE ST	48640	913 E GROVE ST	MIDLAND	MI	48640	RB	14-21-10-552	0.17
811 E INDIAN ST	48640	3310 JEFFERSON AVE	MIDLAND	MI	48640-3502	OS	14-21-10-604	0.33
613 HALEY ST	48640	613 HALEY ST	MIDLAND	MI	48640	RB	14-21-10-538	0.17
602 MILL ST	48640	602 MILL ST	MIDLAND	MI	48640-5333	RB	14-21-10-550	0.17

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Identification of Year 1 Properties
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Owner Address	Owner City	Owner State	Owner Zip	ZONING	Property ID Number	Property Acreage
816 E GROVE ST	48640	4878 BAILEY BRIDGE	FREELAND	MI	48623-9801	RB	14-21-10-590	0.17
615 HALEY ST	48640	2855 N MID-BAY CO LINE	MIDLAND	MI	48642	RB	14-21-10-540	0.17
606 MILL ST	48640	606 MILL ST	MIDLAND	MI	48640-5333	RB	14-21-10-548	0.17
812 E GROVE ST	48640	812 E GROVE ST	MIDLAND	MI	48640-5227	RB	14-21-10-592	0.17
610 MILL ST	48640	3065 ALETHA CT	MIDLAND	MI	48640	RB	14-21-10-546	0.17
502 STATE ST	48640	3310 JEFFERSON AVE	MIDLAND	MI	48640-3502	OS	14-21-10-600	0.50
906 E PINE ST	48640	72 E YOUNGS CT	MIDLAND	MI	48640	RB	14-21-10-542	0.17
808 E GROVE ST	48640	3310 JEFFERSON	MIDLAND	MI	48640	RB	14-21-10-594	0.17
1110 E GROVE ST	48640	P O BOX 1647	MIDLAND	MI	48641-1647	RB	14-21-10-344	0.31
1110 E PINE ST	48640	P O BOX 1647	MIDLAND	MI	48641-1647	RB	14-21-10-308	1.20
613 E BUTTLES ST	48640	613 E BUTTLES ST	MIDLAND	MI	48640-5215	OS	14-21-80-470	0.17
609 E BUTTLES ST	48640	609 E BUTTLES ST	MIDLAND	MI	48640	OS	14-21-80-468	0.17
616 E INDIAN ST	48640	1111 MICHIGAN AVE STE 200	EAST LANSING	MI	48823	OS	14-21-80-492	0.21
612 E INDIAN ST	48640	1111 MICHIGAN AVE STE 201	EAST LANSING	MI	48823	OS	14-21-80-494	0.17
402 GEORGE ST	48640	718 E BUTTLES ST	MIDLAND	MI	48640	OS	14-21-80-499	0.34
412 GEORGE ST	48640	117 W REARDON STREET	MIDLAND	MI	48640	OS	14-21-80-498	0.17
416 GEORGE ST	48640	1111 MICHIGAN AVE STE 201	EAST LANSING	MI	48823	OS	14-21-80-496	0.17
715 E BUTTLES ST	48640	825 E MAIN ST	MIDLAND	MI	48640	OS	14-21-80-480	0.17
711 E BUTTLES ST	48640	P O BOX 1010	MIDLAND	MI	48641	OS	14-21-80-478	0.12
409 STATE ST	48640	P O BOX 1010	MIDLAND	MI	48641-1010	OS	14-21-80-482	0.08
707 E BUTTLES ST	48640	1111 E MICHIGAN AVE STE 201	EAST LANSING	MI	48823	OS	14-21-80-476	0.12
411 STATE ST	48640	P O BOX 1647	MIDLAND	MI	48641-1647	OS	14-21-80-484	0.08
701 E BUTTLES ST	48640	1111 MICHIGAN AVE STE 201	EAST LANSING	MI	48823	OS	14-21-80-472	0.25
712 E INDIAN ST	48640	P O BOX 1010	MIDLAND	MI	48641-1010	OS	14-21-80-486	0.18
706 E INDIAN ST	48640	706 E INDIAN ST	MIDLAND	MI	48640	OS	14-21-80-488	0.15
702 E INDIAN ST	48640	1111 MICHIGAN AVE STE 200	EAST LANSING	MI	48823	OS	14-21-80-490	0.12
306 KENT CT	48642	306 KENT ST	MIDLAND	MI	48642	RB	14-23-60-154	0.22
301 WALTER CT	48642	301 WALTER CT	MIDLAND	MI	48640	RB	14-23-60-088	0.24
310 KENT CT	48642	310 KENT CT	MIDLAND	MI	48642	RB	14-23-60-152	0.21
307 WALTER CT	48642	307 WALTER CT	MIDLAND	MI	48642	RB	14-23-60-090	0.26
309 WALTER CT	48642	309 WALTER CT	MIDLAND	MI	48642	RB	14-23-60-092	0.22
306 WALTER CT	48642	4285 TWO MILE ROAD	BAY CITY	MI	48706-2332	RB	14-23-60-080	1.47
314 KENT CT	48642	314 KENT CT	MIDLAND	MI	48642-5909	RB	14-23-60-148	0.15
311 WALTER CT	48642	1104 W PARK DR	MIDLAND	MI	48640-4251	RB	14-23-60-094	0.21
316 WALTER CT	48642	4285 TWO MILE RD	BAY CITY	MI	48706	RB	14-23-60-078	0.47
320 WALTER CT	48642	4285 TWO MILE RD	BAY CITY	MI	48706	RB	14-23-60-076	0.34
324 WALTER CT	48642	4285 TWO MILE	BAY CITY	MI	48706	RB	14-23-60-074	0.34
322 KENT CT	48642	322 KENT CT	MIDLAND	MI	48642	RB	14-23-60-144	0.23
328 WALTER CT	48642	328 WALTER ST	MIDLAND	MI	48642-5917	RB	14-23-60-072	0.32
328 KENT CT	48642	2810 SWEDE AVE	MIDLAND	MI	48642-4716	RB	14-23-60-142	0.25

Table 2-1
Identification of Year 1 Properties
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Owner Address	Owner City	Owner State	Owner Zip	ZONING	Property ID Number	Property Acreage
329 WALTER CT	48642	329 WALTER CT	MIDLAND	MI	48640	RB	14-23-60-102	0.22
332 WALTER CT	48642	332 WALTER ST	MIDLAND	MI	48642-5917	RB	14-23-60-070	0.40
332 KENT CT	48642	332 KENT CT	MIDLAND	MI	48642	RB	14-23-60-140	0.22
401 WALTER CT	48642	401 WALTER ST	MIDLAND	MI	48642-5916	RB	14-23-60-106	0.22
400 WALTER CT	48642	400 WALTER	MIDLAND	MI	48640	RB	14-23-60-068	0.64
400 KENT CT	48642	P O BOX 1647	MIDLAND	MI	48641-1647	RB	14-23-60-132	0.68
408 WALTER CT	48642	408 WALTER CT	MIDLAND	MI	48642	RB	14-23-60-064	0.48
410 KENT CT	48642	410 KENT CT	MIDLAND	MI	48642	RB	14-23-60-131	0.18
409 WALTER CT	48642	409 WALTER ST	MIDLAND	MI	48642-5916	RB	14-23-60-110	0.20
410 WALTER CT	48642	410 WALTER CT	MIDLAND	MI	48642	RB	14-23-60-062	0.49
412 KENT CT	48642	1525 S NINE MILE RD	MIDLAND	MI	48640-9148	RB	14-23-60-130	0.27
413 WALTER CT	48642	3310 JEFFERSON AVE	MIDLAND	MI	48640-3502	RB	14-23-60-112	0.30
416 KENT CT	48642	416 KENT	MIDLAND	MI	48640	RB	14-23-60-128	0.43
424 KENT CT	48642	424 KENT CT	MIDLAND	MI	48642	RB	14-23-60-124	0.23
2201 MARK PUTNAM RD	48642	P O BOX 1647	MIDLAND	MI	48641-1647	IA	14-23-50-060	2.07
425 WALTER CT	48642	3310 JEFFERSON AVE	MIDLAND	MI	48640-3502	RB	14-23-60-120	0.48
420 KENT CT	48642	420 KENT CT	MIDLAND	MI	48642	RB	14-23-60-126	0.28
2208 BAY CITY RD	48642	2727 W. N. UNION	MIDLAND	MI	48642	RB	14-23-60-122	0.24
319 WALTER CT	48642	319 WALTER	MIDLAND	MI	48640	RB	14-23-60-098	0.18
318 KENT CT	48642	318 KENT CT	MIDLAND	MI	48642	RB	14-23-60-146	0.22
325 WALTER CT	48642	325 WALTER ST	MIDLAND	MI	48642-5916	RB	14-23-60-100	0.22
312 KENT CT	48642	312 KENT CT	MIDLAND	MI	48640	RB	14-23-60-150	0.23
301 KENT CT	48642	301 KENT CT	MIDLAND	MI	48640	RB	14-23-60-156	0.38
309 KENT CT	48642	202 SEMINOLE CT	MIDLAND	MI	48642-3560	MULT	14-23-60-160	1.58
315 KENT CT	48642	315 KENT CT	MIDLAND	MI	48642	MULT	14-23-60-164	0.16
315 KENT CT	48642	315 KENT CT	MIDLAND	MI	48642	MULT	14-23-60-164	0.98
319 KENT CT	48642	3439 HIGHLAND DR	BAY CITY	MI	48706-2414	MULT	14-23-60-168	0.49
323 KENT CT	48642	5101 OAKRIDGE DR	MIDLAND	MI	48640	MULT	14-23-60-170	0.49
327 KENT CT	48642	327 KENT CT	MIDLAND	MI	48640	MULT	14-23-60-172	0.97
331 KENT CT	48642	331 KENT CT	MIDLAND	MI	48640	MULT	14-23-60-176	0.97
409 KENT CT	48642	409 KENT CT	MIDLAND	MI	48640	RB	14-23-60-184	0.43
415 KENT CT	48642	415 KENT CT	MIDLAND	MI	48640	RB	14-23-60-190	0.27
419 KENT CT	48642	419 KENT CT	MIDLAND	MI	48640	RB	14-23-60-196	0.26
2127 MARK PUTNAM RD	48642	P O BOX 1647	MIDLAND	MI	48641-1647	IA	14-23-50-070	0.95
Phase II								
706 MILL ST	48640	3901 W CHIPPEWA RIVER RD	SHEPHERD	MI	48883	RC	14-16-40-508	0.19
710 MILL ST	48640	2587 E STEWART RD	MIDLAND	MI	48640-8557	RC	14-16-40-510	0.34
801 HALEY ST	48640	801 HALEY ST	MIDLAND	MI	48640-5313	RA4	14-16-40-612	0.27
805 HALEY ST	48640	805 HALEY ST	MIDLAND	MI	48640-5313	RA4	14-16-40-614	0.18
811 HALEY ST	48640	811 HALEY ST	MIDLAND	MI	48640-5313	RA4	14-16-40-616	0.18
815 HALEY ST	48640	837 GAGE RD	SANFORD	MI	48657	RA4	14-16-40-618	0.18

Table 2-1
Identification of Year 1 Properties
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Owner Address	Owner City	Owner State	Owner Zip	ZONING	Property ID Number	Property Acreage
819 HALEY ST	48640	819 HALEY ST	MIDLAND	MI	48640	RA4	14-16-40-620	0.18
1001 HALEY ST	48640	1001 HALEY ST	MIDLAND	MI	48640	RA4	14-16-40-622	0.18
1007 HALEY ST	48640	1213 SCOTT ST	MIDLAND	MI	48642-4709	RA4	14-16-40-624	0.19
916 E CARPENTER ST	48640	916 E CARPENTER ST	MIDLAND	MI	48640	RA4	14-16-40-626	0.23
912 & 914 E CARPENTER ST	48640	912 & 914 E CARPENTER ST	MIDLAND	MI	48640	RA4	14-16-40-630	0.18
906 E CARPENTER ST	48640	837 GAGE RD	SANFORD	MI	48657-0373	RA4	14-16-40-632	0.18
902 E CARPENTER ST	48640	902 E CARPENTER ST	MIDLAND	MI	48640	RA4	14-16-40-634	0.25
1006 MILL ST	48640	1006 MILL ST	MIDLAND	MI	48640-5335	RA4	14-16-40-636	0.19
1002 MILL ST	48640	PO BOX 1088	MIDLAND	MI	48641-1088	RA4	14-16-40-638	0.19
820 MILL ST	48640	820 MILL ST	MIDLAND	MI	48640-5335	RA4	14-16-40-640	0.20
812 MILL ST	48640	812 MILL ST	MIDLAND	MI	48640	RA4	14-16-40-642	0.19
810 MILL ST	48640	810 MILL ST	MIDLAND	MI	48640-5335	RA4	14-16-40-644	0.19
806 MILL ST	48640	806 MILL ST	MIDLAND	MI	48640-5388	RA4	14-16-40-646	0.19
802 MILL ST	48640	802 MILL ST	MIDLAND	MI	48640-5335	RA4	14-16-40-648	0.29
1110 E CARPENTER ST	48640	P O BOX 1647	MIDLAND	MI	48641-1647	RB	14-16-40-649	0.55
811 FOURNIE ST	48640	4703 E MONROE RD	MIDLAND	MI	48642-8852	RA4	14-16-40-654	0.19
813 FOURNIE ST	48640	813 FOURNIE	MIDLAND	MI	48642	RA4	14-16-40-656	0.19
819 FOURNIE ST	48640	1333 N TEN MILE ROAD	SANFORD	MI	48657	RA4	14-16-40-658	0.19
1001 & 1,2 FOURNIE ST	48640	3324 JEFFERSON AVE	MIDLAND	MI	48640	RA4	14-16-40-660	0.19
1007 FOURNIE ST	48640	316 S AUBURN RD	AUBURN	MI	48611	RA4	14-16-40-662	0.19
1016 E CARPENTER ST	48640	4890 CURVE RD	FREELAND	MI	48623-8511	RA4	14-16-40-664	0.25
1010 E CARPENTER ST	48640	P O BOX 2655	MIDLAND	MI	48641-2655	RA4	14-16-40-666	0.17
1000 & 1006 E CARPENTER S	48640	5811 N SWEDE RD	MIDLAND	MI	48640	NC	14-16-40-670	0.21
1014 & 1016 HALEY ST	48640	716 W LARKIN ST	MIDLAND	MI	48640-4235	NC	14-16-40-672	0.24
1010 HALEY ST	48640	1010 HALEY ST	MIDLAND	MI	48640	RA4	14-16-40-674	0.19
1002 HALEY ST	48640	1002 HALEY ST	MIDLAND	MI	48640	RA4	14-16-40-676	0.19
818 & 1,2,3 HALEY ST	48640	2709 RODD	MIDLAND	MI	48640	RA4	14-16-40-678	0.18
816 & 816 1/2 HALEY ST	48640	2434 PETERSON DR	SANFORD	MI	48657	RA4	14-16-40-680	0.19
810 HALEY ST	48640	4399 ROEHRS RD	BEAVERTON	MI	48612-9107	RA4	14-16-40-682	0.19
806 HALEY ST	48640	806 HALEY ST	MIDLAND	MI	48640-5314	RA4	14-16-40-684	0.19
806 FOURNIE ST	48640	P O BOX 1647	MIDLAND	MI	48641-1647	RB	14-21-10-290	3.10
711 FOURNIE ST	48640	711 FOURNIE ST	MIDLAND	MI	48640	RB	14-21-10-316	0.19
715 FOURNIE ST	48640	715 FOURNIE ST	MIDLAND	MI	48640	RB	14-21-10-317	0.10
717 FOURNIE ST	48640	717 FOURNIE ST	MIDLAND	MI	48640	RB	14-21-10-318	0.09
719 FOURNIE ST	48640	719 FOURNIE ST	MIDLAND	MI	48640	RB	14-21-10-319	0.20
807 FOURNIE ST	48640	807 FOURNIE ST	MIDLAND	MI	48640	RA4	14-21-10-320	0.20
803 FOURNIE ST	48640	807 FOURNIE	MIDLAND	MI	48640	RA4	14-21-10-322	0.21
1109 E PINE ST	48640	P O BOX 1647	MIDLAND	MI	48641-1647	RB	14-21-10-330	2.08
720 HALEY ST	48640	720 HALEY ST	MIDLAND	MI	48640	RA4	14-21-10-384	0.41
716 HALEY ST	48640	716 HALEY ST	MIDLAND	MI	48642-5708	RB	14-21-10-386	0.19
712 HALEY ST	48640	712 HALEY ST	MIDLAND	MI	48640-5312	RB	14-21-10-388	0.19
706 HALEY ST	48640	6513 W WACKERLY	MIDLAND	MI	48640	RB	14-21-10-390	0.19

Table 2-1
Identification of Year 1 Properties
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Owner Address	Owner City	Owner State	Owner Zip	ZONING	Property ID Number	Property Acreage
702 HALEY ST	48640	50 LOUIS NW	GRAND RAPIDS	MI	49503-2674	RB	14-21-10-392	0.24
1009 E PINE ST	48640	1819 E AIRPORT RD	MIDLAND	MI	48642	RB	14-21-10-394	0.19
1013 E PINE ST	48640	1006 ELGIN ST	MIDLAND	MI	48640	RB	14-21-10-396	0.24
701 HALEY ST	48640	701 HALEY ST	MIDLAND	MI	48640	RC	14-21-10-558	0.43
711 HALEY ST	48640	4108 DYCKMAN RD	MIDLAND	MI	48640	RC	14-21-10-562	0.19
715 HALEY ST	48640	4108 DYCKMAN RD	MIDLAND	MI	48640	RC	14-21-10-564	0.32
907 E PINE ST	48640	3901 W CHIPPEWA RIVER RD	SHEPHERD	MI	48883	RC	14-21-10-568	0.19
901 E PINE ST	48640	701 HALEY ST	MIDLAND	MI	48640	RC	14-21-10-570	0.25
800 E HALEY ST	48640	800 E HALEY ST	MIDLAND	MI	48640-5604	RB	14-15-50-012	0.19
804 & 808 E HALEY ST	48640	800 EAST HALEY STREET	MIDLAND	MI	48640	RB	14-15-50-010	0.25
720 E HALEY ST	48640	720 E HALEY ST	MIDLAND	MI	48640	RB	14-15-50-014	0.19
716 E HALEY ST	48640	716 E HALEY ST	MIDLAND	MI	48640-5604	RB	14-15-50-016	0.19
712 E HALEY ST	48640	712 E HALEY ST	MIDLAND	MI	48640	RB	14-15-50-018	0.19
704, 706, 708, & 710 E HALE	48640	5915 EASTMAN AVE	MIDLAND	MI	48640	RB	14-15-50-020	0.47

Notes:
[1] All Properties are within the City of Midland, MI
Zoning Codes
IA = Industrial
MULTI = Indicates that there is more than one zoning classification for that parcel
NC = Neighborhood Commercial
OS = Office Space
RA4 = Residential
RB = Residential
RC = Regional Commercial

Table 2-2
Year 1 Property Information
Implementation Plan for 2012
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Property ID Number	Total Property Acreage	Available Acreage for Sampling (Total acreage - Permanent Structures)	# of Increments	Does Property Contain Woodland Areas of >7,200 sq ft in size (Y/N)	Land Use (Residential / Non-residential)
Phase I							
501 STATE ST	48640	14-21-10-622	0.99	0.57	20	N	Residential
704 E GROVE ST	48640	14-21-10-630	0.17	0.13	10	N	Residential
615 E INDIAN ST	48640	14-16-50-064	0.18	0.14	10	N	Residential
611 E INDIAN ST	48640	14-16-50-063	0.24	0.21	10	N	Residential
502 GEORGE ST	48640	14-16-50-062	0.17	0.11	10	N	Residential
508 GEORGE ST	48640	14-16-50-060	0.16	0.13	10	N	Residential
612 E GROVE ST	48640	14-16-40-410	0.17	0.12	10	N	Residential
512 GEORGE ST	48640	14-16-50-058	0.15	0.11	10	N	Residential
516 GEORGE ST	48640	14-16-50-056	0.15	0.11	10	N	Residential
616 E GROVE ST	48640	14-16-40-406	0.27	0.21	10	N	Residential
515 E BUTTLES ST	48640	14-16-50-096	0.16	0.12	10	N	Residential
509 E BUTTLES ST	48640	14-16-50-095	0.17	0.17	10	N	Residential
411 GEORGE ST	48640	14-16-50-065	0.17	0.17	10	N	Residential
505 E BUTTLES ST	48640	14-16-50-094	0.17	0.17	10	N	Residential
415 GEORGE ST	48640	14-16-50-066	0.17	0.10	10	N	Residential
501 E BUTTLES ST	48640	14-16-50-092	0.17	0.17	10	N	Residential
412 CRONKRIGHT ST	48640	14-16-50-090	0.17	0.17	10	N	Residential
416 CRONKRIGHT ST	48640	14-16-50-088	0.17	0.13	10	N	Residential
1010 E GROVE ST	48640	14-21-10-410	1.31	1.31	30+ or Divide	N	Residential
1015 E GROVE ST	48640	14-21-10-408	0.17	0.11	10	N	Residential
915 E INDIAN ST	48640	14-21-10-536	0.17	0.13	10	N	Residential
1011 E GROVE ST	48640	14-21-10-406	0.17	0.13	10	N	Residential
909 E INDIAN ST	48640	14-21-10-534	0.17	0.14	10	N	Residential
609 FOURNIE ST	48640	14-21-10-346	0.17	0.14	10	N	Residential
602 HALEY ST	48640	14-21-10-404	0.17	0.13	10	N	Residential
916 E GROVE ST	48640	14-21-10-520	0.17	0.13	10	N	Residential
613 FOURNIE ST	48640	14-21-10-350	0.17	0.13	10	N	Residential

Table 2-2
Year 1 Property Information
Implementation Plan for 2012
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Property ID Number	Total Property Acreage	Available Acreage for Sampling (Total acreage - Permanent Structures)	# of Increments	Does Property Contain Woodland Areas of >7,200 sq ft in size (Y/N)	Land Use (Residential / Non-residential)
606 HALEY ST	48640	14-21-10-402	0.17	0.14	10	N	Residential
914 E GROVE ST	48640	14-21-10-522	0.17	0.13	10	N	Residential
901 E INDIAN ST	48640	14-21-10-530	0.33	0.09	0	N	Non-Residential
510 MILL ST	48640	14-21-10-528	0.13	0.09	10	N	Residential
612 HALEY ST	48640	14-21-10-400	0.21	0.16	10	N	Residential
614 HALEY ST	48640	14-21-10-398	0.12	0.08	0	N	Non-Residential
516 MILL ST	48640	14-21-10-524	0.20	0.18	10	N	Residential
915 E GROVE ST	48640	14-21-10-554	0.17	0.13	10	N	Residential
913 E GROVE ST	48640	14-21-10-552	0.17	0.11	10	N	Residential
811 E INDIAN ST	48640	14-21-10-604	0.33	0.27	20	N	Residential
613 HALEY ST	48640	14-21-10-538	0.17	0.12	10	N	Residential
602 MILL ST	48640	14-21-10-550	0.17	0.10	10	N	Residential
816 E GROVE ST	48640	14-21-10-590	0.17	0.15	10	N	Residential
615 HALEY ST	48640	14-21-10-540	0.17	0.14	10	N	Residential
606 MILL ST	48640	14-21-10-548	0.17	0.12	10	N	Residential
812 E GROVE ST	48640	14-21-10-592	0.17	0.13	10	N	Residential
610 MILL ST	48640	14-21-10-546	0.17	0.15	10	N	Residential
502 STATE ST	48640	14-21-10-600	0.50	0.38	20	N	Residential
906 E PINE ST	48640	14-21-10-542	0.17	0.11	10	N	Residential
808 E GROVE ST	48640	14-21-10-594	0.17	0.13	10	N	Residential
1110 E GROVE ST	48640	14-21-10-344	0.31	0.31	20	N	Residential
1110 E PINE ST	48640	14-21-10-308	1.20	1.20	30+ or Divide	N	Residential
613 E BUTTLES ST	48640	14-21-80-470	0.17	0.14	10	N	Residential
609 E BUTTLES ST	48640	14-21-80-468	0.17	0.13	10	N	Residential
616 E INDIAN ST	48640	14-21-80-492	0.21	0.21	10	N	Residential
612 E INDIAN ST	48640	14-21-80-494	0.17	0.17	10	N	Residential
402 GEORGE ST	48640	14-21-80-499	0.34	0.00	0	N	Non-Residential
412 GEORGE ST	48640	14-21-80-498	0.17	0.14	10	N	Residential

Table 2-2
Year 1 Property Information
Implementation Plan for 2012
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Property ID Number	Total Property Acreage	Available Acreage for Sampling (Total acreage - Permanent Structures)	# of Increments	Does Property Contain Woodland Areas of >7,200 sq ft in size (Y/N)	Land Use (Residential / Non-residential)
416 GEORGE ST	48640	14-21-80-496	0.17	0.17	10	N	Residential
715 E BUTTLES ST	48640	14-21-80-480	0.17	0.17	10	N	Residential
711 E BUTTLES ST	48640	14-21-80-478	0.12	0.10	10	N	Residential
409 STATE ST	48640	14-21-80-482	0.08	0.06	10	N	Residential
707 E BUTTLES ST	48640	14-21-80-476	0.12	0.12	10	N	Residential
411 STATE ST	48640	14-21-80-484	0.08	0.08	10	N	Residential
701 E BUTTLES ST	48640	14-21-80-472	0.25	0.25	10	N	Residential
712 E INDIAN ST	48640	14-21-80-486	0.18	0.15	10	N	Residential
706 E INDIAN ST	48640	14-21-80-488	0.15	0.11	10	N	Residential
702 E INDIAN ST	48640	14-21-80-490	0.12	0.12	10	N	Residential
306 KENT CT	48642	14-23-60-154	0.22	0.19	10	N	Residential
301 WALTER CT	48642	14-23-60-088	0.24	0.20	10	N	Residential
310 KENT CT	48642	14-23-60-152	0.21	0.17	10	N	Residential
307 WALTER CT	48642	14-23-60-090	0.26	0.21	10	N	Residential
309 WALTER CT	48642	14-23-60-092	0.22	0.18	10	N	Residential
306 WALTER CT	48642	14-23-60-080	1.47	1.00	20	N	Residential
314 KENT CT	48642	14-23-60-148	0.15	0.11	10	N	Residential
311 WALTER CT	48642	14-23-60-094	0.21	0.18	10	N	Residential
316 WALTER CT	48642	14-23-60-078	0.47	0.44	20	N	Residential
320 WALTER CT	48642	14-23-60-076	0.34	0.31	20	N	Residential
324 WALTER CT	48642	14-23-60-074	0.34	0.31	20	N	Residential
322 KENT CT	48642	14-23-60-144	0.23	0.19	10	N	Residential
328 WALTER CT	48642	14-23-60-072	0.32	0.26	20	N	Residential
328 KENT CT	48642	14-23-60-142	0.25	0.25	10	N	Residential
329 WALTER CT	48642	14-23-60-102	0.22	0.20	10	N	Residential
332 WALTER CT	48642	14-23-60-070	0.40	0.36	20	N	Residential

Table 2-2
Year 1 Property Information
Implementation Plan for 2012
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Property ID Number	Total Property Acreage	Available Acreage for Sampling (Total acreage - Permanent Structures)	# of Increments	Does Property Contain Woodland Areas of >7,200 sq ft in size (Y/N)	Land Use (Residential / Non-residential)
332 KENT CT	48642	14-23-60-140	0.22	0.18	10	N	Residential
401 WALTER CT	48642	14-23-60-106	0.22	0.17	10	N	Residential
400 WALTER CT	48642	14-23-60-068	0.64	0.60	20	N	Residential
400 KENT CT	48642	14-23-60-132	0.68	0.64	20	N	Residential
408 WALTER CT	48642	14-23-60-064	0.48	0.43	20	N	Residential
410 KENT CT	48642	14-23-60-131	0.18	0.10	10	N	Residential
409 WALTER CT	48642	14-23-60-110	0.20	0.16	10	N	Residential
410 WALTER CT	48642	14-23-60-062	0.49	0.45	20	N	Residential
412 KENT CT	48642	14-23-60-130	0.27	0.23	10	N	Residential
413 WALTER CT	48642	14-23-60-112	0.30	0.26	20	N	Residential
416 KENT CT	48642	14-23-60-128	0.43	0.37	20	N	Residential
424 KENT CT	48642	14-23-60-124	0.23	0.20	10	N	Residential
2201 MARK PUTNAM RD	48642	14-23-50-060	2.07	1.85	0	N	Non-Residential
425 WALTER CT	48642	14-23-60-120	0.48	0.48	20	N	Residential
420 KENT CT	48642	14-23-60-126	0.28	0.25	10	N	Residential
2208 BAY CITY RD	48642	14-23-60-122	0.24	0.20	10	N	Residential
319 WALTER CT	48642	14-23-60-098	0.18	0.15	10	N	Residential
318 KENT CT	48642	14-23-60-146	0.22	0.21	10	N	Residential
325 WALTER CT	48642	14-23-60-100	0.22	0.17	10	N	Residential
312 KENT CT	48642	14-23-60-150	0.23	0.19	10	N	Residential
301 KENT CT	48642	14-23-60-156	0.38	0.33	20	N	Residential
309 KENT CT	48642	14-23-60-160	1.47	1.47	0	N	Non-Residential
315 KENT CT	48642	14-23-60-164 (ne	0.16	0.16	10	Y	Residential
315 KENT CT	48642	14-23-60-164	0.98	0.92	20	Y	Residential
319 KENT CT	48642	14-23-60-168	0.49	0.42	20	Y	Residential
323 KENT CT	48642	14-23-60-170	0.49	0.46	20	Y	Residential
327 KENT CT	48642	14-23-60-172	0.97	0.95	20	Y	Residential
331 KENT CT	48642	14-23-60-176	0.97	0.94	20	Y	Residential
409 KENT CT	48642	14-23-60-184	0.43	0.37	20	N	Residential
415 KENT CT	48642	14-23-60-190	0.27	0.17	10	N	Residential
419 KENT CT	48642	14-23-60-196	0.26	0.22	10	N	Residential
2127 MARK PUTNAM RD	48642	14-23-50-070	0.95	0.95	0	N	Non-Residential

Table 2-2
Year 1 Property Information
Implementation Plan for 2012
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Property ID Number	Total Property Acreage	Available Acreage for Sampling (Total acreage - Permanent Structures)	# of Increments	Does Property Contain Woodland Areas of >7,200 sq ft in size (Y/N)	Land Use (Residential / Non-residential)
Phase II							
706 MILL ST	48640	14-16-40-508	0.19	0.02	0	N	Non-residential
710 MILL ST	48640	14-16-40-510	0.34	0.29	20	N	Residential
801 HALEY ST	48640	14-16-40-612	0.27	0.22	10	N	Residential
805 HALEY ST	48640	14-16-40-614	0.18	0.14	10	N	Residential
811 HALEY ST	48640	14-16-40-616	0.18	0.14	10	N	Residential
815 HALEY ST	48640	14-16-40-618	0.18	0.15	10	N	Residential
819 HALEY ST	48640	14-16-40-620	0.18	0.14	10	N	Residential
1001 HALEY ST	48640	14-16-40-622	0.18	0.11	10	N	Residential
1007 HALEY ST	48640	14-16-40-624	0.19	0.14	10	N	Residential
916 E CARPENTER ST	48640	14-16-40-626	0.23	0.17	10	N	Residential
912 & 914 E CARPENTER ST	48640	14-16-40-630	0.18	0.13	10	N	Residential
906 E CARPENTER ST	48640	14-16-40-632	0.18	0.15	10	N	Residential
902 E CARPENTER ST	48640	14-16-40-634	0.25	0.17	10	N	Residential
1006 MILL ST	48640	14-16-40-636	0.19	0.16	10	N	Residential
1002 MILL ST	48640	14-16-40-638	0.19	0.12	10	N	Residential
820 MILL ST	48640	14-16-40-640	0.20	0.16	10	N	Residential
812 MILL ST	48640	14-16-40-642	0.19	0.14	10	N	Residential
810 MILL ST	48640	14-16-40-644	0.19	0.12	10	N	Residential
806 MILL ST	48640	14-16-40-646	0.19	0.13	10	N	Residential
802 MILL ST	48640	14-16-40-648	0.29	0.22	10	N	Residential
1110 E CARPENTER ST	48640	14-16-40-649	0.55	0.53	20	N	Residential
811 FOURNIE ST	48640	14-16-40-654	0.19	0.13	10	N	Residential
813 FOURNIE ST	48640	14-16-40-656	0.19	0.16	10	N	Residential
819 FOURNIE ST	48640	14-16-40-658	0.19	0.15	10	N	Residential
1001 & 1,2 FOURNIE ST	48640	14-16-40-660	0.19	0.14	10	N	Residential
1007 FOURNIE ST	48640	14-16-40-662	0.19	0.16	10	N	Residential
1016 E CARPENTER ST	48640	14-16-40-664	0.25	0.17	10	N	Residential

Table 2-2
Year 1 Property Information
Implementation Plan for 2012
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Property ID Number	Total Property Acreage	Available Acreage for Sampling (Total acreage - Permanent Structures)	# of Increments	Does Property Contain Woodland Areas of >7,200 sq ft in size (Y/N)	Land Use (Residential / Non-residential)
1010 E CARPENTER ST	48640	14-16-40-666	0.17	0.09	10	N	Residential
1000 & 1006 E CARPENTER ST	48640	14-16-40-670	0.21	0.09	0	N	Non-residential
1014 & 1016 HALEY ST	48640	14-16-40-672	0.24	0.06	0	N	Non-residential
1010 HALEY ST	48640	14-16-40-674	0.19	0.13	10	N	Residential
1002 HALEY ST	48640	14-16-40-676	0.19	0.12	10	N	Residential
818 & 1,2,3 HALEY ST	48640	14-16-40-678	0.18	0.09	10	N	Residential
816 & 816 1/2 HALEY ST	48640	14-16-40-680	0.19	0.11	10	N	Residential
810 HALEY ST	48640	14-16-40-682	0.19	0.16	10	N	Residential
806 HALEY ST	48640	14-16-40-684	0.19	0.14	10	N	Residential
806 FOURNIE ST	48640	14-21-10-290	3.10	2.96	30	N	Residential
711 FOURNIE ST	48640	14-21-10-316	0.19	0.14	10	N	Residential
715 FOURNIE ST	48640	14-21-10-317	0.10	0.04	10	N	Residential
717 FOURNIE ST	48640	14-21-10-318	0.09	0.04	10	N	Residential
719 FOURNIE ST	48640	14-21-10-319	0.20	0.14	10	N	Residential

Table 2-2
Year 1 Property Information
Implementation Plan for 2012
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Address[1]	Property Zip	Property ID Number	Total Property Acreage	Available Acreage for Sampling (Total acreage - Permanent Structures)	# of Increments	Does Property Contain Woodland Areas of >7,200 sq ft in size (Y/N)	Land Use (Residential / Non-residential)
807 FOURNIE ST	48640	14-21-10-320	0.20	0.13	10	N	Residential
803 FOURNIE ST	48640	14-21-10-322	0.21	0.16	10	N	Residential
1109 E PINE ST	48640	14-21-10-330	2.08	2.02	30	N	Residential
720 HALEY ST	48640	14-21-10-384	0.41	0.33	20	N	Residential
716 HALEY ST	48640	14-21-10-386	0.19	0.11	10	N	Residential
712 HALEY ST	48640	14-21-10-388	0.19	0.14	10	N	Residential
706 HALEY ST	48640	14-21-10-390	0.19	0.15	10	N	Residential
702 HALEY ST	48640	14-21-10-392	0.24	0.19	10	N	Residential
1009 E PINE ST	48640	14-21-10-394	0.19	0.16	10	N	Residential
1013 E PINE ST	48640	14-21-10-396	0.24	0.21	10	N	Residential
701 HALEY ST	48640	14-21-10-558	0.43	0.07	0	N	Non-residential
711 HALEY ST	48640	14-21-10-562	0.19	0.01	0	N	Non-residential
715 HALEY ST	48640	14-21-10-564	0.32	0.13	0	N	Non-residential
907 E PINE ST	48640	14-21-10-568	0.19	0.02	0	N	Non-residential
901 E PINE ST	48640	14-21-10-570	0.25	0.17	10	N	Residential
800 E HALEY ST	48640	14-15-50-012	0.19	0.11	10	N	Residential
804 & 808 E HALEY ST	48640	14-15-50-010	0.25	0.14	10	N	Residential
720 E HALEY ST	48640	14-15-50-014	0.19	0.11	10	N	Residential
716 E HALEY ST	48640	14-15-50-016	0.19	0.08	10	N	Residential
712 E HALEY ST	48640	14-15-50-018	0.19	0.11	10	N	Residential
704, 706, 708 & 710 E HALEY ST	48640	14-15-50-020	0.47	0.29	20	N	Residential

Notes:
> 0.25 acres = 10 increments
<0.25 but >1 acre = 20 increments
> 1 acre = 30 + increments or divide
[1] All Properties are within the City of Midland, MI

Table 2-3
Properties that Required Relocated Increments During Sampling Activities
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Sample Collection	Justification for Moving Increment Location
Phase I Properties			
14-23-60-156	301 Kent Ct	6/13/2012	Moved one increment to avoid stones.
14-23-60-088	301 Walter Ct.	6/19/2012	Moved one increment to avoid tree and shed.
14-23-60-154	306 Kent Ct.	6/11/2012	Decision unit increment moved from outlawn because access was not granted.
14-23-60-080	306 Walter Ct.	6/8/2012	Moved five increments to avoid vegetation and/or gravel.
14-23-60-152	310 Kent Ct.	6/20/2012	Moved one increment to avoid pavement.
14-23-60-150	312 Kent Ct.	6/6/2012	Moved one backyard increment to avoid fill area and one increment from outlawn.
14-23-60-148	314 Kent Ct.	6/7/2012	Moved one increment from outlawn and two increments to avoid garden.
14-23-60-078	316 Walter Ct.	6/8/2012	Decision unit increment moved from outlawn because access was not granted.
14-23-60-146	318 Kent Ct.	6/6/2012	Moved four increments to the center of backyard to avoid gravel.
14-23-60-098	319 Walter Ct.	6/6/2012	Moved one increment approximately 3 feet out of the woods.
14-23-60-076	320 Walter Ct.	6/8/2012	Moved six increments to avoid gravel and two increments from outlawn.
14-23-60-070	332 Walter Ct.	6/7/2012	Decision unit increment moved from outlawn because access was not granted.
14-23-60-100	325 Walter Ct.	6/18/2012	Moved one increment to avoid gravel.
14-23-60-106	401 Walter Ct.	6/12/2012	Moved two increments to avoid treeline.
14-23-60-064	408 Walter Ct.	6/7/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-80-482	409 State St.	6/6/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-50-090	412 Cronkright St.	6/5/2012	Moved one increment to avoid gravel path/outlawn.
14-23-60-130	412 Kent Ct.	6/6/2012	Moved three increments to avoid vegetation and/or gravel/rock.
14-23-60-112	413 Walter Ct.	6/8/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-80-496	416 George St.	6/9/2012	Decision unit increment moved from outlawn because access was not granted.
14-23-60-128	416 Kent Ct.	6/11/2012	Moved two increments to avoid obstruction in yard.
14-23-60-120	425 Walter Ct.	6/8/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-50-092	501 E. Buttles St.	6/5/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-50-094	505 E. Buttles St.	6/5/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-50-060	508 George St.	6/8/2012	Moved four increments to avoid pavement and one increment from outlawn.
14-16-50-095	509 E. Buttles St.	6/5/2012	Moved one increment from outlawn; one additional increment moved on the property.
14-21-10-528	510 Mill St.	6/12/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-50-058	512 George St.	6/8/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-50-096	515 E. Buttles St.	6/5/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-50-056	516 George St.	6/8/2012	Moved three increments from outlawn and one increment to avoid old driveway.
14-21-10-524	516 Mill St.	6/9/2012	Several increments moved to avoid soil relocation and from outlawn.
14-21-10-402	606 Haley St.	6/14/2012	Moved one increment to avoid sidewalk.

Table 2-3
Properties that Required Relocated Increments During Sampling Activities
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Sample Collection	Justification for Moving Increment Location
14-21-80-468	609 E. Buttles St.	6/6/2012	Moved two increments to avoid fill added to property and shed; one increment moved from outlawn.
14-21-10-346	609 Fournie St.	6/13/2012	Several increments moved to avoid objects in the yard.
14-21-40-546	610 Mill St.	6/6/2012	Moved two increments to avoid dense vegetation and/or flower beds and one increment moved from outlawn.
14-16-40-410	612 E. Grove St.	6/13/2012	Moved two increments to avoid pavement.
14-21-80-494	612 E. Indian St.	6/9/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-10-400	612 Haley St	6/14/2012	Moved one increment to avoid deck.
14-21-10-350	613 Fournie St.	6/11/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-50-064	615 E. Indian St.	6/8/2012	Moved one increment to avoid garage.
14-21-80-492	616 E. Indian St.	6/9/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-80-472	701 E. Buttles St.	6/9/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-80-490	702 E. Indian St.	6/9/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-80-488	706 E. Indian St.	6/15/2012	Moved increments to avoid pavement.
14-21-80-476	707 E. Buttles St.	6/9/2012	Moved one increment from outlawn and two moved to avoid fallen tree.
14-21-80-478	711 E. Buttles St.	6/9/2012	Majority of samples depths were not 6"; may have hit a foundation. Made attempts to move location of the increments. One increment moved from outlawn.
14-21-80-480	715 E. Buttles	6/14/2012	Some increments were not 6" deep due to large foundation. Tried moving increments to find edge of foundation with little success.
14-21-10-594	808 E. Grove St.	6/12/2012	Moved one increment to avoid shrub.
14-21-10-592	812 E. Grove St.	6/11/2012	Moved two increments to avoid pavement and one increment moved from outlawn.
14-21-10-542	906 Pine St.	6/7/2012	One increment moved from outlawn and one to avoid gravel.
14-21-10-534	909 E. Indian St.	6/7/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-10-552	913 E. Grove St.	6/6/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-10-522	914 E. Grove St.	6/11/2012	One increment moved onto the property.
14-21-10-536	915 E. Indian St.	6/7/2012	Decision unit increment moved from outlawn because access was not granted.
14-21-10-520	916 E. Grove St.	8/1/2012	Moved one increment from concrete drive and one increment to avoid tree.

Table 2-3
Properties that Required Relocated Increments During Sampling Activities
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Sample Collection	Justification for Moving Increment Location
Phase II Properties			
14-16-40-624	1007 Haley St.	8/9/2012	Moved one increment to avoid gravel.
14-16-40-674	1010 Haley St.	8/9/2012	Moved five increments to avoid subsurface rock.
14-21-10-316	711 Fournie St.	8/15/2012	Moved two increments to avoid driveway.
14-21-10-317	715 Fournie St.	8/14/2012	Moved one increment to avoid deck.
14-15-50-016	716 E. Haley St.	8/9/2012	Moved one increment to avoid tree.
14-21-10-386	716 Haley St.	8/8/2012	Moved six increments to avoid objects in yard.
14-21-10-318	717 Fournie St.	8/7/2012	Moved two increments from landscaping to grass area.
14-21-10-319	719 Fournie St.	8/7/2012	Moved one increment to avoid flower bed and one increment to avoid deck.
14-21-10-384	720 Haley St.	8/10/2012	Moved one increment in front yard.
14-15-50-012	800 E. Haley St.	8/13/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-40-612	801 Haley St.	8/14/2012	Moved one increment to avoid pool and one to avoid brush.
14-16-40-614	805 Haley St.	8/8/2012	Moved three increments to avoid flower beds.
14-21-10-290	806 Fournie St.	8/11/2012	Field House Area; Moved increments to avoid playground equipment.
14-16-40-684	806 Haley St.	8/13/2012	Moved one increment to avoid driveway.
14-16-40-646	806 Mill St.	8/10/2012	Decision unit increment moved from outlawn because access was not granted.
14-16-40-616	811 Haley St.	8/8/2012	Moved one increment to avoid gravel.
14-16-40-640	820 Mill St.	8/6/2012	Moved one increment to avoid driveway.
14-16-40-634	902 E. Carpenter St.	8/10/2012	Moved one increment to avoid deck.
14-21-10-570	901 E. Pine St.	8/28/2012	Moved one increment to avoid from shrubs/bushes.

Table 2-4
Summary of Year 1 Reported Results
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Date	Reported Results 0-6"	Reported Results 0-12"
Phase I				
14-21-10-410	1010 E. Grove St.	6/21/2012	230	
14-21-10-406	1011 E. Grove St.	6/13/2012	210	
14-21-10-408	1015 E. Grove St.	6/13/2012	110	
14-21-10-344	1110 E. Grove St.	6/20/2012	190	
14-21-10-308	1110 E. Pine St.	6/20/2012	180	
14-23-60-122	2208 Bay City Road	6/15/2012	190	
14-23-60-156	301 Kent Ct	6/13/2012	190	220
14-23-60-088	301 Walter Ct.	6/19/2012	120	
14-23-60-154	306 Kent Ct.	6/11/2012	80	
14-23-60-080	306 Walter Ct.	6/8/2012	120	
14-23-60-090	307 Walter Ct.	6/13/2012	80	
14-23-60-092	309 Walter Ct.	6/13/2012	100	
14-23-60-152	310 Kent Ct.	6/20/2012	90	90
14-23-60-094	311 Walter Ct.	6/7/2012	240	
14-23-60-150	312 Kent Ct.	6/6/2012	100	
14-23-60-148	314 Kent Ct.	6/7/2012	140	140
14-23-60-164	315 Kent Ct.	6/11/2012	290	
14-23-60-164	315 Kent Ct.	6/11/2012	320	
14-23-60-078	316 Walter Ct.	6/8/2012	140	
14-23-60-146	318 Kent Ct.	6/6/2012	220	
14-23-60-098	319 Walter Ct.	6/6/2012	220	
14-23-60-168	319/321 Kent Ct.	6/14/2012	50	
14-23-60-168	319/321 Kent Ct.	6/14/2012	420	
14-23-60-076	320 Walter Ct.	6/8/2012	170	
14-23-60-144	322 Kent Ct.	6/13/2012	180	
14-23-60-170	323 Kent Ct.	6/14/2012	160	
14-23-60-170	323 Kent Ct.	6/14/2012	350	
14-23-60-074	324 Walter Ct.	6/15/2012	130	
14-23-60-100	325 Walter Ct.	6/18/2012	240	
14-23-60-172	327 Kent Ct.	6/14/2012	230	
14-23-60-172	327 Kent Ct.	6/14/2012	250	
14-23-60-142	328 Kent Ct.	6/19/2012	190	
14-23-60-072	328 Walter Ct.	6/15/2012	90	
14-23-60-102	329 Walter Ct.	6/27/2012	200	
14-23-60-176	331 Kent Ct.	6/11/2012	180	
14-23-60-176	331 Kent Ct.	6/11/2012	230	
14-23-60-140	332 Kent Ct.	6/14/2012	180	
14-23-60-070	332 Walter Ct.	6/7/2012	160	
14-23-60-132	400 Kent Ct.	6/20/2012	180	
14-23-60-068	400 Walter Ct.	6/19/2012	190	
14-23-60-106	401 Walter Ct.	6/12/2012	80	

Table 2-4
Summary of Year 1 Reported Results
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Date	Reported Results 0-6"	Reported Results 0-12"
14-23-60-064	408 Walter Ct.	6/7/2012	200	
14-23-60-184	409 Kent Ct.	6/15/2012	50	
14-21-80-482	409 State St.	6/6/2012	90	
14-23-60-131	410 Kent Ct.	6/19/2012	150	
14-23-60-062	410 Walter Ct.	6/13/2012	100	
14-16-50-065	411 George St.	6/5/2012	170	
14-21-80-484	411 State St.	6/20/2012	140	
14-16-50-090	412 Cronkright St.	6/5/2012	100	
14-23-60-130	412 Kent Ct.	6/6/2012	150	
14-23-60-112	413 Walter Ct.	6/8/2012	200	
14-23-60-190	415 Kent Ct.	6/12/2012	50	
14-21-80-496	416 George St.	6/9/2012	50	
14-23-60-128	416 Kent Ct.	6/11/2012	170	
14-23-60-196	419 Kent Ct.	6/12/2012	100	
14-23-60-126	420 Kent Ct.	6/18/2012	170	
14-23-60-124	424 Kent Ct.	6/12/2012	140	
14-23-60-120	425 Walter Ct.	6/8/2012	150	
14-16-50-092	501 E. Buttles St.	6/5/2012	130	
14-21-10-622	501 State Street	6/15/2012	70	
14-21-10-600	502 State St.	6/12/2012	180	
14-16-50-094	505 E. Buttles St.	6/5/2012	100	
14-16-50-060	508 George St.	6/8/2012	120	
14-16-50-095	509 E. Buttles St.	6/5/2012	50	
14-21-10-528	510 Mill St.	6/12/2012	210	
14-16-50-058	512 George St.	6/8/2012	220	
14-16-50-096	515 E. Buttles St.	6/5/2012	2660	
14-16-50-056	516 George St.	6/8/2012	190	
14-21-10-524	516 Mill St.	6/9/2012	260	200
14-21-10-404	602 Haley St	6/14/2012	190	
14-21-10-402	606 Haley St.	6/14/2012	290	
14-21-10-548	606 Mill St.	6/7/2012	200	
14-21-80-468	609 E. Buttles St.	6/6/2012	200	
14-21-10-346	609 Fournie St.	6/13/2012	220	
14-21-40-546	610 Mill St.	6/6/2012	200	
14-16-40-410	612 E. Grove St.	6/13/2012	170	
14-21-80-494	612 E. Indian St.	6/9/2012	110	
14-21-10-400	612 Haley St	6/14/2012	310	
14-21-10-350	613 Fournie St.	6/11/2012	190	
14-21-10-538	613 Haley St	6/14/2012	240	
14-16-50-064	615 E. Indian St.	6/8/2012	210	
14-21-10-540	615 Haley St.	8/1/2012	180	
14-21-80-492	616 E. Indian St.	6/9/2012	100	

Table 2-4
Summary of Year 1 Reported Results
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Date	Reported Results 0-6"	Reported Results 0-12"
14-21-80-472	701 E. Buttles St.	6/9/2012	130	
14-21-80-490	702 E. Indian St.	6/9/2012	50	
14-21-10-630	704 E. Grove St.	6/11/2012	210	
14-21-80-488	706 E. Indian	6/15/2012	140	
14-21-80-476	707 E. Buttles St.	6/9/2012	80	
14-21-80-478	711 E. Buttles St.	6/9/2012	130	
14-21-80-486	712 E. Indian St	6/14/2012	70	
14-21-80-480	715 E. Buttles	6/14/2012	110	
14-21-10-594	808 E. Grove St.	6/12/2012	190	
14-21-10-604	811 E. Indian St.	6/12/2012	160	
14-21-10-592	812 E. Grove St.	6/11/2012	170	160
14-21-10-542	906 Pine St.	6/7/2012	160	
14-21-10-534	909 E. Indian St.	6/7/2012	290	
14-21-10-552	913 E. Grove St.	6/6/2012	300	
14-21-10-522	914 E. Grove St.	6/11/2012	240	
14-21-10-554	915 E. Grove St.	7/5/2012	210	
14-21-10-536	915 E. Indian St.	6/7/2012	220	
14-21-10-520	916 E. Grove Street	8/1/2012	300	
Phase II				
14-16-40-656	813 FOURNIE ST	8/15/2012	230	
14-21-10-319	719 FOURNIE ST	8/7/2012	150	
14-16-40-622	1001 HALEY ST	8/13/2012	290	
14-16-40-684	806 HALEY ST	8/13/2012	240	
14-16-40-680	816 HALEY ST	8/10/2012	190	
14-16-40-638	1002 MILL ST	8/6/2012	310	
14-15-40-174	1128 E Haley Street	8/10/2012	90	70
14-21-10-290	806 FOURNIE ST	8/11/2012	130	
14-21-10-290	806 FOURNIE ST	8/11/2012	150	
14-16-40-649	1110 E CARPENTER ST	8/11/2012	160	
14-15-40-172	1202 E. Haley Street	8/11/2012	180	70
14-21-10-330	1109 E PINE ST	8/11/2012	210	
14-16-40-642	812 MILL ST	8/15/2012	250	
14-16-40-660	1001 FOURNIE ST	8/7/2012	430	
14-16-40-630	912 E CARPENTER ST	8/14/2012	190	
14-16-40-662	1007 FOURNIE ST	8/10/2012	290	
14-16-40-664	1016 E Carpenter St	8/28/2012	220	
14-16-40-634	902 E CARPENTER ST	8/10/2012	200	
14-15-50-016	716 E HALEY ST	8/9/2012	110	
14-21-10-396	1013 E PINE ST	8/15/2012	280	
14-16-40-676	1002 HALEY ST	8/9/2012	220	
14-21-10-386	716 HALEY ST	8/8/2012	490	
14-16-40-614	805 HALEY ST	8/8/2012	370	

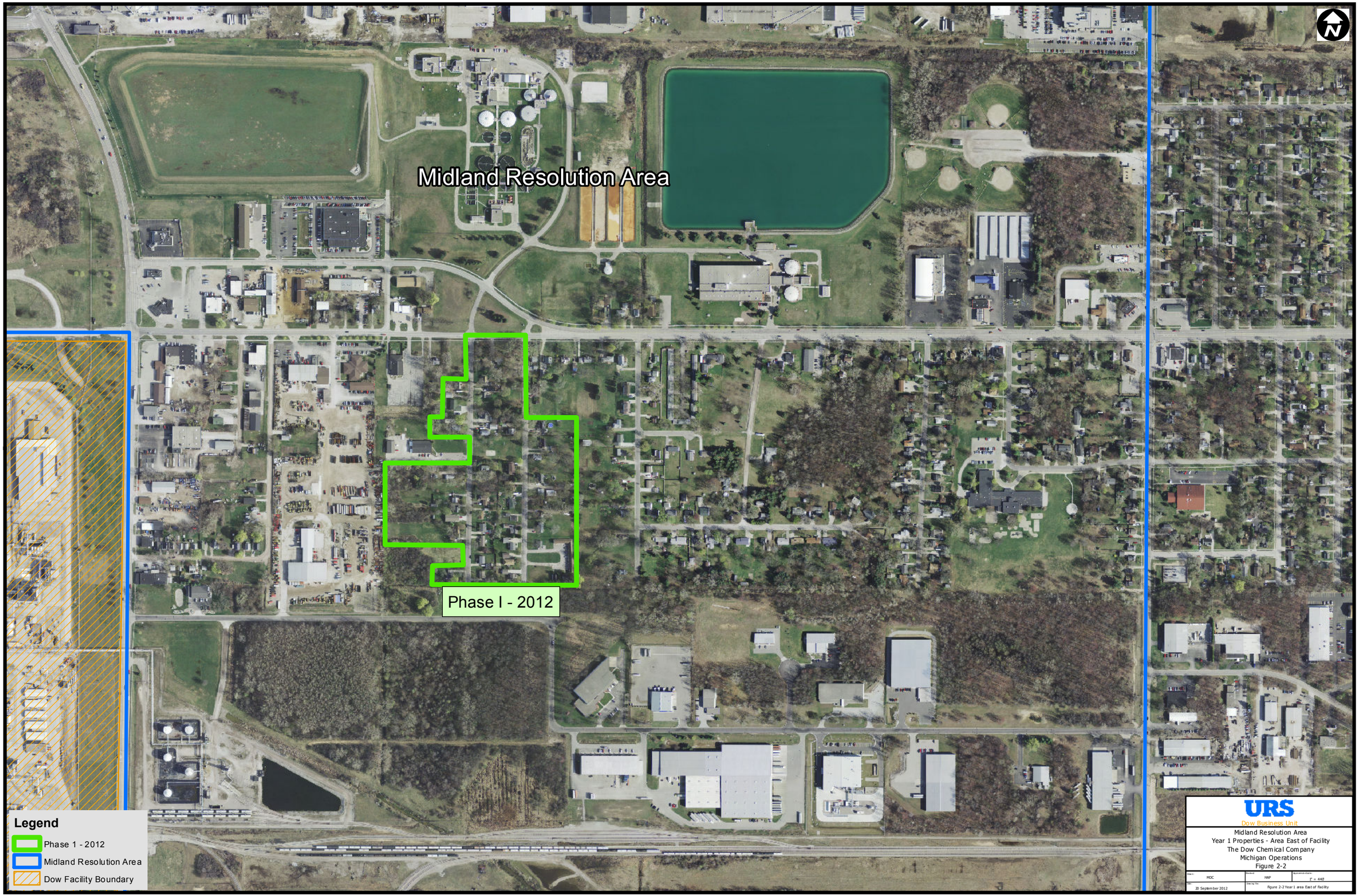
Table 2-4
Summary of Year 1 Reported Results
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Date	Reported Results 0-6"	Reported Results 0-12"
14-21-10-384	720 HALEY ST	8/10/2012	150	140
14-16-40-658	819 FOURNIE ST	8/14/2012	370	
14-21-10-394	1009 E PINE ST	8/9/2012	200	
14-16-40-612	801 HALEY ST	8/14/2012	170	
14-16-40-674	1010 HALEY ST	8/9/2012	220	
14-16-40-640	820 MILL ST	8/6/2012	300	
14-21-10-318	717 FOURNIE ST	8/7/2012	180	110
14-16-40-620	819 HALEY ST	8/8/2012	200	
14-16-40-646	806 MILL ST	8/10/2012	160	
14-21-10-316	711 FOURNIE ST	8/15/2012	290	
14-21-10-317	715 FOURNIE ST	8/14/2012	210	130
14-15-50-018	712 E HALEY ST	8/14/2012	120	
14-16-40-624	1007 HALEY ST	8/9/2012	200	
14-21-10-390	706 HALEY ST	8/8/2012	290	
14-16-40-616	811 HALEY ST	8/8/2012	230	
14-15-50-012	800 E HALEY ST	8/13/2012	120	
14-15-50-010	804 E HALEY ST	8/13/2012	160	
14-21-10-570	901 E Pine St.	8/28/2012	180	
14-16-40-648	802 MILL ST	8/7/2012	150	
14-16-40-666	1010 E CARPENTER ST	8/13/2012	200	
14-16-40-654	811 FOURNIE ST	8/7/2012	290	

Table 2-5
Summary of Site B-001 Reported Results
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Date	Reported Results 0-6"
Site B-001			
14-21-20-032	514 Sixth St (DU1)	7/6/2012	558
14-21-20-032	514 Sixth St (DU2)	7/6/2012	900
14-21-20-014	613 Jefferson Ave. (DU3)	7/6/2012	537
14-21-20-010	91 Austin St (DU4)	7/6/2012	382

Midland Resolution Area
Phase II - 2012
Phase II - 2012
Phase I - 2012
Legend
Phase 1 - 2012
Phase 2 - 2012
Midland Resolution Area
Dow Facility Boundary
URS
Dow Business Unit
Midland Resolution Area
Year 1 Properties - Area North of Facility
The Dow Chemical Company
Michigan Operations
Figure 2-1
MDC
HAP
1" = 470'
20 September 2012
Figure 2-1 Year 1 area North of Facility


Midland Resolution Area
Phase I - 2012
Legend
Phase 1 - 2012
Midland Resolution Area
Dow Facility Boundary
URS
Dow Business Unit
Midland Resolution Area
Year 1 Properties - Area East of Facility
The Dow Chemical Company
Michigan Operations
Figure 2-2
Drawn: MDC
Reviewed: HAP
Approved date:
1" = 440
Date: 20 September 2012
Drawing File: figure 2-2 Year 1 area East of Facility

3.0 Remedy Design for Year 1

For those 22 properties where remedy was determined to be necessary based on analytical results, Dow made best efforts and obtained appropriate access from the property owners for implementation of the property-specific presumptive remedy. The presumptive remedy for each residential or residential-like property undergoing remediation included removal of the upper twelve inches (12") of existing landscaping and soil, followed by replacement with new soil, lawn, and landscaping. The excavated soils were placed into trucks for transport to the Michigan Operation plant site for re-use or to an appropriate disposal facility.

3.1 Property-Specific Work Plans

Dow representatives worked with individual property owners to define individual property-specific work plans during remedy planning. During the property visit, Dow communicated details regarding the presumptive remedy sampling effort and possible implications based on analytical results. Dow, along with the property owner, developed and documented property-specific remedy plans that met the approved Work Plan objectives and addressed any special concerns of the property owner. At that time, the property owner had the opportunity to communicate specific concerns regarding unique features of their property and these unique features were documented on the property-specific work plan.

3.2 Completed Remedies

The remedy activities were completed in accordance with the approved Work Plan. Any property-specific adjustments were documented. The completed remedies are summarized on maps in Attachment D. Areas that were not removed are noted on the drawings.

3.3 Construction Quality Assurance

Construction activities were documented by property to record the details of construction, ensure consistency with the presumptive remedy, and note exceptions. The following information was documented as part of construction quality assurance (CQA):

- Area of soil removal;
- Area of undisturbed soil;
- Number of cubic yards of soil removed from the property; and
- Notations for areas where less than 12" of soil were removed (e.g., near tree roots).

Table 3-3 presents the information collected on each of the remedy properties used to complete the construction quality assurance. Construction quality assurance field forms are included in Attachment E.

Borrow Pit Soils

Samples were collected from the borrow pits used as sources of replacement soils for remedied yards. The samples were tested for dioxins and furans by EPA Method 1613b, herbicides by EPA Method 8151, PCBs by EPA Method 8082, pesticides by EPA Method 8081, mercury by EPA Method 7471, metals by EPA Method 6020A, and semi-volatile compounds by EPA Method 8270. The sample from the Alma borrow source was tested beyond the listed holding time for semi-volatile compounds and pesticides due to laboratory issues. The analytical results are summarized on Tables 3-1 and 3-2. The sample results indicate the borrow soils are suitable for use as replacement fill in an unrestricted residential setting.

3.3.1 SWAC Calculation

During remedy completion, portions of each DU remained undisturbed (such as soil remaining beneath appurtenant structures such as decks and pools). As part of the CQA, an average concentration of dioxin and furan TEQ on the property after clean up was calculated to determine if it was less than the Site-specific Action Level (SSAL). The DU weighted average concentration is provided for each remedy property in Table 3-3. Property-specific calculation sheets for each remedy property are included in Attachment F. The total undisturbed and/or inaccessible area TEQ concentration was assumed to be equal to the TEQ concentration determined for the DU prior to cleanup. The TEQ concentration in the remedy areas was assumed to be the concentration from the borrow source. Land under permanent in-ground structures such as houses, paved sidewalks, and driveways was not included in the calculation.

If the undisturbed limited-use wooded areas (as defined in 7.4.3.1 of the approved Work Plan) were sampled, the evaluation was made using the known concentration for the wooded areas. Remedy was necessary for three parcels that included two decision units. Remedies were conducted on these properties in accordance with the approved Work Plan. At each of the properties originally containing wooded DUs, there are less than 7,200 sq ft of woodlands

remaining on the properties. Therefore, the wooded areas are small enough that these properties are not included on the list for land use monitoring. Because the woodlands are smaller than the 7,200 sq ft threshold, the SWAC for the properties with woodlands is determined for the entire property.

These evaluations also confirmed the percentage of undisturbed remaining soil post-remedy and identified if remedy was required for accumulated indoor dust, as described below.

3.3.2 Indoor Dust Evaluation

Upon completion of the remedy, an evaluation of possible exposure to dust accumulated within dwelling(s) ducts (for those properties with existing structures) was completed by utilizing the analytical result for the DU (soil concentration) and the percent undisturbed remaining soil. The site-specific parameters, and the same assumptions defined in Section 6 of the approved Work Plan, were used in the site-specific algorithm equation to solve for target risk (TR). As stated in the approved Work Plan, duct cleaning will be offered for all DUs with calculated TR values greater than 1E-05. The indoor dust evaluation was completed for 19 properties. Three (3) properties were remedied, but no structure was present on the property (therefore, the indoor dust evaluation was not necessary). These evaluations are presented in Attachment F. Based on the SWAC values calculated as part of the CQA evaluations, there is no unacceptable risk remaining post-remedy at any of the subject properties. Therefore, duct cleaning was not necessary.

3.4 Verification of Non-Residential Properties

In accordance with the approved Work Plan, a site visit or survey was conducted to verify that non-residential properties (e.g., businesses) were not currently used as a residence or in a manner which constitutes residential-like use. Additionally, non-residential properties bordering residential properties were evaluated for the potential for soil and sediment erosion and transport by surface water runoff. The findings from the survey were summarized and presented in Table 3-4.

During the land use survey, the property at 1184 James Savage Road was determined to be a daycare facility and, therefore, considered residential-like in use. Due to the nature of the land use and the proximity to Michigan Operations, Dow chose to implement presumptive remedy on this property. Dow obtained appropriate access from the property owner for implementation of

the remedy. The remedy plan developed for this property met the approved Work Plan objectives and addressed concerns of the daycare facility that uses this property.

3.5 Land-Use Monitoring

Some businesses are located in areas that may allow for conversion to residential or residential-like use. Institutional controls are planned for implementation to prevent residential or residential-like use of these properties in the future. Prior to that time, it is possible some businesses could be converted to residential use. To address this possibility, non-residential properties within the Resolution Area were identified and will be monitored for changes to residential or residential-like land use until appropriate institutional controls prohibiting this use are in place. Table 3-4 presents the properties that will be monitored annually for any changes in land use. In conjunction with the evaluation of non-residential land use described in Section 3.4, monitoring activities during the project will be conducted in accordance with the approved Work Plan.

Residential and residential-like properties where owners declined participation in the program in 2012 will have the remedy deferred and funding placed into a Trust at a later date. These properties will be monitored for change in ownership and/or changes in use. If changes in ownership or use are identified, the new owners will be advised of options for testing and/or cleanup.

Table 3-1
Borrow Pit Detected Compounds - Metals
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

	Arsenic	Lead	Mercury	Silver	Barium	Cadmium	Chromium	Copper	Zinc	Selenium
Drinking Water Protection Criteria	4,600	7.00E+05	1,700	4,500	1.3E+06	6,000	30,000	5.8E+06	2.4E+06	4,000
Groundwater Surface Water Interface Protection Criteria	4,600	4.0E+06(G,X)	50 (M); 1.2	100 (M); 27	(G)	4.7E+04(G,X)	3,300	9.8E+04(G)	2.2E+05(G)	400
Groundwater Contact Protection Criteria	2.0E+06	ID	47,000	2.0E+08	1.0E+09	2.3E+08	1.4E+08	1.0E+09	1.0E+09	7.8E+07
Particulate Soil Inhalation Criteria	7.2E+05	1.0E+08	2.0E+07	6.7E+06	3.3E+08	1.7E+06	2.6E+05	1.3E+08	ID	1.3E+08
Direct Contact Criteria	7,600	4.0E+05	1.6E+05	2.5E+06	3.7E+07	5.5E+05	2.5E+06	2.0E+07	1.7E+08	2.6E+06
Statewide Default Background Levels	5,800	2.1E+04	130	1,000	7.5E+04	1,200	18,000	32,000	47,000	410
Regional Background Screening Levels	11,290	1.1E+05	---	---	1.8E+05	2,000	21,930	38,080	1.4E+05	710
CMU Topsoil Borrow	1,700	8,200	37	ND (<76)	40,000	190	9,000	6,000	25,000	220
Alma S-1	5,280	11,800	25.1 (J)	45.3 (J)	73,800	286	18,200	9,250	45,300	400 (J)
Alma S-2	4,820	11,600	19.1 (J)	23.3 (J)	70,600	295	18,000	8,250	48,600	337 (J)

Concentrations in µg/kg.

Footnotes:

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO3/L, use 400 mg CaCO3/L for the FCV calculation. The FCV formula provides values in units of µg/L or ppb. The generic GSI criterion is the lesser of Remediation Division Michigan Department of Environmental Quality Document release date: March 25, 2011. Page 2 of 9 the calculated FCV, the wildlife value (WV), and the surface water human nondrinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote. A spreadsheet that may be used to calculate GSI and GSI protection criteria for (G)-footnoted hazardous substances is available on the Department of Environmental Quality (DEQ) internet web site.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

(M) Calculated criterion is below the analytical target detection limit; therefore, the criterion defaults to the target detection limit.

(ID) Insufficient data available.

(J) Estimated value - The result is >= the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

Table 3-1
Borrow Pit Detected Compounds - PAH
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

	Benzo(a)anthracene (Q)	Benzo(a)pyrene (Q)	Benzo(b)fluoranthene (Q)	Benzo(g,h,i)perylene	Benzo(k)fluoranthene (Q)	Chrysene (Q)	Dibenzo(a,h)anthracene (Q)	Indeno(1,2,3-cd)pyrene (Q)
Drinking Water Protection Criteria	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL
Groundwater Surface Water Interface Protection Criteria	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL
Groundwater Contact Protection Criteria	NLL	NLL	NLL	NLL	NLL	NLL	NLL	NLL
Particulate Soil Inhalation Criteria	ID	1.5E+06	ID	8.0E+08	ID	ID	ID	ID
Direct Contact Criteria	2.0E+04	2.0E+03	2.0E+04	2.5E+06	2.0E+05	2.0E+06	2.0E+03	2.0E+04
CMU Topsoil Borrow	<31	<31	<31	<31	<31	<31	<31	<31
Alma S-1	7 J *(20)*	9 J *(20)*	15 J *(20)*	7 J *(20)*	6 J *(20)*	14 J *(20)*	<20	5 J *(20)*
Alma S-2	9 J *(20)*	13 J *(20)*	23	11 J *(20)*	10 J *(20)*	16 J *(20)*	6 J *(20)*	10 J *(20)*

Concentrations in µg/kg.

Footnotes:
(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO3/L, use 400 mg CaCO3/L for the FCV calculation. The FCV formula provides values in units of µg/L or ppb. The generic GSI criterion is the lesser of Remediation Division Michigan Department of Environmental Quality Document release date: March 25, 2011. Page 2 of 9 the calculated FCV, the wildlife value (WV), and the surface water human nondrinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote. A spreadsheet that may be used to calculate GSI and GSI protection criteria for (G)-footnoted hazardous substances is available on the Department of Environmental Quality (DEQ) internet web site.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

(M) Calculated criterion is below the analytical target detection limit; therefore, the criterion defaults to the target detection limit.

(ID) Insufficient data available.

(J) Estimated value - The result is >= the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

Table 3-1
Borrow Pit Detected Compounds - PAH
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

	Fluoranthene	Phenanthrene	Pyrene
Drinking Water Protection Criteria	7.30E+05	56,000	4.80E+05
Groundwater Surface Water Interface Protection Criteria	5,500	2,100	ID
Groundwater Contact Protection Criteria	7.3E+05	1.1E+06	4.80E+05
Particulate Soil Inhalation Criteria	9.3E+09	6.7E+06	6.7E+09
Direct Contact Criteria	4.6E+07	1.6E+06	2.9E+07
CMU Topsoil Borrow	<31	<31	<31
Alma S-1	17 J *(20)*	6 J *(20)*	15 J *(20)*
Alma S-2	26	10 J *(20)*	20

Concentrations in µg/kg.

Footnotes:
(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO3/L, use 400 mg CaCO3/L for the FCV calculation. The FCV formula provides values in units of µg/L or ppb. The generic GSI criterion is the lesser of Remediation Division Michigan Department of Environmental Quality Document release date: March 25, 2011. Page 2 of 9 the calculated FCV, the wildlife value (WV), and the surface water human nondrinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote. A spreadsheet that may be used to calculate GSI and GSI protection criteria for (G)-footnoted hazardous substances is available on the Department of Environmental Quality (DEQ) internet web site.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

(M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

(ID) Insufficient data available.

(J) Estimated value - The result is >= the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

Table 3-2
Summary of Borrow Pit Trace Analytical Results
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Client sample ID:	CMU Topsoil					Alma S-1					Alma S-2				
Sample Date	7/25/2012					8/30/2012					8/30/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		0.604	0.23	95	0.604		0.386	0.27	85	0.386	E	0.513	0.23	89	0.513
12378-PCDD		ND	0.49	80	0.245		ND	0.58	76	0.290		ND	0.49	81	0.245
123478-HCDD		ND	0.40	70	0.020		ND	0.47	70	0.024		ND	0.40	71	0.020
123678-HCDD		0.856	0.32	69	0.086	E	0.732	0.38	72	0.073		0.781	0.32	75	0.078
123789-HCDD	E	0.613	0.19	68	0.061	E	0.536	0.23	69	0.054	E	0.640	0.19	74	0.064
1234678-H7CDD		18.6	0.32	62	0.186		7.77	0.37	67	0.078		8.52	0.31	65	0.085
OCDD		107	0.70	52	0.032		88.6	0.83	61	0.027		55.4	0.70	51	0.017
2378-TCDF		ND	0.21	80	0.011		ND	0.25	64	0.013	E	0.405	0.21	70	0.041
12378-PCDF		ND	0.25	78	0.004		ND	0.29	75	0.004		ND	0.25	78	0.004
23478-PCDF	N	0.289	0.20	80	0.087	E, N	0.377	0.23	88	0.113	N	0.489	0.20	93	0.147
123478-HCDF	E	0.341	0.25	71	0.034		0.368	0.29	73	0.037		0.453	0.25	73	0.045
123678-HCDF		ND	0.26	68	0.013		ND	0.31	71	0.015		0.336	0.26	73	0.034
234678-HCDF	E, N	0.432	0.18	68	0.043	N	0.408	0.22	70	0.041	E, N	0.399	0.18	72	0.040
123789-HCDF		ND	0.23	66	0.011		ND	0.27	72	0.013		ND	0.23	73	0.011
1234678-H7CDF	B	2.58	0.24	66	0.026		3.87	0.28	69	0.039		3.73	0.24	64	0.037
1234789-H7CDF		ND	0.35	60	0.002		ND	0.42	65	0.002		ND	0.35	59	0.002
OCDF	B	4.53	0.35	55	0.001		5.72	0.41	62	0.002		5.28	0.35	54	0.002
Total WHO-TEC					1.47					1.21					1.38

B - Concentration in blank within 10x of analyte concentration.
E - Estimated maximum possible concentration. Isotope ion ratio is outside of EPA method range (~15 %). Reported value is the lowest concentration of the two ions.
N - There is a chromatographic interference from non-toxic isomer. No peak split was observed between the toxic and non-toxic peak; therefore, 100% of the peak was taken for data reporting purposes.

Table 3-3
Remedy Evaluation Summary Table
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Property Number	Property Address	Parcel	Remedy Work Complete	DEQ Final Inspection	Cubic Yard Soil Removed	Excavation Depth Notes	Fast Analysis TEQ Result	1613b Confirmation TEQ Result	1613b Confirmation Replicate TEQ Result (1)	1613b Confirmation Replicate TEQ Result (2)	Concentration (Fast Analysis or 95% UCL of 1613b)	Area of Yard (sq ft)	Area not Remediated (sq ft)	Surface Weighted Average Concentration	Risk Level	Property Information
1	811 Fournie St	14-16-40-654	9/21/2012	10/4/2012	277	--	277	242	237	278	290	7473	1360	65	6.47E-06	Replaced driveway and approach that would have been heavily damaged during excavation; removed dying locust trees. Newer concrete apron adjacent to garage and newer walkway between house and garage left in place.
2	516 Mill St	14-21-10-524	8/31/2012	10/4/2012	498	--	279	232	225	250	257	9734	164	19	4.93E-06	Driveway and approach replaced at owner expense. Large amount of personal property was stored or disposed of per owner instructions. Fabric barrier with rock cover was applied beneath front porch. Small area of outlawn on northeast perimeter not disturbed due to utilities.
3	606 Haley St	14-21-10-402	8/16/2012	10/4/2012	228	4" around tree to protect from root damage	287	NA	NA	NA	287	5736	0	15	5.37E-06	Front walkway removed and replaced. Back sidewalk replaced and expanded as a patio.
4	913 E. Grove St	14-21-10-552	8/22/2012	10/4/2012	558	4" around tree to protect from root damage	303	NA	NA	NA	303	5150	346	34	6.06E-06	Removed and replaced from walkway. Replaced broken lattice on deck and paver patio changed to concrete to improve drainage of yard. Soil beneath decking concrete patio and shed left in place.
5	1001 Haley St	14-16-40-622	10/12/2012	10/26/2012	238	--	292	NA	NA	NA	292	5075	165	24	5.65E-06	Concrete Walkways removed and replaced. Landscaping between house and driveway was removed. A small strip along north side of driveway was left in place. Installed a stone pad adjacent to garage as owner plans to expand garage. Soil under shed left in place.
6	820 Mill St	14-16-40-640	9/28/2012	10/4/2012	202	--	297	NA	NA	NA	297	5601	0	15	5.55E-06	100% of yard area removed.
7	805 Haley St	14-16-40-614	10/5/2012	10/26/2012	273	--	365	NA	NA	NA	365	6014	648	53	7.54E-06	Some trees were removed to thin canopy to increase sunlight and promote grass growth.
8	315 Kent Ct	14-23-60-164	8/7/2012	10/4/2012	2820	--	324 (wooded) 292 (yard)	NA	NA	NA	322	7768 (wooded) 39401 (yard)	4568 (wooded) 372 (yard)	35	6.10E-06	Removed 2200 sq ft woodland and replanted to address wooded DU; 10 dying ash trees removed from back yard, concentration of remaining soil is a surface weighted average of cleared and wooded for property. Soil beneath front porch, back deck left in place. A small area at the northeast corner not removed due to a shallow buried cable line. Fabric barrier and rock placed under deck.
9	1002 Mill St	14-16-40-638	9/28/2012	10/4/2012	274	3-4" around trees	307	NA	NA	NA	307	5234	0	15	5.73E-06	100% of yard area removed. Installed concrete patio near garage to improve drainage; removed some trees to thin canopy and increase sunlight to promote grass growth.
10	716 Haley St	14-21-10-386	9/14/2012	10/4/2012	139	--	492	NA	NA	NA	492	6350	576	58	6.89E-06	Front walkway removed and replaced. Gravel driveway removed and replaced. Concrete pad installed for travel trailer parking to meet city code; installed concrete pad in front of garage due to drainage issues. Soil under decking and concrete patio remains. A pre-existing patio was present beneath the wood decking by house. Area beneath pool was excavated.
11	711 Fournie St	14-21-10-316	10/19/2012	10/26/2012	420	--	259	216	249	267	288	6596	0	15	5.39E-06	Existing garage removed prior to remedy. Front walkway removed and replaced. 100% of yard area removed. A number of dead trees were removed on interior of property. A stone pad installed for future garage construction.
12	909 E. Indian St	14-21-10-534	8/23/2012	10/4/2012	465	--	291	NA	NA	NA	291	7459	0	15	NA	Existing house and walkway were demolished prior to remedy work at shared expense with owner to increase productivity and safety. NO STRUCTURE CURRENTLY ON PROPERTY.
13	916 E. Grove St	14-21-10-520	9/6/2012	10/4/2012	281	--	303	NA	NA	NA	303	6896	202	23	5.83E-06	Front walkway and walkway near back doorway removed and replaced. Concrete driveway and new concrete walkway between garage and deck not disturbed. Owner had bushes already purchased during remedy. Deck had lattice in good condition. Soil beneath deck left in place.
14	1001 Fournie St	14-16-40-660	9/18/2012	10/4/2012	285	--	434	NA	NA	NA	434	4758	0	15	7.97E-06	100 % of yard area removed. Improved area adjacent to driveway and removed trees to thin canopy and increase sunlight to promote grass growth.
15	819 Fournie St	14-16-40-658	9/18/2012	10/4/2012	210	--	369	NA	NA	NA	369	6647	288	30	7.14E-06	Front walkway removed and replaced. Gravel driveway removed and replaced. Fabric barrier and rock installed beneath back porch. Soil beneath deck and shed left in place.
16	706 Haley St	14-21-10-390	9/18/2012	10/4/2012	205	--	287	NA	NA	NA	287	5529	0	15	5.37E-06	100% of yard removed. Removed large number of trees (some dead, some were damaging sidewalks).
17	319/321 Kent Ct	14-23-60-168	8/6/2012	10/4/2012	435	--	419 (wooded) 47 (yard)	NA	NA	NA	178	12348 (wooded) 6168 (yard)	3337 (wooded) 6168 (yard)	98	3.30E-06	Removed 9011 sq ft of woodland and replanted to address wooded DU, concentration of remaining soil is a surface weighted average of cleared and wooded for property. Remedy not required for yard DU.
18	323 Kent Ct	14-23-60-170	8/6/2012	10/4/2012	255	--	347 (wooded) 162 (yard)	NA	NA	NA	239	12632 (wooded) 7940 (yard)	5679 (wooded) 7940 (yard)	163	6.30E-06	Removed 6953 sq ft of woodland and replanted to address wooded DU, concentration of remaining soil is a surface weighted average of cleared and wooded for the property. Remedy not required for yard DU.
19	515 E Buttles St	14-16-50-096	8/16/2012	10/4/2012	619	--	2660	2220	1770	1610	2400	9872	0	15	NA	House, garage and walkways removed prior to remedy. 100% of yard area, parking area, and sidewalks removed. NO STRUCTURE CURRENTLY ON PROPERTY.
20	612 Haley St	14-21-10-400	8/16/2012	10/4/2012	257	4" around tree to protect from root damage	311	NA	NA	NA	311	7131	0	15	5.80E-06	100% of yard area removed. Electrical work done between house and garage to bring property to code.
21	1013 E Pine St	14-21-10-396	10/19/2012	10/26/2012	500	--	281	NA	NA	NA	281	9651	0	15	NA	Building removed prior to remedy. Concrete approach removed during remedy. 100% of yard area removed. Dead ash trees in interior of property removed. NO STRUCTURE CURRENTLY ON PROPERTY.
22	1007 Fournie St	14-16-40-662	9/17/2012	10/4/2012	345	--	285	NA	NA	NA	285	6470	166	22	5.48E-06	Soil beneath shed and back porch left in place.
23	1184 James Savage	14-22-10-120	8/26/2012	10/4/2012	845	--	NA	NA	NA	NA	NA	19110	298	NA	NA	Presumptive remedy on grass and play area completed. Area under existing shed left in place.

Table 3-4
Non-Residential Properties and Land Use Monitoring Summary
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

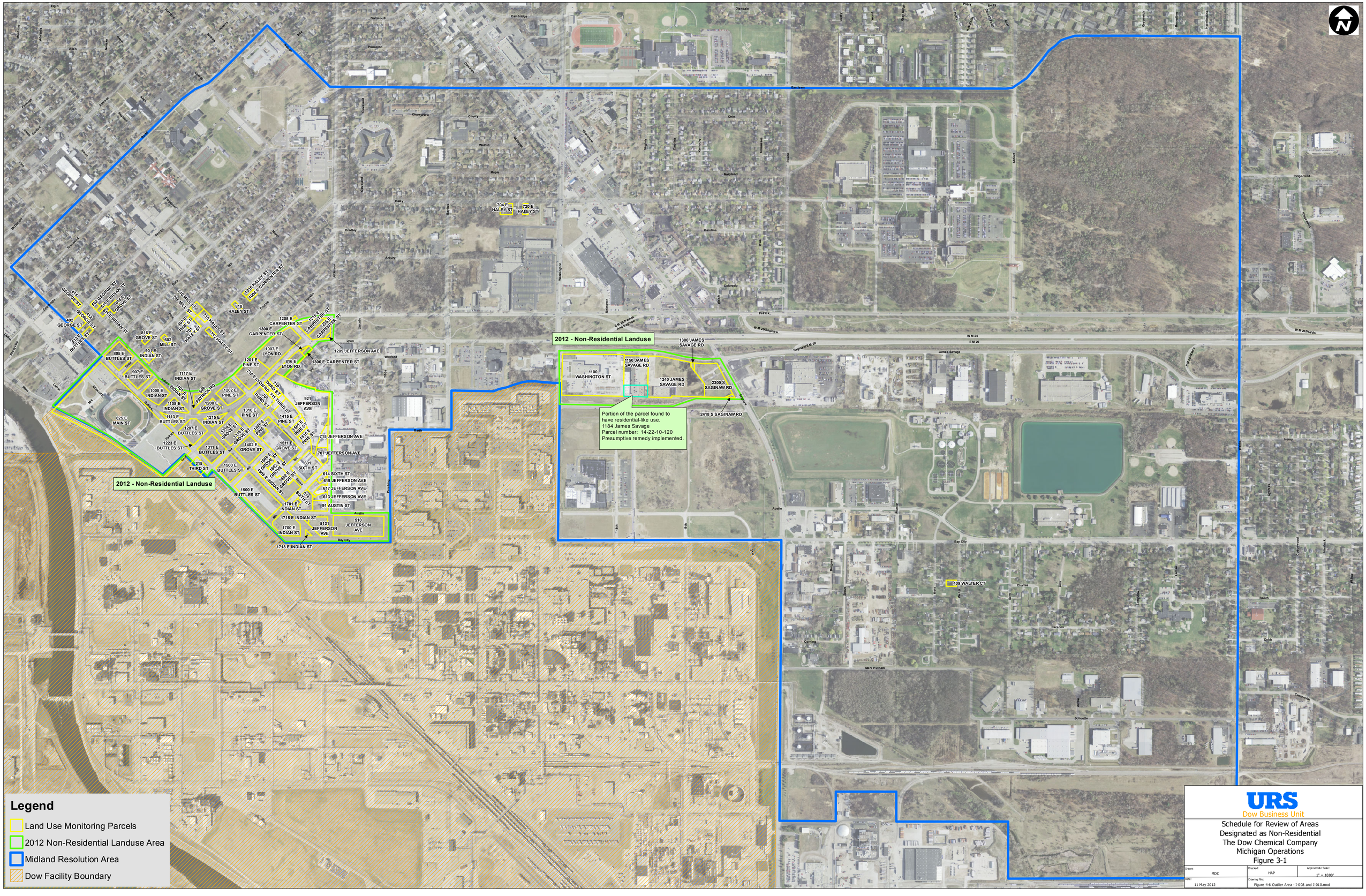
Parcel ID	Parcel Address	Property Zoning	Occupant	Observed Land Use	Date of Land Use Verification	Verification Comment	Included for Land Use Monitoring?	Justification for Inclusion in Land Use Monitoring
14-22-10-084	2300 S Saginaw Rd	IA	Commercial Sales	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-032	514 Sixth St	IA	Towing Company	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-026	614 Sixth St	IA	Storage Area	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-110	707 Jefferson Ave	IA	Auto Services	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-054	1306 E Carpenter St	RC	No Occupant	Undeveloped, no use	8/2/12	Verified non-residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-072	1225 E Carpenter St	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-062	1215 E Carpenter St	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-120	1201 E Pine St	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-142	1007 E Lyon Rd	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-202	1202 E Pine St	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-220	1208 E Grove St	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-234	1215 E Indian St	RC	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-270	816 E Lyon Rd	RC	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-342	509 Patrick Rd	RB	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-372	1108 E Indian St	COM	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-380	1101 E Indian St	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-426	1008 E Indian St	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-448	1113 E Buttles St	RC	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-496	907 E Buttles St	COM	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-584	805 E Buttles St	OS	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-20-186	1316 E Grove St	IA	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning / ownership could change.
14-21-20-286	1207 E Buttles St	RC	Municipal Use	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-22-10-130	1100 Washington St	IA	Service Center and Storage Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-250	1310 E Pine St	IA	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning / ownership could change.
14-21-20-154	1505 E Indian St	IA	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning / ownership could change.
14-21-20-305	1310 E Grove St	IA	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning / ownership could change.
14-21-20-210	1500 E Buttles St	IA	No Occupant	Undeveloped, no use	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-194	1311 E Buttles St	IA	No Occupant	Undeveloped, no use	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-274	315 Third St	IA	Fitness Gym	Commercial/Industrial use	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-044	1700 E Indian St	IA	No Occupant	Undeveloped, no use	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-066	1715 E Indian St	IA	No Occupant	Undeveloped, no use	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-062	1718 E Indian St	IA	No Occupant	Undeveloped, no use	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-004	5131 Jefferson Ave	IA	No Occupant	Undeveloped, no use	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-22-70-102	510 Jefferson Ave	IA	No Occupant	Undeveloped, no use	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-172	1402 E Grove St	IA	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning / ownership could change.
14-21-20-150	1508 E Grove St	IA	Tool Shop	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-150	1501 E Pine St	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-166	1415 E Pine St	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-176	711 Third St	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-262	710 E Lyon Rd	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-114	715 Jefferson Ave	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-124	1515 E Pine St	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-006	921 Jefferson Ave	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-172	701 Third St	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-178	719 Third St	IA	Sand and Gravel Yard	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-188	1406 E Pine St	IA	Light Industial/Commercial structure with several tenants	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-140	1511 E Grove St	IA	Light Industial/Commercial structure with several tenants	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-034	1701 E Indian St	IA	Electrical Repair and Parts Store	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-088	1602 E Grove St	IA	Office building and commercial gas station	Commercial	8/2/12	Fuel Oil	Yes	Current zoning / ownership could change.
14-22-10-120	1150 James Savage Rd	IA	Multi-tenant Plaza: 1150 - vacant; 1150B - Arrow Restoration; 1151 Bishop Energy Services, LLC; 1160 - Lutheran Social Services, CSC Group of MI, Central Michigan Counseling, Impact Medical Supply; 1164 - unknown; 1170 - A & R Global Logistics; 1174 - Huntington Disease Society of America; 1184 - Michigan Childcare Center	Commercial	8/2/12	Verified non-residential use.	Yes	Portion of the parcel found to have residential-like use. 1184 James Savage. Presumptive remedy implemented in 2012.
14-22-10-074	2418 S Saginaw Rd	IA	No Occupant	Bill board	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-22-10-086	1300 James Savage Rd	IA	No Occupant	Bill board	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-80-804	825 E Main St	MULT	Baseball Stadium	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-20-096	601 Sixth St	IA	Lumber and Supply Store	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-010	91 Austin St	IA	Auto Services	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-22-10-090	1240 James Savage Rd	IA	No Occupant	Vacant commercial structure	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-014	613 Jefferson Ave	IA	Glass and Mirror Store	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-10-076	1209 Jefferson Ave	OS	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-088	1205 E Carpenter St	OS	No Occupant	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-278	1300 E Carpenter St	RC	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-10-375	1117 E Indian St	OS	No Occupant	Recreational bike/walking path	8/2/12	Recreational use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-20-281	1223 E Buttles St	RC	No Occupant	Undeveloped, no use	8/2/12	No defined use and does not involve residency or exposure to soil that is equivalent with residential use.	Yes	Current zoning potentially allows for residential-like use.
14-21-20-022	617 Jefferson Ave	IA	Paint Store	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-20-024	619 Jefferson Ave	IA	Paint Store	Commercial	8/2/12	Verified non-residential use.	Yes	Current zoning / ownership could change.
14-21-80-499	402 George St	OS	Parking lot	Commercial	8/2/2012	Verified non-residential use.	Yes	Current zoning potentially allows for residential-like use.
14-23-60-110	409 Walter Ct.	RB	--	Residential	NA	NA	Yes	No response from property owner.
14-21-80-498	412 George St	OS	--	Residential	NA	NA	Yes	No response from property owner.
14-16-50-066	415 George St	OS	--	Residential	NA	NA	Yes	No response from property owner.
14-16-50-062	502 George St	OS	--	Residential	NA	NA	Yes	No response from property owner.
14-21-10-550	602 Mill St	RB	--	Residential	NA	NA	Yes	Owner declined to participate via agreement form.
14-16-50-063	611 E. Indian St	OS	--	Residential	NA	NA	Yes	Owner declined to participate via agreement form.
14-21-80-470	613 E. Buttles St	OS	--	Residential	NA	NA	Yes	Owner verbally declined to participate on 6/6/2012.
14-16-40-406	616 E. Grove St	RB	--	Residential	NA	NA	Yes	No response from property owner.
14-21-10-590	816 E. Grove St	RB	--	Residential	NA	NA	Yes	No response from property owner.
14-21-10-530	901 E. Indian St	OS	Dentist Office	Commercial	8/2/2012	Verified non-residential use.	Yes	Commercial use - Dentist.
14-16-40-670	1006 E Carpenter St	NC	Designer studio	Commercial	8/2/2012	Verified non-residential use.	Yes	Commercial - Designer studio.

Table 3-4
Non-Residential Properties and Land Use Monitoring Summary
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Parcel ID	Parcel Address	Property Zoning	Occupant	Observed Land Use	Date of Land Use Verification	Verification Comment	Included for Land Use Monitoring?	Justification for Inclusion in Land Use Monitoring
14-16-40-672	1016 Haley St	NC	Fitness studio	Commercial	8/2/2012	Verified non-residential use.	Yes	Commercial - Fitness studio.
14-21-10-558	701 Haley St	RC	Food distribution	Commercial	8/2/2012	Verified non-residential use.	Yes	Commercial - Food distribution.
14-21-10-564	715 Haley St	RC	Bakery	Commercial	8/2/2012	Verified non-residential use.	Yes	Commercial - Bakery.
14-21-10-568	907 E Pine St	RC	Food distribution	Commercial	8/2/2012	Verified non-residential use.	Yes	Commercial - Food distribution.
14-16-40-508	706 Mill St	RC	Food distribution	Commercial	8/2/2012	Verified non-residential use.	Yes	Commercial - Food distribution.
14-15-50-020	704 E Haley St	RB	--	Residential	NA	NA	Yes	No response from property owner.
14-16-40-510	710 Mill St	RC	--	Residential	NA	NA	Yes	No response from property owner.
14-21-10-388	712 Haley St	RB	--	Residential	NA	NA	Yes	No response from property owner.
14-15-50-014	720 E Haley St	RB	--	Residential	NA	NA	Yes	Owner declined to participate via agreement form.
14-16-40-678	818 Haley St	RA-4	--	Residential	NA	NA	Yes	No response from property owner.

Zoning Codes

COM	Community
IA	Industrial
MULT	Multi-zoned
NC	Neighborhood Commercial
OS	Office Service
RA-4	Residential
RB	Residential
RC	Regional Commercial


2012 - Non-Residential Landuse
2012 - Non-Residential Landuse
Portion of the parcel found to have residential-like use.
1164 James Savage
Parcel number: 14-22-10-120
Presumptive remedy implemented.
1100 WASHINGTON ST
1150 JAMES SAVAGE RD
1240 JAMES SAVAGE RD
1300 JAMES SAVAGE RD
2300 S SAGINAW RD
2418 S SAGINAW RD
409 WALTER CT
704 E HALEY ST
720 E HALEY ST
1916 HALEY ST
1006 E CARPENTER ST
818 HALEY ST
1205 E CARPENTER ST
1215 E CARPENTER ST
1300 E CARPENTER ST
1209 JEFFERSON AVE
1306 E CARPENTER ST
1007 E LYON RD
816 E LYON RD
710 MILL ST
706 MILL ST
716 HALEY ST
716 HALEY ST
416 E GEORGE ST
402 GEORGE ST
502 GEORGE ST
416 E INDIAN ST
816 E INDIAN ST
816 E GROVE ST
602 MILL ST
901 E INDIAN ST
805 E BUTTLES ST
907 E BUTTLES ST
1117 E INDIAN ST
1009 E INDIAN ST
1101 E INDIAN ST
1106 E INDIAN ST
1113 E BUTTLES ST
1207 E BUTTLES ST
1223 E BUTTLES ST
825 E MAIN ST
315 THIRD ST
1311 E BUTTLES ST
1500 E BUTTLES ST
1500 E BUTTLES ST
1202 E PINE ST
1208 E GROVE ST
1215 E INDIAN ST
1201 E PINE ST
1310 E PINE ST
1315 E GROVE ST
1316 E GROVE ST
1402 E GROVE ST
1406 E PINE ST
1415 E PINE ST
1501 E PINE ST
1515 E PINE ST
1511 E GROVE ST
921 JEFFERSON AVE
715 JEFFERSON AVE
707 JEFFERSON AVE
601 SIXTH ST
614 SIXTH ST
619 JEFFERSON AVE
617 JEFFERSON AVE
613 JEFFERSON AVE
91 AUSTIN ST
1701 E INDIAN ST
1715 E INDIAN ST
1700 E INDIAN ST
1718 E INDIAN ST
5131 JEFFERSON AVE
510 JEFFERSON AVE
Legend
Land Use Monitoring Parcels
2012 Non-Residential Landuse Area
Midland Resolution Area
Dow Facility Boundary
URS
Dow Business Unit
Schedule for Review of Areas
Designated as Non-Residential
The Dow Chemical Company
Michigan Operations
Figure 3-1
Drawn: MDC
Checked: HAP
Approximate Scale: 1" = 1000'
Date: 11 May 2012
Drawing File: Figure 4-6 Outlier Area - I-008 and I-010.mxd

4.0 References

URS. May 2012. Interim Response Activity Plan Designed to Meet Criteria Work Plan. May 25, 2012.

Attachment B

Soil Raw Data Summary Tables

Table B-1
Phase I Analytical Results
Method 8280 - Site-Specific Fast Analysis
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Lab ID	120690		120691		120692		120693		120694		120695	
Sample Description	Primary Sample 412 Conkright Street	Flag	Primary Sample 501 E Buttles Street	Flag	Primary Sample 505 E Buttles Street	Flag	Primary Sample 515 E Buttles Street	Flag	Primary Sample 411 George Street	Flag	Primary Sample 509 E Buttles Street	Flag
Sample Date	6/5/2012		6/5/2012		6/5/2012		6/5/2012		6/5/2012		6/5/2012	
wet weight [g]	30.4		30.2		30.1		30.5		30.5		30.9	
moisture [%]	13.00%		12.30%		11.00%		11.50%		11.40%		7.90%	
2378-TCDF [ng/kg d.w.]	57.3	J	196		57.8	J	8260		106	J	27	J
2378-TCDD [ng/kg d.w.]	27.6	J	16.1	J	25.1	J	36.5	J	50.9	J	8.51	J
23478-PeCDF [ng/kg d.w.]	42.9	J,Y	97.1	J	42	J	3720		71.3	J,Y	< 71.5	J,Y
12378-PeCDD [ng/kg d.w.]	29.4	J,Y	31.3	J,Y	29.2	J,Y	80.1	J,Y	46.1	J,Y	18	J,Y
1234(6)78-HxCDF [ng/kg d.w.]	55.3	J	103	J	62.7	J	4460		103	J	28.1	J
1234(6)78-HxCDD [ng/kg d.w.]	49.2	J	43.3	J	51.9	J	60.6	J	71.2	J	18.6	J
123789-HxCDD [ng/kg d.w.]	27.8	J	31.6	J	33.5	J	35.3	J	49.9	J	12.9	J,Y
1234678-HpCDF [ng/kg d.w.]	222	J	198	J	213	J	652		343	J	71.3	J
1234678-HpCDD [ng/kg d.w.]	461		457		487		569		669		152	J
OCDF [ng/kg d.w.]	389	J	368	J	369	J	600		583	J	120	J
OCDD [ng/kg d.w.]	4010		4430		4650		5330		6130		1250	
TEQ (ND=0.5 LoD)	**102**		**128**		**101**		**2660**		**171**		**51**	

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Lab ID	120696		120697		120698		120699		120700		120701	
Sample Description	Primary Sample 610 Mill Street	Flag	Primary Sample 319 Walter Court	Flag	Primary Sample 913 E. Grove Street	Flag	Primary Sample 412 Kent Court	Flag	Primary Sample 409 State Street	Flag	Primary Sample 312 Kent Court	Flag
Sample Date	6/6/2012 8:15		6/6/2012 8:35		6/6/2012 10:15		6/6/2012 10:30		6/6/2012 13:11		6/6/2012 13:30	
wet weight [g]	30.1		30.5		30.2		30.1		30.1		30.6	
moisture [%]	12.0%		21.3%		14.8%		12.2%		7.1%		17.0%	
2378-TCDF [ng/kg d.w.]	72.7	J	77.2	J	93.1	J	27.7	J	52.6	J	17.6	J
2378-TCDD [ng/kg d.w.]	66.2	J	107	J	99.5	J	39	J	22.5	J	25.9	J
23478-PeCDF [ng/kg d.w.]	82.1	J	62.7	J,Y	93.5	J	28.1	J,Y	41.5	J	21	J
12378-PeCDD [ng/kg d.w.]	52.8	J,Y	60.6	J,Y	80	J,Y	44.5	J,Y	31.1	J,Y	36.8	J,Y
1234(6)78-HxCDF [ng/kg d.w.]	93.9	J	110	J	153	J	58.4	J	49.7	J	34.6	J
1234(6)78-HxCDD [ng/kg d.w.]	103	J	123	J	173	J	93.8	J	42	J	47.3	J
123789-HxCDD [ng/kg d.w.]	47.4	J	60.6	J	77.9	J	42.2	J	22.5	J	26.7	J
1234678-HpCDF [ng/kg d.w.]	521		1330		1070		1010		178	J	428	
1234678-HpCDD [ng/kg d.w.]	1070		1500		1620		1090		347		453	
OCDF [ng/kg d.w.]	864		2180		1450		1670		313	J	673	J
OCDD [ng/kg d.w.]	9430		15400		14900		12400		2980		4670	
TEQ (ND=0.5 LoD)	**204**		**270**		**303**		**146**		**94**		**97**	

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Lab ID	120702		120703		120721		120722		120723		120724	
Sample Description	Primary Sample 609 E. Butler	Flag	Primary Sample 318 Kent Court	Flag	Primary Sample 909 E. Indian Street	Flag	Primary Sample 332 Walter Court	Flag	Primary Sample 311 Walter Court	Flag	Primary Sample 915 E. Indian Street	Flag
Sample Date	6/6/2012 15:21		6/6/2012 15:30		6/7/2012		6/7/2012		6/7/2012		6/7/2012	
wet weight [g]	30		30.5		30.4		30.3		30		30.7	
moisture [%]	11.6%		21.2%		14.3%		22.3%		20.8%		16.1%	
2378-TCDF [ng/kg d.w.]	173		41.4	J	204		38.4		71.8		97.6	
2378-TCDD [ng/kg d.w.]	46.8		71.7	J	78.1		53.1		105		85.4	
23478-PeCDF [ng/kg d.w.]	123		45.6	J	146		33.7	J,Y	62.1		92.7	
12378-PeCDD [ng/kg d.w.]	45.9	J	63.6	J,Y	64.9	J	37.1	J,Y	61.2		50.6	J
1234(6)78-HxCDF [ng/kg d.w.]	157	J	72.7	J	196		69.2	J	110		162	
1234(6)78-HxCDD [ng/kg d.w.]	88.6	J	114	J	142	J	84.4	J	139		135	
123789-HxCDD [ng/kg d.w.]	52.9	J	61	J	68	J	42.2	J	68.8		60.3	
1234678-HpCDF [ng/kg d.w.]	466		1250		915		1050		1560		885	
1234678-HpCDD [ng/kg d.w.]	1010		1250		1580		1090		1790		1470	
OCDF [ng/kg d.w.]	814		1910		1980		1680		2750		1440	
OCDD [ng/kg d.w.]	8990		13500		13800		11300		17700		14500	
TEQ (ND=0.5 LoD)	**204**		**217**		**291**		**156**		**277**		**250**	

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Lab ID	120725		120726		120728		120729		120730		120731	
Sample Description	Primary Sample 906 E. Pine Street	Flag	6" Primary Sample 314 Kent Court	Flag	Primary Sample 606 Mill Street	Flag	Primary Sample 408 Walter Court	Flag	Primary Sample 516 George Street	Flag	Primary Sample 306 Walter Court	Flag
Sample Date	6/7/2012		6/7/2012		6/7/2012		6/7/2012		6/8/2012		6/8/2012	
wet weight [g]	30.8		30.1		30.3		30		30.8		30.5	
moisture [%]	13.2%		19.9%		13.0%		16.7%		15.1%		18.0%	
2378-TCDF [ng/kg d.w.]	63.5		44.7		70.8		192		110		15.8	J
2378-TCDD [ng/kg d.w.]	51.1		42		64.8		39		55.1		39.4	
23478-PeCDF [ng/kg d.w.]	58.9		36.2		80		122		147		20.5	J
12378-PeCDD [ng/kg d.w.]	35.9	J	33.8		44.6	J	35.2	J	49.1	J	27.2	J
1234(6)78-HxCDF [ng/kg d.w.]	94.1	J	64.1	J	128		155		182		42.1	J
1234(6)78-HxCDD [ng/kg d.w.]	95.9	J	80.2		108	J	91.5	J	109	J	62.8	J
123789-HxCDD [ng/kg d.w.]	45.1	J	39.5		51.3	J	45.6	J	56.5	J	34	J
1234678-HpCDF [ng/kg d.w.]	591		800		726		1160		759	Y	1210	
1234678-HpCDD [ng/kg d.w.]	1120		944		1030		1200		1170		804	
OCDF [ng/kg d.w.]	1100		1370		952		1880		980		1120	
OCDD [ng/kg d.w.]	10800		9230		9860		13500		10100		7970	
TEQ (ND=0.5 LoD)	**163**		**137**		**200**		**196**		**228**		**117**	

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Lab ID	120732		120733		120734		120735		120736		120737	
Sample Description	Primary Sample 316 Walter Court	Flag	Primary Sample 615 East Indian Street	Flag	Primary Sample 320 Walter Court	Flag	Primary Sample 508 George Street	Flag	Primary Sample 425 Walter Court	Flag	Primary Sample 512 George Street	Flag
Sample Date	6/8/2012		6/8/2012		6/8/2012		6/8/2012		6/8/2012		6/8/2012	
wet weight [g]	30.1		30.7		30.3		30.3		30.6		30.3	
moisture [%]	20.0%		14.8%		12.4%		16.1%		14.9%		13.8%	
2378-TCDF [ng/kg d.w.]	23.8		62.2		36.7		49.1		27.7		81.6	
2378-TCDD [ng/kg d.w.]	46		71.5		53.2		32.2		46.2		68.8	
23478-PeCDF [ng/kg d.w.]	27.9	J	60.6		38.7	J	48.9	J	38.4	J	86.1	J
12378-PeCDD [ng/kg d.w.]	33.8	J	49.9	J	42.9	J	28.7	J	34.3	J	51.2	J
1234(6)78-HxCDF [ng/kg d.w.]	57.3	J	107		78.6	J	60.8	J	78.6	J	130	J
1234(6)78-HxCDD [ng/kg d.w.]	83.9	J	107	J	100	J	73.5	J	88.8	J	118	J
123789-HxCDD [ng/kg d.w.]	43.9	J	62.3		51.9		40.7	J	44.1	J	62.5	J
1234678-HpCDF [ng/kg d.w.]	940		572		1210		326		1140		812	
1234678-HpCDD [ng/kg d.w.]	1030		1280		1220		1200		1300		1170	
OCDF [ng/kg d.w.]	1470		1050		2250		628		1980		1030	
OCDD [ng/kg d.w.]	10400		15600		12200		9960		14300		10900	
TEQ (ND=0.5 LoD)	**139**		**207**		**171**		**122**		**152**		**218**	

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Lab ID	120738		120739		120740		120741		120742		120743	
Sample Description	Primary Sample 413 Walter Court	Flag	Primary Sample 613 Fournie Street	Flag	Primary Sample 416 Kent Court	Flag	Primary Sample 914 E. Grove Street	Flag	Primary Sample 315 Kent Ct. - Wooded	Flag	Primary Sample 812 E. Grove St. - 6"	Flag
Sample Date	6/8/2012		6/11/2012		6/11/2012		6/11/2012		6/11/2012		6/11/2012	
wet weight [g]	30.6		30.2		30.9		30.9		30.9		30.5	
moisture [%]	13.7%		9.6%		12.8%		16.3%		24.8%		9.9%	
2378-TCDF [ng/kg d.w.]	31.7		150		65.2		96.4		74.4		61.1	
2378-TCDD [ng/kg d.w.]	54.8		47.5		44.2		110		121		58	
23478-PeCDF [ng/kg d.w.]	53.6	J	100		56.6		81.7	J	66.9		56.3	J
12378-PeCDD [ng/kg d.w.]	46.5	J	33.2	J	39.2	J	50.9	J	68.9		37.9	J
1234(6)78-HxCDF [ng/kg d.w.]	112	J	149		101		136	J	135		95.7	J
1234(6)78-HxCDD [ng/kg d.w.]	141	J	98.3	J	98.1		139	J	171		97.8	J
123789-HxCDD [ng/kg d.w.]	74.2		45.5	J	50.4		68.5	J	82.7		47.7	J
1234678-HpCDF [ng/kg d.w.]	1520		590		1350		875		2100		542	
1234678-HpCDD [ng/kg d.w.]	1870		1230		1230		1780		2330		1110	
OCDF [ng/kg d.w.]	2330		926		1910		1500		3700		917	
OCDD [ng/kg d.w.]	20400		12000		13300		16600		24700		10900	
TEQ (ND=0.5 LoD)	**204**		**186**		**170**		**275**		**324**		**171**	

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Lab ID	120744		120746		120747		120748		120749		120750	
Sample Description	Primary Sample 331 Kent Ct. - Wooded	Flag	Primary Sample 331 Kent Ct. - Cleared	Flag	Primary Sample 704 E. Grove Street	Flag	Primary Sample 306 Kent Court	Flag	Primary Sample 315 Kent Ct. - Cleared	Flag	Primary Sample 401 Walter Court	Flag
Sample Date	6/11/2012		6/11/2012		6/11/2012		6/11/2012		6/11/2012		6/12/2012	
wet weight [g]	30.4		30.5		30.8		30.5		30.2		30.2	
moisture [%]	15.1%		13.2%		18.3%		12.9%		20.5%		15.0%	
2378-TCDF [ng/kg d.w.]	34.7		34.3		69.7		16	J	65.5		16.9	J
2378-TCDD [ng/kg d.w.]	55.7		72.7		81.3		27.9	J	114		25	
23478-PeCDF [ng/kg d.w.]	38	J,Y	48.4	J	57.4		17.5	J,Y	62.9	J	18.5	J,Y
12378-PeCDD [ng/kg d.w.]	43.7	J	53		47.9	J	20.6	J,Y	61.4		21.1	J
1234(6)78-HxCDF [ng/kg d.w.]	83.5	J	115		88.3	J	33.4	J	123		36.4	J
1234(6)78-HxCDD [ng/kg d.w.]	104	J	132		99.9	J	46.3	J	145		49.5	J
123789-HxCDD [ng/kg d.w.]	53.2		64.8		48.3	J	26.3	J	75.8		27.4	J
1234678-HpCDF [ng/kg d.w.]	1410		1680		515		499		1900		692	
1234678-HpCDD [ng/kg d.w.]	1380		1710		1020		538		1740		610	
OCDF [ng/kg d.w.]	2220		2680		914		849		2810		925	
OCDD [ng/kg d.w.]	15900		19100		9570		5040		18400		6350	
TEQ (ND=0.5 LoD)	**181**		**226**		**205**		**82**		**292**		**84**	

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Lab ID	120751		120752		120753		120754		120755		120756	
Sample Description	Primary Sample 510 Mill Street	Flag	Primary Sample 502 State Street	Flag	Primary Sample 424 Kent Court	Flag	Primary Sample 415 Kent Court	Flag	Primary Sample 808 E. Grove Street	Flag	Primary Sample 419 Kent Court	Flag
Sample Date	6/12/2012		6/12/2012		6/12/2012		6/12/2012		6/12/2012		6/12/2012	
wet weight [g]	30		30.3		30.4		30.3		30.5		30.4	
moisture [%]	12.3%		11.2%		16.8%		14.1%		11.2%		12.7%	
2378-TCDF [ng/kg d.w.]	89		53.5		29.5	J	12.5	J	140		26.9	J,Y
2378-TCDD [ng/kg d.w.]	79.5		60		41.9	J	14.8	J	66		27.6	J
23478-PeCDF [ng/kg d.w.]	90.3		54.8	J,Y	34.4	J,Y	11.8	J,Y	90.4		29.8	J,Y
12378-PeCDD [ng/kg d.w.]	46.4	J	44.7	J,Y	33.3	J	13.9	J	50	J	25	J,Y
1234(6)78-HxCDF [ng/kg d.w.]	133		94.5	J	75	J	27	J	147	J	51.7	J
1234(6)78-HxCDD [ng/kg d.w.]	132	J	102	J	87.1	J	31	J	116	J	59.5	J
123789-HxCDD [ng/kg d.w.]	61.5		53.6	J	43.2	J	18	J	55.1	J	31.1	J,Y
1234678-HpCDF [ng/kg d.w.]	751	Y	537		1070		300		737		599	
1234678-HpCDD [ng/kg d.w.]	1480		1170		1130		341		1150		633	
OCDF [ng/kg d.w.]	1250		1000		1830		487		1450		993	
OCDD [ng/kg d.w.]	13900		10900		13600		3660		12100		7240	
TEQ (ND=0.5 LoD)	**232**		**181**		**143**		**51**		**223**		**98**	

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Lab ID	120757		120758		120759		120760		120761		120762	
Sample Description	Primary Sample 811 E. Indian Street	Flag	Primary Sample 416 George Street	Flag	Primary Sample 702 E. Indian Street	Flag	Primary Sample 616 E. Indian Street	Flag	Primary Sample 612 E. Indian Street	Flag	Primary Sample 701 E. Buttles Street	Flag
Sample Date	6/12/2012		6/9/2012		6/9/2012		6/9/2012		6/9/2012		6/9/2012	
wet weight [g]	30		30.4		30.2		30.2		30.1		30.1	
moisture [%]	9.9%		10.2%		9.7%		11.2%		11.1%		9.8%	
2378-TCDF [ng/kg d.w.]	50.8		36.4	J	26.1	J	36.5	J	60.4		142	
2378-TCDD [ng/kg d.w.]	52.6		< 16.2	J,Y	10.9	J,Y	29.3	J	30.1	J	29	J
23478-PeCDF [ng/kg d.w.]	43.1	J,Y	35.1	J	20.9	J,Y	34.4	J,Y	43.8	J,Y	90.1	
12378-PeCDD [ng/kg d.w.]	37	J	< 24.4	J,Y	< 31.6	J,Y	25.9	J	28.9	J	21.7	J
1234(6)78-HxCDF [ng/kg d.w.]	85.2	J	41	J	29.8	J	57.6	J	75.1	J	120	J
1234(6)78-HxCDD [ng/kg d.w.]	94.8	J	27.9	J	28.1	J	66.5	J	62.5	J	49.7	J
123789-HxCDD [ng/kg d.w.]	50.9	J	19.7	J,Y	20.8	J,Y	38.6	J	38.1	J	25.7	J
1234678-HpCDF [ng/kg d.w.]	506		130	Y	113		291		321		299	
1234678-HpCDD [ng/kg d.w.]	1010		165		218		567		564		405	
OCDF [ng/kg d.w.]	911		168	J	270	J	514		494		449	
OCDD [ng/kg d.w.]	10800		1570		2050		5580		5650		3850	
TEQ (ND=0.5 LoD)	**156**		**49**		**50**		**101**		**111**		**126**	

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Lab ID	120763		120764		120765		120766		120767		120768	
Sample Description	Primary Sample 707 E. Buttles Street	Flag	Primary Sample 711 E. Buttles Street	Flag	Primary Sample 516 Mill Street - 6"	Flag	Primary Sample 301 Kent Ct. - 6"	Flag	Primary Sample 1015 E. Grove Street	Flag	Primary Sample 309 Walter Court	Flag
Sample Date	6/9/2012		6/9/2012		6/9/2012		6/12/2012		6/13/2012		6/13/2012	
wet weight [g]	30.3		30.1		30.1		30.4		30.7		30.5	
moisture [%]	9.3%		10.3%		12.8%		15.3%		8.4%		15.1%	
2378-TCDF [ng/kg d.w.]	50.2		67.3		158		39.1		51.9		19.3	J
2378-TCDD [ng/kg d.w.]	21.9	J	38.6	J	84.1		64.7		33.8		32.2	
23478-PeCDF [ng/kg d.w.]	34.8	J,Y	54.1	J,Y	131		132		40.4	J	19.5	J,Y
12378-PeCDD [ng/kg d.w.]	18.2	J	29.5	J	56.6	J	48.3	J	21.9	J	25.6	J,Y
1234(6)78-HxCDF [ng/kg d.w.]	53.5	J	79	J	210	J	110	J	69.8	J	46.3	J
1234(6)78-HxCDD [ng/kg d.w.]	42.1	J	74	J	144	J	114	J	66.3	J	63.8	J
123789-HxCDD [ng/kg d.w.]	26.8	J	41.4	J	72.5	J	55		32.2	J	33.1	J
1234678-HpCDF [ng/kg d.w.]	214		346		958	Y	1150		382		615	
1234678-HpCDD [ng/kg d.w.]	381		805		1360		1290		827		644	
OCDF [ng/kg d.w.]	375		781		1510	Y	1910		990		1080	
OCDD [ng/kg d.w.]	3460		8770		13400		14100		8400		6910	
TEQ (ND=0.5 LoD)	**79**		**131**		**279**		**224**		**110**		**100**	

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Lab ID	120769		120770		120771		120772		120773		120774	
Sample Description	Primary Sample 1011 E. Grove Street	Flag	Primary Sample 410 Walter Court	Flag	Primary Sample 612 E. Grove Street	Flag	Primary Sample 307 Walter Court	Flag	Primary Sample 609 Fournie Street	Flag	Primary Sample 322 Kent Court	Flag
Sample Date	6/13/2012		6/13/2012		6/13/2012		6/13/2012		6/13/2012		6/13/2012	
wet weight [g]	30.3		30.2		30.6		30		30.1		30.3	
moisture [%]	13.5%		15.2%		14.1%		13.3%		8.7%		15.2%	
2378-TCDF [ng/kg d.w.]	72.2	J	21.4	J	80.2		23.4		94.8		59.8	J
2378-TCDD [ng/kg d.w.]	67.3	J	27.9		62		27.2		80.7		59.7	J
23478-PeCDF [ng/kg d.w.]	73	J,Y	22.9	J,Y	53.3	J,Y	21.4	J,Y	84.4	J	48.8	J
12378-PeCDD [ng/kg d.w.]	57.3	J,Y	24.1	J	41	J	19.8	J,Y	62.1	J	41.8	J
1234(6)78-HxCDF [ng/kg d.w.]	128	J	47.7	J	77.6	J	40.8	J	138	J	89.4	J
1234(6)78-HxCDD [ng/kg d.w.]	107	J	60.8	J	85.9	J	45.4	J	145	J	90	J
123789-HxCDD [ng/kg d.w.]	54.9	J	32.8	J	50.2	J	25.3	J	69.3	J	45.8	J
1234678-HpCDF [ng/kg d.w.]	676		698		402		332		784		1060	
1234678-HpCDD [ng/kg d.w.]	1080		677		889		461		1460		1030	
OCDF [ng/kg d.w.]	1060		1110		835		622		1590		1670	
OCDD [ng/kg d.w.]	10000		7770		8790		5500		15400		11200	
TEQ (ND=0.5 LoD)	**214**		**96**		**172**		**81**		**252**		**177**	

Table B-1
Phase I Analytical Results
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Lab ID	120784		120785		120786		120787		120788		120789	
Sample Description	Primary Sample 606 Haley Street	Flag	Primary Sample 323 Kent Ct. - Cleared	Flag	Primary Sample 323 Kent Ct. - Wooded	Flag	Primary Sample 715 E. Buttles Street	Flag	Primary Sample 613 Haley Street	Flag	Primary Sample 327 Kent Ct. - Wooded	Flag
Sample Date	6/14/2012		6/14/2012		6/14/2012		6/14/2012		6/14/2012		6/14/2012	
wet weight [g]	30.3		30.4		30.3		30.5		30.1		30.1	
moisture [%]	10.3%		14.4%		26.2%		6.8%		11.5%		18.9%	
2378-TCDF [ng/kg d.w.]	76.2		35.1	J	66.9		46.2		84.7		52.8	J
2378-TCDD [ng/kg d.w.]	108		50		119		30.5	J	80		84.2	J
23478-PeCDF [ng/kg d.w.]	80.5	J	37.4	J,Y	66.9	J,Y	45.1	J,Y	88.7	J	51.3	J,Y
12378-PeCDD [ng/kg d.w.]	67.6	J	43.7	J	82.5	J	27.8	J,Y	57.2	J	57.4	J
1234(6)78-HxCDF [ng/kg d.w.]	111	J	72.1	J	148	J	72.5	J	131	J	115	J
1234(6)78-HxCDD [ng/kg d.w.]	168	J	87.5	J	193	J	63.8	J	125	J	140	J
123789-HxCDD [ng/kg d.w.]	84.2		47.2	J	95.2	J	33.4	J	65.6	J	69.9	J
1234678-HpCDF [ng/kg d.w.]	780		1040		2430		448		842		1830	
1234678-HpCDD [ng/kg d.w.]	1650		1040		2440		721		1300		1800	
OCDF [ng/kg d.w.]	1530		1570		3800		680		1200		2920	
OCDD [ng/kg d.w.]	14700		11900		26400		6740		12000		19800	
TEQ (ND=0.5 LoD)	**287**		**162**		**347**		**112**		**242**		**250**	

Table B-1
Phase I Analytical Results
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Lab ID	120790		120791		120792		120793		120794		120795	
Sample Description	Primary Sample 327 Kent Ct. - Cleared	Flag	Primary Sample 612 Haley Street	Flag	Primary Sample 319 Kent Ct. - Wooded	Flag	Primary Sample 319 Kent Ct. - Cleared	Flag	Primary Sample 712 East Indian Street	Flag	Primary Sample 602 Haley Street	Flag
Sample Date	6/14/2012		6/14/2012		6/14/2012		6/14/2012		6/14/2012		6/14/2012	
wet weight [g]	30.1		30.1		30.7		30.7		30.2		30.3	
moisture [%]	17.1%		8.9%		25.4%		10.3%		9.4%		8.6%	
2378-TCDF [ng/kg d.w.]	42.7	J	137	J	79.6		10.8		36.6	J	82.4	
2378-TCDD [ng/kg d.w.]	64		111	J	144		15	J	16.7	J	81.5	
23478-PeCDF [ng/kg d.w.]	48.2	J,Y	112	J	81	J,Y	11.1	J,Y	28.6	J,Y	80.2	J
12378-PeCDD [ng/kg d.w.]	55.2	J	67.1	J	93.2	J	12.9	J,Y	15.9	J,Y	50.5	J
1234(6)78-HxCDF [ng/kg d.w.]	105	J	175	J	186		20	J	42.6	J	111	J
1234(6)78-HxCDD [ng/kg d.w.]	121	J	152	J	229		25.5	J,Y	43.6	J	127	J
123789-HxCDD [ng/kg d.w.]	60.4	J	71.6	J	110		14.2	J	29.5	J	62.8	J
1234678-HpCDF [ng/kg d.w.]	1580		1120		4000		255		183		637	
1234678-HpCDD [ng/kg d.w.]	1430		1540		2660		278		554		1350	
OCDF [ng/kg d.w.]	2420		1560		4970		400		364	J	1210	
OCDD [ng/kg d.w.]	15400		14200		30400		3010		5260		12700	
TEQ (ND=0.5 LoD)	**212**		**311**		**419**		**47**		**69**		**230**	

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Phase I Analytical Results
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Lab ID	120796		120838		120839		120840		120841		120842	
Sample Description	Primary Sample 332 Kent Court	Flag	Primary Sample 515 E Buttles Street	Flag	Primary Sample 515 E Buttles Street DUPLICATE	Flag	Duplicate Sample 515 E. Buttles Street	Flag	Triplicate Sample 515 E. Buttles Street	Flag	Primary Sample 2208 Bay City Road	Flag
Sample Date	6/14/2012		6/5/2012		6/5/2012		6/5/2012		6/5/2012		6/15/2012	
wet weight [g]	30.5		30.9		30.5		30.3		30.9		30	
moisture [%]	9.3%		11.7%		11.7%		11.7%		11.6%		9.8%	
2378-TCDF [ng/kg d.w.]	31.7	J	4740		4460		4740		4890		25.6	J
2378-TCDD [ng/kg d.w.]	58.6	J	34.4	J,Y	29.9	J,Y	32.9	J,Y	37.5	J,Y	52.6	
23478-PeCDF [ng/kg d.w.]	35.3	J,Y	2510		2860		2760		2560		46.5	J
12378-PeCDD [ng/kg d.w.]	43.9	J	53.7	J,Y	47.6	J,Y	53.3	J,Y	57.9	J,Y	47.8	J
1234(6)78-HxCDF [ng/kg d.w.]	78.8	J	3510		3830		4000		3520		95.1	J
1234(6)78-HxCDD [ng/kg d.w.]	109	J	67.5	J	59.8	J	69	J	61.7	J	129	J
123789-HxCDD [ng/kg d.w.]	55.5	J	45.2	J	36.9	J	36.4	J	45.5	J	59.8	J
1234678-HpCDF [ng/kg d.w.]	1290		463	Y	722	Y	781		585	Y	1520	
1234678-HpCDD [ng/kg d.w.]	1260		710		578		662		583		1630	
OCDF [ng/kg d.w.]	2170		656		615		710		599	Y	2660	
OCDD [ng/kg d.w.]	14000		6770		5200		6070		5460		18500	
TEQ (ND=0.5 LoD)	**180**		**1770**		**1880**		**1910**		**1820**		**192**	

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Phase I Analytical Results
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Lab ID	120843		120844		120845		120846		120847		120848	
Sample Description	Primary Sample 501 State Street	Flag	Primary Sample 409 Kent Court	Flag	Primary Sample 324 Walter Court	Flag	Primary Sample 328 Walter Court	Flag	Primary Sample 706 East Indian	Flag	Primary Sample 420 Kent Court	Flag
Sample Date	6/15/2012		6/15/2012		6/15/2012		6/15/2012		6/15/2012		6/18/2012	
wet weight [g]	30.2		30.7		30.2		30		30.4		30.3	
moisture [%]	8.5%		9.4%		15.7%		12.0%		9.0%		14.0%	
2378-TCDF [ng/kg d.w.]	30.3	J	34.5		23.6	J	15.4	J	53.8		32.8	J
2378-TCDD [ng/kg d.w.]	21.6	J	12.8	J,Y	44.7		22.7	J,Y	39.4	J	46.5	
23478-PeCDF [ng/kg d.w.]	27.4	J,Y	26.2	J	24.9	J,Y	17.9	J,Y	50.7	J,Y	40	J
12378-PeCDD [ng/kg d.w.]	19.3	J	10.5	J	32	J,Y	25	J	33.3	J	41.8	J
1234(6)78-HxCDF [ng/kg d.w.]	43.3	J	40.4	J	61.2	J	36.7	J	83.8	J	81.1	J
1234(6)78-HxCDD [ng/kg d.w.]	41.7	J	31.7	J	84	J	64	J	77.5	J	107	J
123789-HxCDD [ng/kg d.w.]	24	J	16.4	J	40.9	J	33.6	J	43.3	J	52.3	J
1234678-HpCDF [ng/kg d.w.]	225	Y	275		811		436		409		1230	
1234678-HpCDD [ng/kg d.w.]	434		315		906		637		835		1270	
OCDF [ng/kg d.w.]	442		519		1380		778		669		1950	
OCDD [ng/kg d.w.]	3870		3050		9450		6450		8140		14800	
TEQ (ND=0.5 LoD)	**74**		**53**		**132**		**85**		**135**		**166**	

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Lab ID	120849		120850		120851		120852		120853		120862	
Sample Description	Primary Sample 325 Walter Court	Flag	Primary Sample 400 Walter Court	Flag	Primary Sample 410 Kent Court	Flag	Primary Sample 301 Walter Court	Flag	Primary Sample 328 Kent Court	Flag	Outlawn Sample 515 East Buttles Street	Flag
Sample Date	6/18/2012		6/19/2012		6/19/2012		6/19/2012		6/19/2012		6/21/2012	
wet weight [g]	30.1		30.3		30.2		30.2		30.1		31	
moisture [%]	14.5%		19.1%		9.9%		12.9%		10.6%		5.6%	
2378-TCDF [ng/kg d.w.]	130		36.1		23.3	J	21.8	J	34.1	J	3960	
2378-TCDD [ng/kg d.w.]	86.4		62.2		43.7		41.9		50.1	J	50.9	
23478-PeCDF [ng/kg d.w.]	89.8	J	44.8	J	35.5	J	23.3	J,Y	54.4	J	2110	
12378-PeCDD [ng/kg d.w.]	57	J	45.1	J	35.7	J	32.6	J	52.4	J	56.7	J,Y
1234(6)78-HxCDF [ng/kg d.w.]	159	J	86.8	J	75.5	J	50.3	J	95.6	J	2970	
1234(6)78-HxCDD [ng/kg d.w.]	129	J	109	J	94.6	J	71.2	J	108	J	86	J
123789-HxCDD [ng/kg d.w.]	67.9	J	53.9	J	43.9	J	36.3	J	57.7	J	45.9	J
1234678-HpCDF [ng/kg d.w.]	1490		1380		1170		648		1180		665	
1234678-HpCDD [ng/kg d.w.]	1550		1300		1150		718		1170		1050	
OCDF [ng/kg d.w.]	2490		2410		1890		1120		1810		1000	
OCDD [ng/kg d.w.]	17100		14400		12800		7570		13500		9910	
TEQ (ND=0.5 LoD)	**268**		**190**		**148**		**122**		**185**		**1540**	

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Phase I Analytical Results
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Lab ID	120863		120864		120865		120866		120867		120868	
Sample Description	Original Sample 515 East Buttles Street	Flag	Fill Sample 515 East Buttles Street	Flag	Primary Sample 310 Kent Ct. - 6"	Flag	Primary Sample 400 Kent Court	Flag	Primary Sample 1110 East Pine Street	Flag	Primary Sample 1110 East Grove Street	Flag
Sample Date	6/21/2012		6/21/2012		6/20/2012		6/20/2012		6/20/2012		6/20/2012	
wet weight [g]	30.4		30.6		30.7		30.5		30.8		30.5	
moisture [%]	5.3%		6.2%		12.8%		10.3%		5.0%		5.4%	
2378-TCDF [ng/kg d.w.]	17600		384		20	J	29.1		84.3		106	
2378-TCDD [ng/kg d.w.]	45.2	J	21.1	J	27.9	J	52.6		52.9		49.2	
23478-PeCDF [ng/kg d.w.]	9400		217		18.8	J,Y	38.2	J	73.3		86.6	J
12378-PeCDD [ng/kg d.w.]	108	Y	18.3	J	26.5	J	44.1	J	37.8	J	41.8	J
1234(6)78-HxCDF [ng/kg d.w.]	12600		306		38.6	J	88.2	J	136		133	J
1234(6)78-HxCDD [ng/kg d.w.]	84	J	38.8	J	59.7	J	117	J	113		110	J
123789-HxCDD [ng/kg d.w.]	40.4		21.2	J	36.2	J	58.1		48.4		48.9	J
1234678-HpCDF [ng/kg d.w.]	1500		221		511		1550		655		634	
1234678-HpCDD [ng/kg d.w.]	681		377		587		1410		1070		994	
OCDF [ng/kg d.w.]	1020		374	J	864		2530		1120		1090	Y
OCDD [ng/kg d.w.]	6540		3750		5900		16400		11400		10300	
TEQ (ND=0.5 LoD)	**6320**		**196**		**93**		**182**		**181**		**185**	

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Phase I Analytical Results
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Lab ID	120869		120870		120871		120872		120873		120874	
Sample Description	Primary Sample 411 State Street	Flag	Primary Sample 1010 East Grove Street	Flag	Primary Sample 516 Mill Street - 12"	Flag	Primary Sample 812 E. Grove St. - 12"	Flag	Primary Sample 301 Kent Ct. - 12"	Flag	12" Primary Sample 314 Kent Court	Flag
Sample Date	6/20/2012		6/21/2012		6/9/2012		6/11/2012		6/12/2012		6/7/2012	
wet weight [g]	30.3		30.4		30.6		30.8		30.3		30.7	
moisture [%]	6.5%		5.2%		10.7%		9.5%		14.5%		17.7%	
2378-TCDF [ng/kg d.w.]	61.2		137		157		60.1		44.7		44.5	
2378-TCDD [ng/kg d.w.]	39.2	J	78.9		55.4		42.2	J	53.1		44.7	
23478-PeCDF [ng/kg d.w.]	48.5	J	108	J	117	J	59	J	180		38.1	J
12378-PeCDD [ng/kg d.w.]	33.8	J	51.8	J	40.7	J	44.5	J	46.3	J	31.6	J
1234(6)78-HxCDF [ng/kg d.w.]	87.9	J	190	J	175	J	118	J	119	J	72.2	J
1234(6)78-HxCDD [ng/kg d.w.]	90.8	J	156	J	86.2	J	88.6	J	98.2	J	74.1	J
123789-HxCDD [ng/kg d.w.]	53.7	J	69.6	J	43.2	J	46.9	J	51.7	J	37.9	J
1234678-HpCDF [ng/kg d.w.]	439		895		647		476		1130		852	
1234678-HpCDD [ng/kg d.w.]	1030		1540		796		697		1030		876	
OCDF [ng/kg d.w.]	828		1550		950	Y	736		1650		1500	
OCDD [ng/kg d.w.]	9770		16400		7570		6420		10700		9740	
TEQ (ND=0.5 LoD)	**142**		**260**		**204**		**158**		**221**		**138**	

Table B-1
Phase I Analytical Results
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Lab ID	120920		120921		120941		121163		121164	
Sample Description	Primary Sample 310 Kent Ct. - 12"	Flag	Primary Sample 329 Walter Ct	Flag	Primary Samples 915 E. Grove St	Flag	Primary Sample 916 E. Grove St	Flag	Primary Sample 615 Haley St	Flag
Sample Date	6/20/2012		6/27/2012		7/5/2012 8:10		8/1/2012 9:49		8/1/2012 9:11	
wet weight [g]	30.1		30.3		30.8		31		30.2	
moisture [%]	13.60%		10.60%		11.70%		16.1%		12.5%	
2378-TCDF [ng/kg d.w.]	18.3		44.4		75.2		98.6		60.7	
2378-TCDD [ng/kg d.w.]	28.4		73.1		60.9		135		47.7	J
23478-PeCDF [ng/kg d.w.]	21.1	J	52.9	J	70.5	J	76.3	J	52.6	J
12378-PeCDD [ng/kg d.w.]	25.8	J	53.5	J	56.8	J	56	J	40.8	J
1234(6)78-HxCDF [ng/kg d.w.]	40.2	J	92.8	J	108	J	140	J	93.3	J
1234(6)78-HxCDD [ng/kg d.w.]	56	J	125	J	112	J	142	J	135	J
123789-HxCDD [ng/kg d.w.]	29.3	J	64.9	J	55.6	J	67.3	J	70.2	J
1234678-HpCDF [ng/kg d.w.]	566		1530		646		974		760	
1234678-HpCDD [ng/kg d.w.]	612		1590		1140		1580		1840	
OCDF [ng/kg d.w.]	855		2550		1140		1550		1420	
OCDD [ng/kg d.w.]	6080		15600		10800		14600		14200	
TEQ (ND=0.5 LoD)	**93**		**223**		**205**		**303**		**180**	

TEQ: Toxicity Equivalence Quotient; calculated using .05 the detection limit for non-detects.
J - Reported value is below the lower calibration limit.
Y - Isotope ion ratio is below or above the method range (15%). Reported value is the lowest concentration of the two ions.

Table B-2
Phase II Analytical Results
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Lab ID	121196		121197		121198		121199		121200		121201	
Sample Description	Primary Sample 820 Mill St	Flag	Primary Sample 1002 Mill St	Flag	Primary Sample 802 Mill St	Flag	Primary 6" Sample 717 Fournie St	Flag	Primary 12" Sample 717 Fournie St	Flag	Primary Sample 719 Fournie St	Flag
Sample Date	8/6/2012 14:15		8/6/2012 15:05		8/7/2012 8:10		8/7/2012 9:30		8/7/2012 10:20		8/7/2012 11:10	
wet weight [g]	31.8		30.9		30.4		30.2		30.3		30.4	
moisture [%]	12.5%		12.1%		7.9%		15.3%		9.8%		7.7%	
2378-TCDF [ng/kg d.w.]	91.2		96.4		43.4		121		76.5		114	
2378-TCDD [ng/kg d.w.]	103		115		47.4		50.5		29.1		38	J
23478-PeCDF [ng/kg d.w.]	82.6		90.5	Y	43.4	J, Y	81.6		52.6	Y	73.8	J
12378-PeCDD [ng/kg d.w.]	79.2		70.8		42.3	J, Y	36.7	J, Y	22.2		35.8	J, Y
1234(6)78-HxCDF [ng/kg d.w.]	142		147		67.6	J	123	J	76.1		113	J
1234(6)78-HxCDD [ng/kg d.w.]	152		162		84	J	98.6	J	56.6		81	J
123789-HxCDD [ng/kg d.w.]	73.2		73.8		40.2	J	45.6	J	26.7		35	J
1234678-HpCDF [ng/kg d.w.]	1030		1110		506		603		375		515	
1234678-HpCDD [ng/kg d.w.]	1490		1620		1030		1060		579		750	
OCDF [ng/kg d.w.]	1390		1520		780		892		547		682	
OCDD [ng/kg d.w.]	13000		14300		8750		8980		4950		6090	
ETEQ (ND=0.5 LoD)	**297**		**307**		**151**		**179**		**107**		**152**	

Table B-2
Phase II Analytical Results
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Lab ID	121202		121203		121219		121220		121221		121222	
Sample Description	Primary Sample 811 Fournie St	Flag	Primary Sample 1001 Fournie St	Flag	Primary Sample 706 Haley St	FLAG	Primary Sample 716 Haley St	FLAG	Primary Sample 805 Haley St	FLAG	Primary Sample 811 Haley St	FLAG
Sample Date	8/7/2012 13:35		8/7/2012 15:10		8/8/2012 8:10		8/8/2012 9:40		8/8/2012 11:05		8/8/2012 13:35	
wet weight [g]	30		31		30.1		30.2		30		30.3	
moisture [%]	8.9%		9.8%		10.1%		12.6%		15.8%		11.6%	
2378-TCDF [ng/kg d.w.]	171		122		110		1320		137		76.9	
2378-TCDD [ng/kg d.w.]	97.5		159		90.7		40.7		123		97.4	
23478-PeCDF [ng/kg d.w.]	115		113	Y	131		553		112		81	J
12378-PeCDD [ng/kg d.w.]	55.9		98.8		65	J, Y	47.1	J, Y	84.9	J, Y	71	J, Y
1234(6)78-HxCDF [ng/kg d.w.]	153		203		153	J	566		185	J	112	J
1234(6)78-HxCDD [ng/kg d.w.]	130		241		149	J	74	J, Y	209		138	J
123789-HxCDD [ng/kg d.w.]	61.4		115		65.1	J	37.4	J	95.1		65.2	J
1234678-HpCDF [ng/kg d.w.]	722		1740		970		543		1300		814	
1234678-HpCDD [ng/kg d.w.]	1370		2650		1570		818		2440		1480	
OCDF [ng/kg d.w.]	1120		2280		1400		786	Y	2400		1270	
OCDD [ng/kg d.w.]	11800		26100		15000		6940		20700		13100	
ETEQ (ND=0.5 LoD)	**277**		**434**		**287**		**492**		**365**		**272**	

Table B-2
Phase II Analytical Results
Method 8280 - Site-Specific Fast Analysis
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Lab ID	121223		121224		121225		121226		121227		121228	
Sample Description	Primary Sample 819 Haley St	FLAG	Primary Sample 1002 Haley St	FLAG	Primary Sample 1007 Haley St	FLAG	Primary Sample 1010 Haley St	FLAG	Primary Sample 1009 East Pine St	FLAG	Primary Sample 716 East Haley St	FLAG
Sample Date	8/8/2012 15:00		8/9/2012 8:15		8/9/2012 9:55		8/9/2012 11:15		8/9/2012 13:50		8/9/2012 15:15	
wet weight [g]	30.4		30.3		30.2		30.4		30.2		30.4	
moisture [%]	11.3%		13.9%		12.1%		14.2%		12.4%		13.8%	
2378-TCDF [ng/kg d.w.]	118		120		62.8	Y	63.6		95.8		20.2	J
2378-TCDD [ng/kg d.w.]	75.4		90.2		86.3		79.9		68.3		47.7	
23478-PeCDF [ng/kg d.w.]	88.2	J	87.4	J, Y	85.7	J	58.3	J, Y	62.1	J, Y	20.7	J, Y
12378-PeCDD [ng/kg d.w.]	62.2	J, Y	65.4	J, Y	55.7	J, Y	56.2	J, Y	49.5	J,Y	24.7	J, Y
1234(6)78-HxCDF [ng/kg d.w.]	143	J	132	J	116	J	94.9	J	103	J	38.5	J
1234(6)78-HxCDD [ng/kg d.w.]	119	J	135	J	118	J	116	J	107	J	63.3	J
123789-HxCDD [ng/kg d.w.]	59.2	J	65.6	J	57.4	J	58	J	49.9	J	34	J
1234678-HpCDF [ng/kg d.w.]	842		821		746		640		559		286	
1234678-HpCDD [ng/kg d.w.]	1200		1450		1170		1210		1110		910	
OCDF [ng/kg d.w.]	989		1300		1140		1160		914		732	
OCDD [ng/kg d.w.]	10000		12400		9990		10400		10100		8580	
ETEQ (ND=0.5 LoD)	**244**		**267**		**237**		**219**		**202**		**114**	

Table B-2
Phase II Analytical Results
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Lab ID	121268		121269		121270		121271		121272		121273
Sample Description	Primary Sample 806 Mill St	FLAG	Primary Sample 902 East Carpenter St	FLAG	Primary Sample 1007 Fournie St	FLAG	Primary Sample 816 Haley St	FLAG	Primary 6" Sample 1128 East Haley St	FLAG	Primary 12" Sample 1128 East Haley St
Sample Date	8/10/2012 8:15		8/10/2012 9:40		8/10/2012 11:15		8/10/2012 13:40		8/10/2012 14:15		8/10/2012 14:30
wet weight [g]	30.3		32		30.5		30.3		34.1		31.3
moisture [%]	20.3%		17.9%		19.8%		21.2%		30.7%		21.9%
2378-TCDF [ng/kg d.w.]	69.9		51		100		70.7		11.1	J, Y	15.5
2378-TCDD [ng/kg d.w.]	56.1	Y	79.7		112		67.3		34.2	J	23.4
23478-PeCDF [ng/kg d.w.]	57.4	J	53.8	J, Y	77.2	J, Y	78.4	J	17.3	J, Y	20
12378-PeCDD [ng/kg d.w.]	33	J, Y	43.6	J, Y	61.2	J, Y	42.1	J, Y	22.4	J, Y	17.8
1234(6)78-HxCDF [ng/kg d.w.]	91.3	J	95.8	J	142	J	119	J	46.3	J	33.3
1234(6)78-HxCDD [ng/kg d.w.]	94.4	J	111	J	152	J	101	J	56.6	J	37.4
123789-HxCDD [ng/kg d.w.]	40.8	J	51.2	J	69.7		48.3	J	30.6	J	17.3
1234678-HpCDF [ng/kg d.w.]	561		652		862		638		274		202
1234678-HpCDD [ng/kg d.w.]	1010		1110		1480		913		654		361
OCDF [ng/kg d.w.]	962		1120		1480		940		611		388
OCDD [ng/kg d.w.]	11100		10900		14600		8270		6740		3550
ETEQ (ND=0.5 LoD)	**163**		**202**		**285**		**194**		**92**		**68**

Table B-2
Phase II Analytical Results
Method 8280 - Site-Specific Fast Analysis
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Lab ID		121274		121275		121276		121277		121278	
Sample Description	FLAG	Primary 6" Sample 720 Haley St	FLAG	Primary 6" Sample 1202 East Haley St	FLAG	Primary 12" Sample 1202 East Haley St	FLAG	Primary Sample 1109 East Pine St	FLAG	Primary Sample 806 Fournie Street (Soccer Field)	FLAG
Sample Date		8/10/2012 15:15		8/11/2012 11:15		8/11/2012 11:30		8/11/2012 12:30		8/11/2012 13:50	
wet weight [g]		35.7		32.1		31.2		33.2		30.1	
moisture [%]		24.0%		15.0%		13.8%		14.3%		14.7%	
2378-TCDF [ng/kg d.w.]	J, Y	110		21.5	J, Y	19.5	J	286		75.8	
2378-TCDD [ng/kg d.w.]	J	40.6		48.8		26.4	J	32.1		42	
23478-PeCDF [ng/kg d.w.]	J, Y	71.7	J	36.4	J, Y	20.3	J, Y	177		58.1	J
12378-PeCDD [ng/kg d.w.]	J, Y	25.5	J, Y	34.4	J, Y	18.6	J, Y	30.1	J, Y	24.6	J, Y
1234(6)78-HxCDF [ng/kg d.w.]	J	167	J	154	J	35	J	256		95.1	J
1234(6)78-HxCDD [ng/kg d.w.]	J	67.6	J	83.4	J	39.2	J	77	J	77.2	J
123789-HxCDD [ng/kg d.w.]	J	32.3	J	36.9	J	19	J	32.4	J	35.8	J
1234678-HpCDF [ng/kg d.w.]		428		2870		257		486		453	
1234678-HpCDD [ng/kg d.w.]		713		1000		402		727		706	
OCDF [ng/kg d.w.]		1110		7270		455		750		694	
OCDD [ng/kg d.w.]		6690		14600		3940		7450		6730	
ETEQ (ND=0.5 LoD)		**146**		**177**		**74**		**205**		**132**	

Table B-2
Phase II Analytical Results
Method 8280 - Site-Specific Fast Analysis
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Lab ID	121279		121280		121281		121282	
Sample Description	Primary Sample 806 Fournie Street (Field House)	FLAG	Primary Sample 1110 East Carpenter St	FLAG	Primary Sample 806 Haley St	FLAG	Primary Sample 804/808 East Haley St	FLAG
Sample Date	8/11/2012 15:20		8/11/2012 16:30		8/13/2012 8:15		8/13/2012 9:40	
wet weight [g]	34.9		32.7		32.2		31.2	
moisture [%]	15.2%		14.6%		15.5%		15.3%	
2378-TCDF [ng/kg d.w.]	62.7		82.2		92.2		25.9	J
2378-TCDD [ng/kg d.w.]	49.2		50		89.4		66	
23478-PeCDF [ng/kg d.w.]	54.8	J	64.7	J	84.5		35.6	J
12378-PeCDD [ng/kg d.w.]	30.5	J, Y	29.8	J, Y	58.7	J	28.2	J, Y
1234(6)78-HxCDF [ng/kg d.w.]	82.4	J	100	J	144	J	62.6	J
1234(6)78-HxCDD [ng/kg d.w.]	84.8	J	89.6	J	124	J	98.3	J
123789-HxCDD [ng/kg d.w.]	36.8	J	39.9	J	52.8	J	49.8	J
1234678-HpCDF [ng/kg d.w.]	453		499		897		453	
1234678-HpCDD [ng/kg d.w.]	818		983		1260		1180	
OCDF [ng/kg d.w.]	765		911		1300		1090	
OCDD [ng/kg d.w.]	8000		9300		12500		11900	
ETEQ (ND=0.5 LoD)	**145**		**155**		**252**		**156**	

Table B-2
Phase II Analytical Results
Method 8280 - Site-Specific Fast Analysis
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Lab ID	121283		121284		121285		121315		121316	
Sample Description	Primary Sample 800 East Haley St	FLAG	Primary Sample1001 Haley St	FLAG	Primary Sample 1010 East Carpenter St	FLAG	Primary 12" Sample 720 Haley St	FLAG	Primary Sample 819 Fournie St	FLAG
Sample Date	8/13/2012 11:20		8/13/2012 13:40		8/13/2012 15:15		8/10/2012 15:30		8/14/2012 8:15	
wet weight [g]	31.8		35.1		34.8		31.2		30.5	
moisture [%]	15.7%		15.9%		13.3%		19.7%		16.2%	
2378-TCDF [ng/kg d.w.]	14.4	J, Y	182		158		128		70.9	
2378-TCDD [ng/kg d.w.]	46.7		96.9		67.8		36.3	J	151	
23478-PeCDF [ng/kg d.w.]	23	J	132		78.8	J	80	J	90.5	
12378-PeCDD [ng/kg d.w.]	26.7	J, Y	63.1	J	41.2	J, Y	29	J	84.1	
1234(6)78-HxCDF [ng/kg d.w.]	39.3	J	176		92.7	J	109	J	146	J
1234(6)78-HxCDD [ng/kg d.w.]	71.2	J	121	J	84.2	J	67.8	J	196	
123789-HxCDD [ng/kg d.w.]	33.3	J	56	J	39.6	J	33.7	J	105	
1234678-HpCDF [ng/kg d.w.]	249		859		462		483		1060	
1234678-HpCDD [ng/kg d.w.]	875		1210		986		665		2030	
OCDF [ng/kg d.w.]	632		1220		845		642		2010	
OCDD [ng/kg d.w.]	8040		11200		9280		5950		18000	
ETEQ (ND=0.5 LoD)	**116**		**292**		**197**		**144**		**369**	

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Phase II Analytical Results
Method 8280 - Site-Specific Fast Analysis
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Lab ID	121317		121318		121319		121320		121321	
Sample Description	Primary Sample 712 East Haley St	FLAG	Primary Sample 912 East Carpenter St	FLAG	Primary 6" Sample 715 Fournie St	FLAG	Primary Sample 801 Haley St	FLAG	Primary Sample 812 Mill St	FLAG
Sample Date	8/14/2012 9:45		8/14/2012 11:15		8/14/2012 13:35		8/14/2012 15:15		8/15/2012 8:10	
wet weight [g]	30.3		30.7		30.5		30.1		30.4	
moisture [%]	16.4%		17.2%		13.8%		15.2%		16.1%	
2378-TCDF [ng/kg d.w.]	23.6	J	50.2		143		106		118	
2378-TCDD [ng/kg d.w.]	46.8		64		54.3		59.5		90.7	
23478-PeCDF [ng/kg d.w.]	31.4	J	62	J	94.2		71.1	J	87.4	J
12378-PeCDD [ng/kg d.w.]	29.1	J, Y	48.8	J	42.3	J	35.9	J, Y	64.5	J
1234(6)78-HxCDF [ng/kg d.w.]	51.5	J	94.7	J	143	J	107	J	134	J
1234(6)78-HxCDD [ng/kg d.w.]	67.3	J	100	J	118	J	81.8	J	160	J
123789-HxCDD [ng/kg d.w.]	32.9	J	45	J	59.7	J	43.4	J	84.5	J
1234678-HpCDF [ng/kg d.w.]	319		670		696		501		882	
1234678-HpCDD [ng/kg d.w.]	884		956		1320		823		2030	
OCDF [ng/kg d.w.]	723		934		1230		780		1740	
OCDD [ng/kg d.w.]	8730		8790		12000		7770		19100	
ETEQ (ND=0.5 LoD)	**124**		**189**		**205**		**174**		**279**	

Table B-2
Phase II Analytical Results
Method 8280 - Site-Specific Fast Analysis
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Lab ID	121322		121323		121324		121399		121400		121401	
Sample Description	Primary Sample 711 Fournie St	FLAG	Primary Sample 813 Fournie St	FLAG	Primary Sample 1013 East Pine St	FLAG	Primary 12" Sample 715 Fournie St	FLAG	Primary Sample 901 E. Pine St	FLAG	Primary Sample 1016 E. Carpenter	FLAG
Sample Date	8/15/2012 9:45		8/15/2012 11:10		8/15/2012 13:40		8/14/2012 13:50		8/28/2012 9:19		8/28/2012 8:45	
wet weight [g]	30.8		30.8		30.4		30.2		30.1		31.6	
moisture [%]	16.9%		14.9%		13.8%		11.2%		7.4%		5.7%	
2378-TCDF [ng/kg d.w.]	95.1		96.5		126		86.6		78.3		71.5	
2378-TCDD [ng/kg d.w.]	80.4		96.6		91.8		39.3		61.5		88.9	
23478-PeCDF [ng/kg d.w.]	83.7		77.4	J	94.4	J	66.5	J	64.2	J	55.6	J
12378-PeCDD [ng/kg d.w.]	60.4	J	63.4	J	60.4	J, Y	22.6	J, Y	36.5	J	44.8	J, Y
1234(6)78-HxCDF [ng/kg d.w.]	142	J	126	J	158	J	100	J	106	J	103	J
1234(6)78-HxCDD [ng/kg d.w.]	153	J	139	J	168	J	75.2	J	106	J	114	J
123789-HxCDD [ng/kg d.w.]	79.9		74	J	83	J	37.5	J	51.5	J	57.8	
1234678-HpCDF [ng/kg d.w.]	1050		787		944		406		526		550	
1234678-HpCDD [ng/kg d.w.]	1780		1450		1850		716		1040		1150	
OCDF [ng/kg d.w.]	1960		1260		1790		710		941		1110	
OCDD [ng/kg d.w.]	16900		13400		17800		7280		10800		11400	
ETEQ (ND=0.5 LoD)	**259**		**267**		**281**		**131**		**180**		**216**	

TEQ: Toxicity Equivalence Quotient; calculated using .05 the detection limit for non-detects.
J - Reported value is below the lower calibration limit.
Y - Isotope ion ratio is below or above the method range (15%). Reported value is the lowest concentration of the two ions.

Table B-3
Phase I Analytical Results
EPA Method 1613b - Property-Specific Confirmation
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Lab ID:	Vial 5 Tray 1 Sample #2 (120812)					Vial 6 Tray 1 Sample #3 (120813)					Vial 7 Tray 1 Sample #4 (120814)					Vial 8 Tray 1 Sample #5 (120815)				
Client sample ID:	Prim 516 George St					Dup 516 George St					Trip 516 George St					Prim 319 Walter Crt				
Sample Date	6/8/2012					6/8/2012					6/8/2012					6/6/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		60.2	1.57	84	60.2		60.5	1.61	97	60.5		61.5	1.37	91	61.5		102	1.58	90	102
12378-PCDD		36.2	0.962	71	36.2		36.6	0.984	83	36.6		36.8	0.992	81	36.8		35.2	1.05	78	35.2
123478-HCDD		27.7	1.16	62	2.77		29.5	1.13	68	2.95		28.8	1.19	64	2.88		24.8	1.28	70	2.48
123678-HCDD		74.0	1.77	63	7.40		76.0	1.84	68	7.60		74.5	2.05	60	7.45		80.6	1.94	69	8.06
123789-HCDD		48.7	1.45	63	4.87		50.8	1.60	66	5.08		49.3	1.54	63	4.93		48.0	1.50	69	4.80
1234678-H7CDD		1080	0.632	57	10.8		1190	0.633	60	11.9		1060	0.638	53	10.6		1400	0.722	66	14.0
OCDD		9500	1.39	52	2.85		10600	1.41	56	3.18		9100	1.43	47	2.73		14500	1.95	64	4.35
2378-TCDF	C	91.6	0.965	80	9.16	C	99.1	1.06	90	9.91	C	97.0	0.941	85	9.70	C	55.2	0.846	86	5.52
12378-PCDF		65.1	1.66	68	1.95		67.0	1.72	79	2.01		64.4	1.26	75	1.93		37.2	1.38	74	1.12
23478-PCDF	C	58.8	0.790	77	17.6	C	60.2	0.808	87	18.1	C	58.7	0.890	80	17.6	C	34.5	0.740	82	10.4
123478-HCDF		104	0.932	59	10.4		105	0.839	66	10.5		95.9	1.07	60	9.59		68.0	1.06	67	6.80
123678-HCDF		44.1	0.976	59	4.41		45.4	0.869	66	4.54		44.3	1.13	61	4.43		28.3	1.11	65	2.83
234678-HCDF	C	34.0	1.83	76	3.40	C	38.9	2.03	80	3.89	E, C	33.1	1.76	78	3.31	E, C	23.3	1.87	78	2.33
123789-HCDF	E, C	3.63	1.47	75	0.363	C	4.25	1.65	78	0.425	C	3.65	1.60	78	0.365	C	ND	1.82	77	0.0910
1234678-H7CDF		644	0.466	55	6.44		804	0.477	59	8.04		656	0.480	54	6.56		1310	0.522	64	13.1
1234789-H7CDF		35.8	0.695	52	0.358		42.6	0.711	56	0.426		37.5	0.717	50	0.375		37.2	0.758	62	0.372
OCDF		854	0.692	48	0.256		1570	0.703	52	0.471		891	0.709	43	0.267		1970	0.866	59	0.591
TEQ					**179**					**186**					**181**					**214**

Table B-3
Phase I Analytical Results
EPA Method 1613b - Property-Specific Confirmation
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Lab ID:	Vial 9 Tray 1 Sample #6 (120816)					Vial 10 Tray 1 Sample #7 (120817)					Vial 11 Tray 1 Sample #8 (120818)					Vial 12 Tray 1 Sample #9 (120819)				
Client sample ID:	Dup 319 Walter Crt					Trip 319 Walter Crt					Prim 516 Mill St-6"					Dup 516 Mill St-6"				
Sample Date	6/6/2012					6/6/2012					6/9/2012					6/9/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		81.4	1.88	83	81.4		75.7	1.57	94	75.7		85.4	1.70	82	85.4		75.9	1.64	93	75.9
12378-PCDD		35.8	1.06	80	35.8		34.0	1.07	83	34.0		40.9	0.962	74	40.9		35.3	0.957	83	35.3
123478-HCDD		24.9	1.33	65	2.49		23.4	1.54	63	2.34		35.0	1.32	69	3.50		32.1	1.19	67	3.21
123678-HCDD		79.0	1.91	67	7.90		75.1	2.45	61	7.51		92.1	1.96	69	9.21		86.6	1.87	66	8.66
123789-HCDD		47.5	1.44	67	4.75		47.0	1.99	61	4.70		55.2	1.49	69	5.52		51.9	1.73	62	5.19
1234678-H7CDD		1380	0.742	63	13.8		1390	0.998	51	13.9		1400	0.618	69	14.0		1340	0.794	55	13.4
OCDD		14500	1.52	62	4.35		15900	1.70	45	4.77		11800	1.57	74	3.54		11600	1.96	49	3.48
2378-TCDF	C	53.9	1.04	77	5.39	C	64.4	0.852	88	6.44	C	129	1.07	77	12.9	C	158	1.07	76	15.8
12378-PCDF		39.0	1.21	75	1.17		39.8	1.29	78	1.19		97.9	2.06	69	2.94		119	1.89	75	3.57
23478-PCDF	C	34.4	0.710	78	10.3	C	36.4	0.870	86	10.9	C	72.7	1.03	74	21.8	C	86.7	1.03	75	26.0
123478-HCDF		70.5	0.864	65	7.05		67.9	0.989	62	6.79		131	1.03	70	13.1		147	1.08	68	14.7
123678-HCDF		28.8	0.969	63	2.88		27.2	1.06	59	2.72		50.2	1.11	70	5.02		55.2	1.15	66	5.52
234678-HCDF	C	34.2	2.02	76	3.42	E, C	22.0	2.12	76	2.20	C	42.9	2.19	70	4.29	C	43.5	1.94	70	4.35
123789-HCDF	C	ND	2.18	74	0.109	C	ND	2.21	78	0.110	C	ND	2.23	68	0.112	C	5.51	1.61	69	0.551
1234678-H7CDF		1230	0.513	62	12.3		1250	0.651	53	12.5		855	0.466	68	8.55		846	0.464	58	8.46
1234789-H7CDF		40.2	0.765	59	0.402		34.2	0.771	45	0.342		41.8	0.695	69	0.418		44.0	0.691	55	0.440
OCDF		1960	0.818	57	0.588		1970	0.774	40	0.591		1260	0.687	70	0.378		1460	0.837	48	0.438
TEQ					**194**					**187**					**232**					**225**

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Lab ID:	Vial 13 Tray 1 Sample #10 (120820)					Vial 5 Tray 1 Sample #2 (120821)					Vial 6 Tray 1 Sample #3 (120822)					Vial 7 Tray 1 Sample #4 (120823)				
Client sample ID:	Trip 516 Mill St-6"					Prim 915E Indian St					Dup 915 E Indian St					Trip 915E Indian St				
Sample Date	6/9/2012					6/7/2012					6/7/2012					6/7/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5
2378-TCDD		90.0	1.70	84	90.0		84.7	2.83	96	84.7		85.8	2.96	96	85.8		93.5	3.16	88	93.5
12378-PCDD		39.7	0.965	76	39.7		38.4	1.95	86	38.4		39.4	1.93	84	39.4		37.9	1.95	73	37.9
123478-HCDD		33.4	1.48	60	3.34		33.7	2.88	76	3.37		37.3	2.34	77	3.73		35.8	2.49	73	3.58
123678-HCDD		98.0	2.18	58	9.80		88.8	3.45	75	8.88		96.4	2.91	77	9.64		93.8	2.98	74	9.38
123789-HCDD		56.6	1.76	57	5.66		52.3	2.32	74	5.23		55.7	2.63	79	5.57		59.3	2.53	71	5.93
1234678-H7CDD		1420	0.772	48	14.2		1410	1.25	73	14.1		1560	1.24	73	15.6		1540	1.32	71	15.4
OCDD		12500	1.74	41	3.75		13400	2.80	69	4.02		14600	2.78	74	4.38		14700	2.80	74	4.41
2378-TCDF	C	170	1.28	83	17.0	C	74.8	1.40	90	7.48	C	75.1	1.87	85	7.51	C	75.2	1.65	87	7.52
12378-PCDF		124	1.84	72	3.72		52.7	2.08	86	1.58		55.7	2.23	86	1.67		58.2	2.30	80	1.75
23478-PCDF	C	91.4	0.976	75	27.4	C	45.8	1.26	94	13.7	C	43.5	1.59	93	13.0	C	45.6	1.27	92	13.7
123478-HCDF		156	0.971	58	15.6		98.9	2.19	76	9.89		100	2.35	77	10.0		102	2.00	72	10.2
123678-HCDF		56.1	1.15	56	5.61		40.0	2.08	82	4.00		40.9	2.26	80	4.09		42.1	2.02	73	4.21
234678-HCDF	C	36.8	2.26	70	3.68	C	30.0	2.53	90	3.00	C	29.9	2.30	86	2.99	E, C	29.4	2.38	87	2.94
123789-HCDF	C	5.18	2.01	69	0.518	C	ND	2.52	89	0.126	C	ND	2.05	90	0.102	C	ND	2.47	88	0.124
1234678-H7CDF		926	0.467	50	9.26		825	0.944	71	8.25		908	0.936	72	9.08		890	0.944	70	8.90
1234789-H7CDF		45.7	0.697	47	0.457		42.0	1.41	71	0.420		44.7	1.40	73	0.447		43.7	1.41	69	0.437
OCDF		1390	0.711	39	0.417		1240	1.39	72	0.372		1440	1.38	72	0.432		1350	1.39	71	0.405
TEQ					**250**					**208**					**213**					**220**

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Lab ID:	Vial 8 Tray 1 Sample #5 (120824)					Vial 9 Tray 1 Sample #6 (120825)					Vial 10 Tray 1 Sample #7 (120826)					Vial 11 Tray 1 Sample #8 (120827)				
Client sample ID:	Prim 311 Walter Crt					Dup 311 Walter Crt					Trip 311 Walter Crt					Prim 914 E Grove St				
Sample Date	6/7/2012					6/7/2012					6/7/2012					6/11/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		105	3.37	94	105		102	3.32	85	102		96.7	3.39	97	96.7		110	3.73	83	110
12378-PCDD		47.1	2.11	75	47.1		45.3	2.07	75	45.3		46.7	2.11	76	46.7		36.8	1.95	74	36.8
123478-HCDD		33.2	3.25	74	3.32		33.3	3.04	65	3.33	E	31.5	2.81	74	3.15		37.2	2.71	70	3.72
123678-HCDD		106	4.06	75	10.6		101	3.88	67	10.1		103	3.82	75	10.3		94.9	3.43	74	9.49
123789-HCDD		65.5	3.27	74	6.55		64.4	3.24	67	6.44		68.2	3.59	72	6.82		59.2	3.13	71	5.92
1234678-H7CDD		1700	1.56	79	17.0		1660	1.33	65	16.6		1810	1.53	75	18.1		1760	1.52	76	17.6
OCDD		17000	3.04	80	5.10		16200	2.98	70	4.86		18200	3.72	77	5.46		15900	2.80	90	4.77
2378-TCDF	C	47.0	1.51	82	4.70	C	50.0	1.66	77	5.00	C	53.2	1.59	79	5.32	C	61.2	1.91	77	6.12
12378-PCDF		32.7	1.68	79	0.981		31.8	1.89	68	0.954		34.7	1.87	79	1.04		44.8	2.01	76	1.34
23478-PCDF	C	29.9	1.19	90	8.97	C	30.5	1.19	88	9.15	C	32.2	1.30	83	9.66	C	37.9	1.62	78	11.4
123478-HCDF		67.8	2.32	80	6.78		72.8	2.31	68	7.28		72.4	2.41	78	7.24		88.9	2.22	74	8.89
123678-HCDF		32.3	2.25	85	3.23		33.2	2.19	75	3.32		32.9	2.48	78	3.29		37.7	2.29	73	3.77
234678-HCDF	C	29.5	2.89	81	2.95	C	27.9	3.36	78	2.79	E, C	27.2	3.06	76	2.72	E, C	29.4	3.23	69	2.94
123789-HCDF	C	ND	3.19	80	0.160	C	ND	3.01	80	0.150	C	ND	3.32	78	0.166	C	ND	2.95	69	0.148
1234678-H7CDF		1490	1.02	78	14.9		1570	1.03	66	15.7		1580	1.02	73	15.8		857	0.944	74	8.57
1234789-H7CDF		49.0	1.53	78	0.490		46.3	1.50	64	0.463		49.6	1.52	72	0.496		45.2	1.41	78	0.452
OCDF		2560	1.51	80	0.768		2340	1.58	64	0.702		2750	1.51	73	0.825		1460	1.39	87	0.438
TEQ					**239**					**234**					**234**					**232**

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Lab ID:	Vial 12 Tray 1 Sample #9 (120828)					Vial 13 Tray 1 Sample #10 (120829)					Vial 5 Tray 1 Sample #2 (120875)					Vial 6 Tray 1 Sample #3 (120876)				
Client sample ID:	Dup 914 E Grove St					Trip 914 E Grove St					Prim 331 Kent Crt					Dup 331 Kent Crt				
Sample Date	6/11/2012					6/11/2012					6/11/2012					6/11/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		84.9	4.03	85	84.9		85.0	3.41	81	85.0		70.9	3.32	72	70.9		62.7	3.05	65	62.7
12378-PCDD		34.5	1.94	70	34.5		39.3	1.95	71	39.3		38.1	1.90	63	38.1		36.0	1.92	56	36.0
123478-HCDD		34.9	3.29	60	3.49		35.1	2.81	63	3.51		31.1	2.96	60	3.11		29.2	3.11	53	2.92
123678-HCDD		93.7	4.00	63	9.37		99.8	3.41	65	9.98		99.0	3.63	60	9.90		92.1	3.96	54	9.21
123789-HCDD		59.3	3.95	59	5.93		56.3	3.31	63	5.63		60.4	3.92	61	6.04		58.8	3.86	56	5.88
1234678-H7CDD		1750	1.63	57	17.5		1670	1.64	61	16.7		1680	1.87	66	16.8		1780	2.51	54	17.8
OCDD		16400	2.79	59	4.92		14800	2.80	59	4.44		18900	2.73	70	5.67		20000	3.80	52	6.00
2378-TCDF	C	56.1	1.98	74	5.61	C	56.6	2.41	73	5.66	C	21.4	1.01	66	2.14	C	20.0	1.01	58	2.00
12378-PCDF		41.2	2.09	72	1.24		44.0	2.16	71	1.32		17.6	1.37	61	0.528		18.5	1.59	56	0.555
23478-PCDF	C	35.6	1.74	70	10.7	C	41.9	1.80	57	12.6	C	21.4	1.05	74	6.42	C	21.8	1.07	62	6.54
123478-HCDF		84.4	2.30	65	8.44		91.5	2.75	65	9.15		62.5	2.49	61	6.25		60.8	2.82	53	6.08
123678-HCDF		36.3	2.50	63	3.63		38.2	2.90	65	3.82		30.9	2.80	58	3.09		31.8	2.79	54	3.18
234678-HCDF	C	33.7	2.97	62	3.37	E, C	31.6	3.93	55	3.16	C	32.4	3.40	67	3.24	E, C	27.3	3.52	61	2.73
123789-HCDF	C	ND	2.94	65	0.147	C	ND	3.68	59	0.184	C	ND	2.64	69	0.132	C	ND	2.68	60	0.134
1234678-H7CDF		832	0.941	60	8.32		807	1.05	61	8.07		1750	1.31	62	17.5		1770	1.55	54	17.7
1234789-H7CDF		44.7	1.40	58	0.447		46.4	1.41	58	0.464		46.8	1.37	64	0.468		50.0	1.39	51	0.500
OCDF		1410	1.39	59	0.423		1480	1.39	57	0.444		2530	1.36	65	0.759		3000	1.69	50	0.900
TEQ					**203**					**209**					**191**					**181**

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Lab ID:	Vial 7 Tray 1 Sample #4 (120877)					Vial 8 Tray 1 Sample #5 (120878)					Vial 9 Tray 1 Sample #6 (120879)					Vial 10 Tray 1 Sample #7 (120880)				
Client sample ID:	Trip 331 Kent Crt					Prim 808 E Grove St					Dup 808 E Grove St					Trip 808 E Grove St				
Sample Date	6/11/2012					6/12/2012					6/12/2012					6/12/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		89.9	3.17	80	89.9		65.4	3.51	72	65.4		66.6	3.20	68	66.6		68.8	3.22	77	68.8
12378-PCDD		40.1	1.90	62	40.1		34.7	1.86	63	34.7		35.7	1.90	61	35.7		34.1	1.81	67	34.1
123478-HCDD		32.2	2.58	56	3.22		30.4	3.10	57	3.04		29.5	3.08	59	2.95		29.9	3.08	60	2.99
123678-HCDD		97.4	3.13	60	9.74		78.2	3.74	57	7.82		81.5	3.72	61	8.15		77.5	3.55	60	7.75
123789-HCDD		61.8	3.30	58	6.18		48.9	4.01	59	4.89		50.8	4.01	59	5.08		48.0	3.00	62	4.80
1234678-H7CDD		1860	2.38	54	18.6		1210	1.44	55	12.1		1210	2.04	55	12.1		1150	1.41	57	11.5
OCDD		19900	2.98	53	5.97		11700	3.49	53	3.51		10700	3.01	53	3.21		10000	3.06	55	3.00
2378-TCDF	C	22.4	0.968	71	2.24	C	101	1.53	66	10.1	C	114	1.98	62	11.4	C	99.0	1.65	68	9.90
12378-PCDF		19.6	1.45	64	0.588		68.2	2.74	60	2.05		76.7	3.05	61	2.30		66.6	2.36	63	2.00
23478-PCDF	C	22.8	0.979	79	6.84	C	50.4	1.20	72	15.1	C	57.0	1.71	59	17.1	C	53.8	1.58	67	16.1
123478-HCDF		67.9	2.63	57	6.79		94.5	3.00	60	9.45		99.4	3.05	58	9.94		87.5	2.42	59	8.75
123678-HCDF		32.7	2.84	56	3.27		38.5	3.24	58	3.85		38.8	3.35	59	3.88		36.3	2.43	59	3.63
234678-HCDF	E, C	28.9	3.43	74	2.89	C	34.1	2.18	69	3.41	E, C	30.4	1.90	59	3.04	C	29.5	2.34	76	2.95
123789-HCDF	C	ND	2.35	76	0.118	C	ND	1.92	68	0.0960	C	ND	2.39	56	0.120	C	ND	1.84	73	0.0920
1234678-H7CDF		1780	1.59	55	17.8		759	1.20	56	7.59		775	1.16	55	7.75		689	0.883	56	6.89
1234789-H7CDF		51.1	1.37	51	0.511		37.0	1.34	53	0.370		38.4	1.36	53	0.384		34.9	1.31	54	0.349
OCDF		2800	1.72	48	0.840		1320	1.67	51	0.396		1190	1.63	52	0.357		1010	1.29	51	0.303
TEQ					**216**					**184**					**190**					**184**

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Lab ID:	Vial 17 Tray 1 Sample #8 (120881)					Vial 12 Tray 1 Sample #9 (120882)					Vial 13 Tray 1 Sample #10 (120883)					Vial 5 Tray 1 Sample #2 (120884)				
Client sample ID:	Prim 510 Mill St					Dup 510 Mill St					Trip 510 Mill St					Prim 609 Fournie St				
Sample Date	6/12/2012					6/12/2012					6/12/2012					6/13/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		84.8	4.08	76	84.8		80.3	4.01	73	80.3		86.6	3.64	77	86.6		84.3	4.23	66	84.3
12378-PCDD		39.3	2.03	68	39.3		39.0	1.86	62	39.0		37.9	1.75	70	37.9		43.0	2.26	58	43.0
123478-HCDD		34.9	3.47	62	3.49		30.6	3.30	60	3.06		34.3	3.19	62	3.43		40.1	3.92	50	4.01
123678-HCDD		87.3	4.21	64	8.73		87.2	4.13	60	8.72		95.6	4.00	61	9.56		93.1	4.74	51	9.31
123789-HCDD		58.0	4.16	61	5.80		56.8	3.77	60	5.68		60.2	3.60	61	6.02		62.7	5.94	48	6.27
1234678-H7CDD		1460	3.10	60	14.6		1580	2.28	61	15.8		1590	1.94	61	15.9		1450	3.27	51	14.5
OCDD		13500	4.91	56	4.05		15300	3.54	65	4.59		15100	2.51	59	4.53		14100	5.14	48	4.23
2378-TCDF	C	81.7	1.08	68	8.17	C	77.9	1.90	76	7.79	C	82.6	2.48	94	8.26	C	68.8	0.996	62	6.88
12378-PCDF		58.3	3.07	71	1.75		54.1	2.75	58	1.62		49.8	2.44	68	1.49	E	44.6	2.48	57	1.34
23478-PCDF	C	49.4	1.01	64	14.8	C	49.4	2.09	46	14.8	C	45.3	1.92	57	13.6	C	43.4	1.21	58	13.0
123478-HCDF		87.9	2.91	63	8.79		85.7	2.93	60	8.57		83.0	2.29	64	8.30		85.2	3.34	52	8.52
123678-HCDF		40.1	3.10	61	4.01		34.1	3.20	59	3.41		34.6	2.56	62	3.46		39.2	3.51	52	3.92
234678-HCDF	C	31.9	1.25	63	3.19	C	38.4	3.05	55	3.84	C	34.6	3.45	60	3.46	C	31.7	1.68	56	3.17
123789-HCDF	E, C	3.23	1.46	60	0.323	C	ND	2.69	54	0.134	C	ND	3.14	52	0.157	E, C	5.08	1.6	54	0.508
1234678-H7CDF		679	1.60	60	6.79		711	1.03	59	7.11		689	0.903	58	6.89		784	1.62	51	7.84
1234789-H7CDF		41.7	1.38	55	0.417		42.1	1.34	58	0.421		38.2	1.26	57	0.382		39.2	1.36	46	0.392
OCDF		1170	2.34	51	0.351		1270	1.33	61	0.381		1210	1.25	54	0.363		1440	2.15	44	0.432
TEQ					**209**					**205**					**210**					**212**

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Phase I Analytical Results
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Lab ID:	Vial 6 Tray 1 Sample #3 (120885)					Vial 7 Tray 1 Sample #4 (120886)					Vial 8 Tray 1 Sample #5 (120887)					Vial 9 Tray 1 Sample #6 (120888)				
Client sample ID:	Dup 609 Fournie St					Trip 609 Fournie St					Prim 301 Kent Ct-6"					Dup 301 Kent Ct-6"				
Sample Date	6/13/2012					6/13/2012					6/13/2012					6/13/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		88.7	4.00	72	88.7		86.9	3.64	63	86.9		65.1	3.37	67	65.1		62.2	3.03	68	62.2
12378-PCDD	E	33.7	1.84	64	33.7		39.5	1.81	56	39.5		36.7	1.96	63	36.7		37.7	1.95	59	37.7
123478-HCDD		36.8	3.37	58	3.68		36.0	3.56	52	3.60		24.5	4.02	56	2.45		23.9	2.57	50	2.39
123678-HCDD		94.5	3.86	60	9.45		98.2	4.36	51	9.82		81.6	4.53	57	8.16		84.6	3.29	50	8.46
123789-HCDD		54.8	5.37	57	5.48		58.4	4.96	51	5.84		56.2	6.26	53	5.62		47.3	4.65	50	4.73
1234678-H7CDD		1450	3.44	62	14.5		1600	2.89	55	16.0		1340	3.50	55	13.4		1450	3.17	47	14.5
OCDD		13900	6.15	63	4.17		15000	3.39	61	4.50		13400	6.09	53	4.02		15100	4.52	46	4.53
2378-TCDF	C	73.9	0.945	62	7.39	C	72.9	1.01	60	7.29	C	23.4	0.852	64	2.34	C	25.4	0.882	62	2.54
12378-PCDF		54.8	3.14	59	1.64		49.3	2.68	54	1.48		17.9	1.68	61	0.537		17.7	1.87	56	0.531
23478-PCDF	C	45.0	0.990	63	13.5	C	43.3	1.02	61	13.0	C	29.9	0.999	64	8.97	C	34.5	1.10	62	10.4
123478-HCDF		88.4	3.36	61	8.84		91.2	2.81	52	9.12		56.7	3.32	56	5.67		62.0	3.15	51	6.20
123678-HCDF		41.6	3.56	57	4.16		39.9	2.90	52	3.99		39.3	3.63	56	3.93		45.8	3.37	50	4.58
234678-HCDF	C	30.0	1.53	61	3.00	E, C	29.2	1.53	59	2.92	E, C	37.2	1.75	61	3.72	C	50.1	2.01	62	5.01
123789-HCDF	C	4.28	1.68	58	0.428	E, C	3.19	1.55	58	0.319	C	ND	1.83	60	0.0915	E, C	2.28	1.94	61	0.228
1234678-H7CDF		885	2.11	61	8.85		815	1.30	53	8.15		1210	1.79	55	12.1		1160	1.53	51	11.6
1234789-H7CDF		41.3	1.39	58	0.413	E	42.9	1.30	54	0.429	E	34.3	1.64	53	0.343		42.1	1.60	45	0.421
OCDF		1330	2.00	58	0.399		1310	1.39	57	0.393		1730	2.66	48	0.519		1950	2.85	44	0.585
TEQ					**208**					**213**					**174**					**177**

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Phase I Analytical Results
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Lab ID:	Vial 10 Tray 1 Sample #7 (120889)					Vial 11 Tray 1 Sample #8 (120890)					Vial 12 Tray 1 Sample #9 (120891)					Vial 13 Tray 1 Sample #10 (120892)				
Client sample ID:	Trip 301 Kent Ct-6"					Prim 613 Haley St					Dup 613 Haley St					Trip 613 Haley St				
Sample Date	6/13/2012					6/14/2012					6/14/2012					6/14/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		57.5	3.44	63	57.5		78.3	3.42	61	78.3		86.2	3.69	72	86.2		89.8	4.28	72	89.8
12378-PCDD		33.3	1.96	56	33.3		39.3	1.89	59	39.3		41.7	1.91	64	41.7		45.4	2.22	65	45.4
123478-HCDD		25.0	2.82	51	2.50		33.4	2.77	55	3.34		37.4	2.78	57	3.74		38.5	3.40	58	3.85
123678-HCDD		79.9	3.47	52	7.99		82.9	3.39	56	8.29		91.4	3.42	58	9.14		103	4.27	56	10.3
123789-HCDD		46.4	4.19	55	4.64		52.1	3.25	56	5.21	E	51.8	3.42	59	5.18		64.9	4.53	57	6.49
1234678-H7CDD		1300	2.36	55	13.0		1320	2.16	59	13.2		1490	2.03	62	14.9		1590	2.64	57	15.9
OCDD		13200	4.11	61	3.96		11900	2.72	66	3.57		14300	3.01	69	4.29		14800	3.88	54	4.44
2378-TCDF	C	22.0	0.820	58	2.20	C	54.3	1.05	61	5.43	C	57.0	0.946	65	5.70	C	63.9	0.995	67	6.39
12378-PCDF		18.8	1.62	53	0.564		41.0	2.02	58	1.23		41.7	2.06	61	1.25		47.3	2.70	61	1.42
23478-PCDF	C	26.9	1.08	56	8.07	C	39.6	1.09	60	11.9	C	39.8	1.08	68	11.9	C	45.6	1.25	69	13.7
123478-HCDF		51.9	3.00	52	5.19		82.6	2.96	54	8.26		85.0	2.76	57	8.50		95.9	3.83	57	9.59
123678-HCDF		36.2	3.01	51	3.62		40.7	2.97	53	4.07		41.9	2.82	56	4.19		46.4	3.95	57	4.64
234678-HCDF	C	34.1	1.67	55	3.41	C	31.6	1.50	58	3.16	E, C	30.8	1.49	66	3.08	C	37.0	1.78	69	3.70
123789-HCDF	E, C	3.18	1.75	55	0.318	E, C	2.19	1.54	59	0.219	E, C	3.73	1.43	66	0.373	E, C	3.07	1.32	69	0.307
1234678-H7CDF		1180	2.05	54	11.8		842	0.916	56	8.42		914	1.11	58	9.14		991	1.50	56	9.91
1234789-H7CDF		35.3	1.41	56	0.353		39.8	1.37	57	0.398		41.8	1.38	61	0.418		50.5	1.37	52	0.505
OCDF		1730	1.40	58	0.519		1160	1.35	60	0.348		1340	1.71	63	0.402		1420	2.12	50	0.426
TEQ					**159**					**195**					**210**					**227**

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Phase I Analytical Results
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Lab ID:	Vial 5 Tray 1 Sample #2 (120905)					Vial 6 Tray 1 Sample #3 (120906)					Vial 7 Tray 1 Sample #4 (120907)					Vial 8 Tray 1 Sample #5 (120908)				
Client sample ID:	Prim 327 Kent Ct W					Dup 327 Kent Ct W					Trip 327 Kent Ct W					Prim 602 Haley St				
Sample Date	6/14/2012					6/14/2012					6/14/2012					6/14/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		80.0	4.15	65	80.0		74.0	3.74	60	74.0		77.0	3.31	68	77.0		82.0	3.98	66	82.0
12378-PCDD		42.6	2.57	58	42.6		38.8	2.03	58	38.8		49.0	2.56	64	49.0		35.3	2.09	60	35.3
123478-HCDD		29.1	3.89	52	2.91		32.8	4.12	54	3.28		38.1	4.37	55	3.81		35.2	3.15	54	3.52
123678-HCDD		98.7	4.54	54	9.87		98.9	4.85	56	9.89		119	4.84	56	11.9		85.4	3.78	55	8.54
123789-HCDD		65.0	3.95	50	6.50		61.1	3.65	53	6.11		72.7	4.76	57	7.27		52.4	3.34	55	5.24
1234678-H7CDD		1850	2.94	54	18.5		1780	3.30	56	17.8		1910	2.94	57	19.1		1410	2.86	54	14.1
OCDD		20000	5.54	55	6.00		19500	5.12	54	5.85		21700	4.67	56	6.51		13100	4.43	50	3.93
2378-TCDF	C	30.2	1.20	62	3.02	C	27.5	1.25	62	2.75	C	30.0	1.29	64	3.00	C	53.6	1.37	63	5.36
12378-PCDF		27.9	2.15	59	0.837		23.9	2.00	57	0.717		25.9	2.16	62	0.777		40.1	2.53	59	1.20
23478-PCDF	C	27.1	1.06	66	8.13	C	23.5	1.08	66	7.05	C	25.3	1.27	70	7.59	C	33.7	1.22	65	10.1
123478-HCDF		73.4	3.26	54	7.34		69.0	2.83	55	6.90		75.4	3.76	58	7.54		74.5	2.87	55	7.45
123678-HCDF		36.0	3.37	55	3.60		32.8	2.90	55	3.28		39.0	3.95	56	3.90		32.4	2.95	54	3.24
234678-HCDF	E, C	34.5	2.87	63	3.45	C	30.5	2.71	64	3.05	C	35.1	2.71	65	3.51	C	24.2	1.48	61	2.42
123789-HCDF	C	ND	2.36	61	0.118	B, C	6.60	2.82	63	0.660	C	ND	2.76	67	0.138	B, E, C	3.29	1.51	58	0.329
1234678-H7CDF		1810	1.64	56	18.1		1770	2.17	56	17.7		1870	2.00	58	18.7		633	1.60	54	6.33
1234789-H7CDF		49.6	1.49	50	0.496		48.0	1.50	51	0.480		51.9	1.53	54	0.519		37.4	1.32	49	0.374
OCDF		2720	2.29	53	0.816		2740	2.02	51	0.822		2890	2.21	54	0.867		1160	2.00	47	0.348
TEQ					**212**					**199**					**221**					**190**

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Phase I Analytical Results
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Lab ID:	Vial 9 Tray 1 Sample #6 (120909)					Vial 10 Tray 1 Sample #7 (120910)					Vial 11 Tray 1 Sample #8 (120911)					Vial 12 Tray 1 Sample #9 (120912)				
Client sample ID:	Dup 602 Haley St					Trip 602 Haley St					Prim 325 Walter Crt					Dup 325 Walter Crt				
Sample Date	6/14/2012					6/14/2012					6/18/2012					6/18/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		78.7	4.01	64	78.7		79.3	3.94	65	79.3		86.3	3.52	75	86.3		98.3	3.17	74	98.3
12378-PCDD		38.1	2.07	53	38.1		37.8	2.03	55	37.8		43.2	2.04	67	43.2		41.5	1.95	66	41.5
123478-HCDD		36.3	3.81	46	3.63		33.2	3.65	46	3.32		30.9	3.41	59	3.09		27.6	3.12	60	2.76
123678-HCDD		91.3	4.56	47	9.13		85.7	4.49	46	8.57		92.0	4.43	59	9.20		87.5	3.88	62	8.75
123789-HCDD		58.0	4.20	47	5.80		50.6	3.54	47	5.06		60.7	3.30	62	6.07		52.0	2.71	63	5.20
1234678-H7CDD		1480	2.95	49	14.8		1420	2.32	43	14.2		1690	2.06	64	16.9		1570	1.80	66	15.7
OCDD		13900	5.45	47	4.17		13600	4.48	39	4.08		17000	3.56	73	5.10		16300	3.82	67	4.89
2378-TCDF	C	55.0	1.70	54	5.50	C	51.3	1.28	62	5.13	C	103	1.48	74	10.3	C	99.9	1.73	69	9.99
12378-PCDF	E	36.9	2.45	54	1.11		37.5	2.17	56	1.12		68.4	3.06	65	2.05		68.7	2.61	65	2.06
23478-PCDF	C	35.2	1.47	57	10.6	C	34.4	1.45	59	10.3	C	57.7	1.79	71	17.3	C	57.2	1.58	67	17.2
123478-HCDF		74.1	3.23	48	7.41		68.5	2.81	48	6.85		113	2.93	60	11.3		103	2.95	61	10.3
123678-HCDF		33.2	3.34	48	3.32		31.2	2.94	48	3.12		37.3	3.12	60	3.73		34.6	3.18	59	3.46
234678-HCDF	C	29.9	1.99	54	2.99	C	27.4	2.41	56	2.74	E, C	29.9	2.43	66	2.99	E, C	28.5	2.24	66	2.85
123789-HCDF	B, E, C	5.34	1.76	55	0.534	B, E, C	3.70	1.79	55	0.370	C	ND	2.77	63	0.138	C	ND	2.15	67	0.108
1234678-H7CDF		688	1.17	47	6.88		610	1.28	45	6.10		1470	1.54	64	14.7		1540	1.15	63	15.4
1234789-H7CDF		36.4	1.34	46	0.364		34.9	1.31	40	0.349		53.0	1.41	62	0.530		47.7	1.41	63	0.477
OCDF		1250	2.25	44	0.375		1140	1.93	37	0.342		2350	1.70	69	0.705		2430	1.68	65	0.729
TEQ					**193**					**189**					**234**					**240**

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Phase I Analytical Results
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Lab ID:	Vial 13 Tray 1 Sample #10 (120913)					Vial 5 Tray 1 Sample #2 (120914)					Vial 6 Tray 1 Sample #3 (120915)					Vial 7 Tray 1 Sample #4 (120916)				
Client sample ID:	Trip 325 Walter Crt					Prim 1010E Grove St					Dup 1010 E Grove St					Trip 1010E Grove St				
Sample Date	6/18/2012					6/21/2012					6/21/2012					6/21/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		85.1	2.50	66	85.1		79.5	4.04	64	79.5		78.6	3.81	70	78.6		74.8	3.58	68	74.8
12378-PCDD		44.6	1.86	54	44.6		39.0	2.01	63	39.0		39.5	1.75	69	39.5		37.1	2.02	66	37.1
123478-HCDD	E	26.9	2.70	45	2.69		41.8	4.00	53	4.18		40.1	3.84	58	4.01		38.2	4.19	54	3.82
123678-HCDD		90.2	3.79	44	9.02		100	4.66	55	10.0		97.6	4.66	57	9.76		92.9	4.65	57	9.29
123789-HCDD		56.2	3.06	46	5.62		63.8	4.44	52	6.38		59.4	3.60	60	5.94		58.4	4.18	56	5.84
1234678-H7CDD		1660	2.39	41	16.6		1650	3.91	51	16.5		1600	2.55	54	16.0		1520	2.33	52	15.2
OCDD		19200	4.59	34	5.76		16200	6.91	47	4.86		15000	3.10	49	4.50		14600	4.29	47	4.38
2378-TCDF	C	116	1.55	61	11.6	C	104	0.985	63	10.4	C	91.9	1.23	73	9.19	C	90.2	1.24	70	9.02
12378-PCDF		75.1	3.24	55	2.25		71.1	3.14	62	2.13		65.1	3.00	66	1.95		65.2	2.95	66	1.96
23478-PCDF	C	64.3	1.95	60	19.3	C	60.1	1.27	61	18.0	C	53.7	1.19	71	16.1	C	53.7	1.12	67	16.1
123478-HCDF		114	3.00	45	11.4		112	3.46	53	11.2		110	4.29	57	11.0		104	3.86	55	10.4
123678-HCDF		39.9	3.10	44	3.99		46.2	3.68	53	4.62		41.9	4.37	57	4.19		42.8	4.10	54	4.28
234678-HCDF	C	32.5	2.40	55	3.25	C	36.1	2.02	58	3.61	C	32.5	2.13	69	3.25	C	36.1	2.00	64	3.61
123789-HCDF	C	ND	2.89	57	0.144	C	3.88	1.84	58	0.388	E, C	2.44	1.44	67	0.244	C	4.31	1.39	65	0.431
1234678-H7CDF		1550	2.05	40	15.5		915	1.70	51	9.15		880	1.73	55	8.80		846	1.28	53	8.46
1234789-H7CDF		50.3	1.35	37	0.503		44.1	1.29	48	0.441		45.7	1.26	50	0.457		42.2	1.26	50	0.422
OCDF		2540	2.20	32	0.762		1440	2.46	44	0.432		1380	2.14	45	0.414		1330	2.37	42	0.399
TEQ					**238**					**221**					**214**					**206**

Table B-3
Phase I Analytical Results
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Lab ID:	Vial 5 Tray 1 Sample #5 (120917)					Vial 9 Tray 1 Sample #6 (120918)					Vial 10 Tray 1 Sample #7 (120919)					Vial 5 Tray 1 Sample #2 (120922)				
Client sample ID:	Prim 515 E Buttles					Dup 515 E Buttles					Trip 515 E Buttles					Prim 329 Walter Ct				
Sample Date	6/5/2012					6/5/2012					6/5/2012					6/27/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		32.3	1.90	75	32.3		32.6	2.56	69	32.6		31.1	2.90	64	31.1		68.6	2.84	80	68.6
12378-PCDD	E	16.2	1.30	73	16.2		21.8	1.88	60	21.8		20.0	1.85	63	20.0		40.1	1.86	67	40.1
123478-HCDD		12.9	2.52	75	1.29		15.1	2.04	58	1.51		14.0	2.32	58	1.40		29.3	3.22	55	2.93
123678-HCDD		37.1	3.03	71	3.71		39.8	2.56	55	3.98		41.5	2.64	56	4.15		87.3	3.87	57	8.73
123789-HCDD		24.8	1.38	72	2.48		29.2	2.68	56	2.92		27.4	2.20	57	2.74		53.5	3.11	60	5.35
1234678-H7CDD		580	1.78	71	5.80		685	1.70	54	6.85		618	1.62	54	6.18		1520	2.22	57	15.2
OCDD		5070	3.40	74	1.52		6110	3.85	45	1.83		5330	2.95	48	1.60		15500	4.10	55	4.65
2378-TCDF	C	6670	2.72	75	667	C	4670	4.79	64	467	C	4560	3.74	59	456	C	27.2	0.738	73	2.72
12378-PCDF		4840	3.20	76	145		3830	16.9	68	115		3570	14.5	61	107		18.9	1.68	67	0.567
23478-PCDF	C	2890	2.05	83	867	C	2340	2.35	65	702	C	2060	3.21	64	618	C	23.4	0.871	73	7.02
123478-HCDF		3650	4.47	73	365		3130	10.1	60	313		2770	6.98	59	277		58.4	2.57	58	5.84
123678-HCDF		721	4.56	73	72.1		659	12.4	57	65.9		563	7.54	56	56.3		27.2	2.83	57	2.72
234678-HCDF	C	216	1.77	79	21.6	C	209	2.74	62	20.9	C	187	3.03	58	18.7	C	33.5	1.72	69	3.35
123789-HCDF	C	69.8	1.80	73	6.98	C	64.8	2.36	61	6.48	C	56.8	2.10	59	5.68	E, C	2.31	1.58	68	0.231
1234678-H7CDF		682	1.64	68	6.82		684	1.38	52	6.84		594	1.83	53	5.94		1500	2.00	59	15.0
1234789-H7CDF		162	1.07	75	1.62		161	1.36	51	1.61		136	1.33	53	1.36		42.6	1.34	52	0.426
OCDF		571	2.51	69	0.171		647	2.16	43	0.194		581	1.32	45	0.174		2340	2.39	49	0.702
TEQ					**2220**					**1770**					**1610**					**184**

Table B-3
Phase I Analytical Results
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Lab ID:	Vial 6 Tray 1 Sample #3 (120923)					Vial 7 Tray 1 Sample #4 (120924)				
Client sample ID:	Dup 329 Walter Ct					Trip 329 Walter Ct				
Sample Date	6/27/2012					6/27/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD (a)	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		73.0	2.71	78	73.0		73.7	3.38	79	73.7
12378-PCDD		40.2	1.93	65	40.2		42.0	1.91	67	42.0
123478-HCDD		30.7	2.80	53	3.07		29.2	3.30	59	2.92
123678-HCDD		89.5	3.63	55	8.95		91.3	4.09	62	9.13
123789-HCDD		57.3	3.46	55	5.73		57.8	3.15	62	5.78
1234678-H7CDD		1570	3.39	52	15.7		1590	2.51	61	15.9
OCDD		15800	5.27	49	4.74		16400	4.90	62	4.92
2378-TCDF	C	25.9	0.819	76	2.59	C	29.1	0.796	84	2.91
12378-PCDF		20.5	1.51	66	0.615		25.4	1.69	68	0.762
23478-PCDF	C	24.3	0.837	75	7.29	C	26.5	0.778	84	7.95
123478-HCDF		61.4	2.45	55	6.14		64.8	2.62	62	6.48
123678-HCDF		28.5	2.65	55	2.85		29.9	2.70	61	2.99
234678-HCDF	E, C	30.1	1.67	70	3.01	C	37.7	1.47	81	3.77
123789-HCDF	C	4.14	1.61	68	0.414	C	4.49	1.89	82	0.449
1234678-H7CDF		1570	1.80	54	15.7		1580	1.45	62	15.8
1234789-H7CDF		46.0	1.42	48	0.460		46.7	1.35	59	0.467
OCDF		2400	2.86	43	0.720		2510	2.29	55	0.753
TEQ					**191**					**197**

B - Concentration in blank within 10x of analyte concentration.
C - Confirmation data reported from SP2331 Column.
E - Estimated maximum possible concentration. Isotope ion ratio is outside of EPA method range (~15 %). Reported value is the lowest concentration of the two ions.

Table B-4
Phase II Analytical Results
EPA Method 1613b - Property-Specific Confirmation
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Lab ID:	Vial 5 Tray 1 Sample #2 (121330)					Vial 6 Tray 1 Sample #3 (121331)					Vial 7 Tray 1 Sample #4 (121332)					Vial 8 Tray 1 Sample #5 (121333)				
Client sample ID:	Prim 806 Haley St					Dup 806 Haley St					Trip 806 Haley St					Dup 811 Haley St				
Sample Date	23-Aug-12					23-Aug-12					23-Aug-12					23-Aug-12				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)
2378-TCDD		94.3	4.60	80	94.3		84.4	5.12	75	84.4		69.6	5.22	76	69.6		100	5.24	79	100
12378-PCDD		37.4	1.90	71	37.4		42.0	1.96	69	42.0		32.9	1.93	75	32.9		41.6	1.88	72	41.6
123478-HCDD		34.7	3.83	65	3.47		34.7	4.29	63	3.47		27.2	3.32	65	2.72		37.9	3.73	67	3.79
123678-HCDD		80.8	4.75	65	8.08		95.8	5.12	64	9.58		78.6	3.97	66	7.86		86.7	4.38	67	8.67
123789-HCDD		53.5	3.24	62	5.35		57.2	3.43	64	5.72		46.0	3.21	63	4.60		57.5	3.88	65	5.75
1234678-H7CDD		1280	2.15	54	12.8		1250	1.34	65	12.5		1080	2.27	58	10.8		1530	1.67	60	15.3
OCDD		11800	4.21	49	3.54		11400	3.60	59	3.42		9810	5.58	49	2.94		14000	4.63	54	4.20
2378-TCDF	C	64.7	2.56	67	6.47	C	67.1	2.80	68	6.71	C	64.4	2.88	69	6.44	C	45.4	2.50	58	4.54
12378-PCDF		44.5	2.83	74	1.34		47.1	2.61	71	1.41		46.0	2.20	79	1.38		32.1	2.03	73	0.963
23478-PCDF	C	42.4	2.12	78	12.7	C	44.2	2.24	74	13.3	C	39.7	2.20	76	11.9	C	32.6	2.15	67	9.78
123478-HCDF		92.7	3.41	68	9.27		94.9	3.49	68	9.49		84.7	4.09	68	8.47		68.3	3.39	70	6.83
123678-HCDF		40.3	3.19	68	4.03		45.7	3.65	67	4.57		38.2	4.04	68	3.82	E	30.9	3.17	70	3.09
234678-HCDF	C	31.2	2.21	76	3.12	C	32.5	2.79	73	3.25	C	27.0	1.77	74	2.70	C	29.4	2.16	65	2.94
123789-HCDF	E, C	6.10	1.96	75	0.610	E, C	4.15	2.04	73	0.415	C	ND	1.89	78	0.0945	C	ND	2.19	66	0.110
1234678-H7CDF		941	0.897	59	9.41		935	0.950	66	9.35		798	1.61	60	7.98		808	0.995	65	8.08
1234789-H7CDF		43.5	1.34	55	0.435		40.3	1.42	61	0.403		35.2	1.39	57	0.352		37.0	1.36	65	0.370
OCDF		1140	1.60	49	0.342		1170	1.52	58	0.351		992	2.52	51	0.298		1240	2.66	56	0.372
Total WHO-TEC					**213**					**210**					**175**					**216**

Table B-4
Phase II Analytical Results
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Lab ID:	Vial 9 Tray 1 Sample #6 (121334)					Vial 10 Tray 1 Sample #7 (121335)					Vial 11 Tray 1 Sample #8 (121336)					Vial 12 Tray 1 Sample #9 (121337)				
Client sample ID:	Prim 811 Haley St					Trip 811 Haley St					Prim 819 Haley St					Dup 819 Haley St				
Sample Date	23-Aug-12					23-Aug-12					24-Aug-12					24-Aug-12				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)
2378-TCDD		98.8	3.96	84	98.8		84.6	4.15	85	84.6		80.3	4.30	73	80.3		77.2	4.18	81	77.2
12378-PCDD		43.6	1.86	75	43.6		41.7	1.85	76	41.7		37.4	1.87	70	37.4		34.6	1.88	73	34.6
123478-HCDD		40.0	3.70	69	4.00		33.8	3.10	74	3.38		29.9	3.14	67	2.99	E	28.9	2.88	71	2.89
123678-HCDD		89.7	4.58	71	8.97		84.7	3.77	75	8.47		81.7	3.98	65	8.17		74.2	3.63	73	7.42
123789-HCDD		58.0	3.42	71	5.80		54.7	2.86	73	5.47		51.3	2.98	64	5.13		45.1	2.43	72	4.51
1234678-H7CDD		1490	1.77	71	14.9		1460	1.72	67	14.6		1190	1.76	61	11.9		1110	1.57	72	11.1
OCDD		13500	3.33	70	4.05		16600	4.85	57	4.98		10400	3.59	57	3.12		9710	3.03	71	2.91
2378-TCDF	C	47.0	2.55	59	4.70	C	41.8	2.29	70	4.18	C	79.2	3.30	57	7.92	C	78.8	3.81	59	7.88
12378-PCDF		35.2	2.22	73	1.06		32.7	1.73	79	0.981		55.3	2.74	70	1.66		54.0	2.59	78	1.62
23478-PCDF	C	32.8	2.12	71	9.84	C	30.1	2.11	79	9.03	C	49.6	2.14	59	14.9	C	46.0	2.15	67	13.8
123478-HCDF		70.5	3.05	74	7.05		63.1	2.65	77	6.31		97.6	3.57	67	9.76		92.5	3.10	73	9.25
123678-HCDF		36.3	3.29	72	3.63		33.2	2.59	76	3.32		40.6	3.49	68	4.06		39.9	3.18	74	3.99
234678-HCDF	C	28.3	2.02	70	2.83	C	27.2	2.25	76	2.72	E, C	28.6	2.08	59	2.86	C	28.1	2.51	68	2.81
123789-HCDF	C	4.01	1.97	73	0.401	C	ND	2.02	79	0.101	E, C	4.52	2.39	57	0.452	C	ND	2.05	66	0.102
1234678-H7CDF		789	0.900	74	7.89		725	0.894	75	7.25		797	1.27	59	7.97		776	0.910	75	7.76
1234789-H7CDF		36.7	1.34	74	0.367		34.0	1.33	73	0.340		37.4	1.35	63	0.374		36.6	1.36	75	0.366
OCDF		1220	2.06	70	0.366		1150	1.59	56	0.345		987	1.34	56	0.296		1010	1.53	68	0.303
Total WHO-TEC					**218**					**198**					**199**					**189**

Table B-4
Phase II Analytical Results
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Lab ID:	Vial 13 Tray 1 Sample #10 (121338)					Vial 5 Tray 1 Sample #2 (121363)					Vial 6 Tray 1 Sample #3 (121364)					Vial 7 Tray 1 Sample #4 (121365)				
Client sample ID:	Trip 819 Haley St					Prim 812 Mill St					Dup 812 Mill St					Trip 812 Mill St				
Sample Date	24-Aug-12					27-Aug-12					27-Aug-12					27-Aug-12				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)
2378-TCDD		73.4	3.83	73	73.4		89.5	4.51	85	89.5		91.3	3.90	80	91.3		90.8	4.83	78	90.8
12378-PCDD		37.0	1.85	77	37.0		44.3	1.97	80	44.3		44.6	1.96	74	44.6		47.3	1.94	73	47.3
123478-HCDD		32.9	3.05	77	3.29		41.1	3.41	78	4.11		46.5	4.27	66	4.65		45.4	4.56	65	4.54
123678-HCDD		77.9	3.86	75	7.79		117	4.08	80	11.7		124	5.06	67	12.4		131	5.72	63	13.1
123789-HCDD		50.0	2.82	74	5.00		71.1	3.77	77	7.11		73.4	3.25	68	7.34		80.7	4.05	65	8.07
1234678-H7CDD		1100	1.48	76	11.0		2040	1.71	75	20.4		2460	2.11	63	24.6		2460	1.88	62	24.6
OCDD		10000	3.06	70	3.00		19400	2.84	77	5.82		23000	3.89	61	6.90		24200	3.39	62	7.26
2378-TCDF	C	79.1	3.14	69	7.91	C	86.0	2.47	70	8.60	C	82.4	2.04	65	8.24	C	87.0	2.42	61	8.70
12378-PCDF		54.9	2.47	75	1.65		55.4	2.34	80	1.66		50.8	2.49	71	1.52		52.2	2.70	72	1.57
23478-PCDF	C	46.0	2.12	74	13.8	C	48.7	2.26	84	14.6	C	46.1	2.24	79	13.8	C	47.7	2.22	75	14.3
123478-HCDF		88.6	2.82	77	8.86		88.3	3.21	82	8.83		86.2	3.49	70	8.62		90.7	3.59	61	9.07
123678-HCDF		37.8	3.20	76	3.78		39.2	3.13	81	3.92		42.5	3.65	68	4.25		42.0	3.50	62	4.20
234678-HCDF	C	29.4	2.44	73	2.94	C	30.5	2.14	82	3.05	C	31.4	2.49	79	3.14	C	33.6	2.20	77	3.36
123789-HCDF	C	ND	2.67	71	0.134	C	6.31	2.01	82	0.631	E, C	2.85	2.17	78	0.285	C	ND	2.61	80	0.130
1234678-H7CDF		751	0.897	74	7.51		850	1.19	78	8.50		922	0.950	66	9.22		987	0.941	59	9.87
1234789-H7CDF		36.9	1.34	74	0.369		46.0	1.43	75	0.460		47.6	1.42	62	0.476		52.6	1.40	61	0.526
OCDF		925	1.32	72	0.278		1590	1.51	74	0.477		2050	1.80	57	0.615		2020	1.70	62	0.606
Total WHO-TEC					**188**					**234**					**242**					**248**

Table B-4
Phase II Analytical Results
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Lab ID:	Vial 8 Tray 1 Sample #5 (121366)					Vial 9 Tray 1 Sample #6 (121367)					Vial 10 Tray 1 Sample #7 (121368)					Vial 11 Tray 1 Sample #8 (121369)				
Client sample ID:	Prim 711 Fournie St					Dup 711 Fournie St					Trip 711 Fournie St					Prim 813 Fournie St				
Sample Date	27-Aug-12					27-Aug-12					27-Aug-12					28-Aug-12				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)
2378-TCDD		81.7	3.77	90	81.7		90.9	4.40	78	90.9		97.2	4.44	89	97.2		102	3.69	88	102
12378-PCDD		41.0	1.97	82	41.0		45.4	1.99	71	45.4		50.2	2.01	80	50.2		45.8	1.93	85	45.8
123478-HCDD		41.2	3.12	70	4.12		52.8	4.42	63	5.28		55.4	4.23	76	5.54		38.1	3.57	77	3.81
123678-HCDD		107	4.29	71	10.7		125	5.98	61	12.5		138	5.42	76	13.8		95.9	4.89	75	9.59
123789-HCDD		62.6	3.32	68	6.26		78.1	4.31	63	7.81		88.1	4.37	73	8.81		61.7	3.07	77	6.17
1234678-H7CDD		1800	1.38	65	18.0		2360	2.30	57	23.6		2460	2.35	70	24.6		1480	1.80	73	14.8
OCDD		16800	3.06	63	5.04		20000	3.17	52	6.00		20700	3.45	58	6.21		13500	3.41	62	4.05
2378-TCDF	C	63.4	1.85	76	6.34	C	72.5	2.59	58	7.25	C	75.6	2.01	65	7.56	C	64.6	2.04	72	6.46
12378-PCDF		48.1	2.37	83	1.44		49.2	2.62	71	1.48		57.8	2.65	79	1.73		46.0	2.64	82	1.38
23478-PCDF	C	43.5	2.25	88	13.0	C	45.8	2.28	67	13.7	C	50.4	2.30	79	15.1	C	40.3	2.20	85	12.1
123478-HCDF		91.2	3.33	70	9.12		102	4.61	61	10.2		105	3.94	77	10.5		82.7	2.71	82	8.27
123678-HCDF		43.8	3.32	68	4.38		53.1	4.74	61	5.31		56.1	3.93	75	5.61		35.9	2.64	81	3.59
234678-HCDF	C	33.7	2.44	88	3.37	C	41.2	3.07	66	4.12	C	42.1	3.09	80	4.21	C	27.0	1.80	85	2.70
123789-HCDF	E, C	4.02	1.97	89	0.402	C	7.28	2.71	69	0.728	C	5.69	2.73	80	0.569	C	ND	2.15	82	0.108
1234678-H7CDF		1050	0.953	66	10.5		1340	0.965	59	13.4		1360	0.974	70	13.6		769	0.968	71	7.69
1234789-H7CDF		52.2	1.42	63	0.522		71.9	1.44	57	0.719		75.8	1.45	69	0.758		41.4	1.39	71	0.414
OCDF		1850	1.58	61	0.555		2640	1.88	51	0.792		2750	1.77	61	0.825		1160	1.38	63	0.348
Total WHO-TEC					**216**					**249**					**267**					**229**

Table B-4
Phase II Analytical Results
EPA Method 1613b - Property-Specific Confirmation
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Lab ID:	Vial 12 Tray 1 Sample #9 (121370)					Vial 13 Tray 1 Sample #10 (121371)					Vial 5 Tray 1 Sample #2 (121301)					Vial 6 Tray 1 Sample #3 (121302)				
Client sample ID:	Dup 813 Fournie St					Trip 813 Fournie St					Prim 811 Fournie St					Dup 811 Fournie St				
Sample Date	28-Aug-12					28-Aug-12					20-Aug-12					20-Aug-12				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)
2378-TCDD		95.9	4.15	75	95.9		93.7	4.28	69	93.7		105	4.59	78	105		97.5	3.96	76	97.5
12378-PCDD		46.6	1.96	72	46.6		41.8	1.99	66	41.8		40.4	1.84	87	40.4		39.9	1.85	74	39.9
123478-HCDD		39.7	3.69	65	3.97		38.0	4.09	59	3.80		34.6	3.75	83	3.46		34.2	3.22	70	3.42
123678-HCDD		96.4	4.47	66	9.64		89.5	5.32	61	8.95		87.1	4.59	82	8.71		89.6	4.21	68	8.96
123789-HCDD		58.8	3.06	64	5.88		59.1	3.28	60	5.91		54.4	2.97	80	5.44		55.8	2.92	67	5.58
1234678-H7CDD		1600	1.59	59	16.0		1450	1.68	56	14.5		1390	1.27	77	13.9		1330	1.84	63	13.3
OCDD		13200	3.30	48	3.96		13800	3.39	46	4.14		12300	3.55	65	3.69		12200	3.30	57	3.66
2378-TCDF	C	63.8	2.33	65	6.38	C	66.5	2.54	61	6.65	C	138	2.94	71	13.8	C	152	2.91	71	15.2
12378-PCDF		44.3	2.38	71	1.33		47.2	2.67	65	1.42		80.6	3.36	83	2.42		79.3	2.77	74	2.38
23478-PCDF	C	38.9	2.24	72	11.7	C	41.4	2.27	69	12.4	C	68.3	2.22	88	20.5	C	70.7	2.35	81	21.2
123478-HCDF		77.2	3.37	67	7.72		79.1	3.20	61	7.91		107	2.67	84	10.7		106	2.63	74	10.6
123678-HCDF		35.7	3.44	65	3.57		35.0	3.32	59	3.50		38.3	3.01	84	3.83		39.7	2.70	74	3.97
234678-HCDF	C	27.3	1.89	71	2.73	C	26.9	2.17	68	2.69	C	27.5	1.90	88	2.75	C	28.9	1.95	79	2.89
123789-HCDF	E, C	4.49	1.96	70	0.449	E, C	4.81	1.97	68	0.481	E, C	3.86	1.69	88	0.386	E, C	3.57	1.53	83	0.357
1234678-H7CDF		745	0.950	63	7.45		724	1.34	56	7.24		679	0.892	83	6.79		740	0.894	65	7.40
1234789-H7CDF		40.9	1.42	57	0.409		39.3	1.44	58	0.393		38.8	1.33	76	0.388		38.7	1.33	58	0.387
OCDF		1200	1.69	47	0.360		1190	2.25	45	0.357		1060	1.46	65	0.318		1160	1.35	55	0.348
Total WHO-TEC					**224**					**216**					**242**					**237**

Table B-4
Phase II Analytical Results
EPA Method 1613b - Property-Specific Confirmation
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Lab ID:	Vial 7 Tray 1 Sample #4 (121303)					Vial 8 Tray 1 Sample #5 (121304)					Vial 9 Tray 1 Sample #6 (121305)					Vial 10 Tray 1 Sample #7 (121306)				
Client sample ID:	Trip 811 Fournie St					Prim 1002 Haley St					Dup 1002 Haley St					Trip 1002 Haley St				
Sample Date	20-Aug-12					20-Aug-12					20-Aug-12					20-Aug-12				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)
2378-TCDD		114	4.05	83	114		87.2	3.38	83	87.2		88.6	3.78	82	88.6		90.0	3.47	84	90.0
12378-PCDD		46.7	1.86	81	46.7		39.7	1.93	79	39.7		37.9	1.96	77	37.9		40.9	1.94	78	40.9
123478-HCDD		38.3	2.45	75	3.83		33.9	3.50	72	3.39		34.4	3.32	70	3.44		33.6	2.70	74	3.36
123678-HCDD		101	3.37	73	10.1		97.6	4.71	69	9.76		86.7	4.18	71	8.67		92.6	3.53	73	9.26
123789-HCDD		62.2	2.80	73	6.22		55.6	3.05	70	5.56		51.7	2.93	69	5.17		56.5	2.78	70	5.65
1234678-H7CDD		1480	1.61	71	14.8		1470	1.67	67	14.7		1430	1.80	63	14.3		1470	1.68	64	14.7
OCDD		13400	3.04	61	4.02		12800	3.51	64	3.84		12800	4.54	51	3.84		12600	2.79	54	3.78
2378-TCDF	C	187	2.10	73	18.7	C	88.7	2.38	72	8.87	C	76.6	2.89	69	7.66	C	83.6	2.70	68	8.36
12378-PCDF		102	3.51	83	3.06		57.1	2.10	80	1.71		51.0	2.46	75	1.53		53.2	2.84	76	1.60
23478-PCDF	C	86.1	2.12	86	25.8	C	49.0	2.21	81	14.7	C	44.9	2.24	83	13.5	C	45.5	2.22	79	13.6
123478-HCDF		130	3.01	78	13.0		88.5	2.80	76	8.85		82.8	2.96	74	8.28		81.3	3.01	71	8.13
123678-HCDF		45.5	3.17	78	4.55		41.5	3.03	74	4.15		36.7	2.95	74	3.67		38.8	2.99	73	3.88
234678-HCDF	C	32.3	1.83	82	3.23	C	30.7	1.96	78	3.07	C	31.0	2.08	83	3.10	C	31.1	2.11	76	3.11
123789-HCDF	E, C	4.39	1.40	81	0.439	C	5.05	1.94	77	0.505	E, C	3.34	1.58	81	0.334	C	4.18	2.06	78	0.418
1234678-H7CDF		844	0.900	73	8.44		779	0.936	74	7.79		799	0.950	69	7.99		793	0.941	69	7.93
1234789-H7CDF		42.4	1.34	69	0.424		34.6	1.40	65	0.346		37.3	1.42	63	0.373		40.8	1.40	60	0.408
OCDF		1270	1.60	60	0.381		1250	1.48	66	0.375		1310	1.50	50	0.393		1330	1.83	50	0.399
Total WHO-TEC					**278**					**215**					**209**					**215**

Table B-4
Phase II Analytical Results
EPA Method 1613b - Property-Specific Confirmation
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Lab ID:	Vial 11 Tray 1 Sample #8 (121307)					Vial 12 Tray 1 Sample #9 (121308)					Vial 13 Tray 1 Sample #10 (121309)				
Client sample ID:	Prim 1007 Haley St					Dup 1007 Haley St					Trip 1007 Haley St				
Sample Date	21-Aug-12					21-Aug-12					21-Aug-12				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEC (0.5)
2378-TCDD		86.8	4.17	74	86.8		76.1	3.52	71	76.1		73.3	3.14	82	73.3
12378-PCDD		39.3	1.90	81	39.3		36.4	1.88	79	36.4		33.7	1.90	72	33.7
123478-HCDD		30.3	3.04	75	3.03		29.2	3.02	74	2.92		27.1	2.65	76	2.71
123678-HCDD		78.8	3.99	78	7.88		76.4	3.79	73	7.64		75.1	3.61	67	7.51
123789-HCDD		48.2	2.57	77	4.82		49.5	2.94	72	4.95		41.8	2.10	73	4.18
1234678-H7CDD		1130	1.53	76	11.3		1250	1.57	66	12.5		1070	1.79	70	10.7
OCDD		10500	3.78	67	3.15		11400	2.95	58	3.42		10100	2.73	62	3.03
2378-TCDF	C	43.0	2.05	72	4.30	C	47.5	2.27	67	4.75	C	46.0	2.09	69	4.60
12378-PCDF		31.7	2.68	77	0.951		36.4	2.31	75	1.09		34.8	2.28	75	1.04
23478-PCDF	C	36.0	2.17	79	10.8	C	36.9	2.14	78	11.1	C	35.0	2.17	83	10.5
123478-HCDF		70.9	2.84	82	7.09		68.7	2.68	75	6.87		69.0	2.36	77	6.90
123678-HCDF		36.9	2.88	79	3.69		38.9	2.69	75	3.89		35.0	2.41	76	3.50
234678-HCDF	C	31.6	1.81	74	3.16	C	30.1	2.06	76	3.01	C	29.6	1.94	80	2.96
123789-HCDF	E, C	4.40	2.03	74	0.440	C	ND	2.73	74	0.136	C	ND	1.80	78	0.0900
1234678-H7CDF		745	0.919	76	7.45		694	0.932	73	6.94		659	0.919	75	6.59
1234789-H7CDF		35.0	1.37	73	0.350		34.4	1.35	66	0.344		30.7	1.37	62	0.307
OCDF		1130	1.36	65	0.339		1230	1.34	57	0.369		927	1.36	61	0.278
Total WHO-TEC					**195**					**182**					**172**

C - Confirmation data reported from SP2331 Column.
E - Estimated maximum possible concentration. Isotope ion ratio is outside of EPA method range (~15 %). Reported value is the lowest concentration of the two ions.

Table B-5
Site B-001 Analytical Results
Method 8280 - Site-Specific Fast Analysis
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Lab ID	120937		120938		120939		120940	
Sample Description	Primary Sample 514 Sixth St (Att H DU1)	Flag	Primary Sample 514 Sixth St (Att H DU2)	Flag	Primary Sample 613 Jefferson (Att H DU3)	Flag	Primary Sample 914 Austin St (Att H DU4)	Flag
Sample Date	7/5/2012 10:00		7/5/2012 10:32		7/5/2012 9:20		7/5/2012 8:47	
Wet Weight (g)	30.1		30.1		30.2		30.5	
moisture [%]	6.30%		7.90%		7.70%		7.00%	
2378-TCDF [ng/kg d.w.]	125	J	127	J	99.1		147	
2378-TCDD [ng/kg d.w.]	91.4	J	246		182		115	
23478-PeCDF [ng/kg d.w.]	863		511		207		147	
12378-PeCDD [ng/kg d.w.]	72.6	J	159	J	108		63.7	J
1234(6)78-HxCDF [ng/kg d.w.]	335	J	413		248		195	J
1234(6)78-HxCDD [ng/kg d.w.]	189	J	438	J	308		232	
123789-HxCDD [ng/kg d.w.]	93.4	J	216	J	154		129	
1234678-HpCDF [ng/kg d.w.]	999		2370		1590		936	
1234678-HpCDD [ng/kg d.w.]	1820		5810		4610		4520	
OCDF [ng/kg d.w.]	2220		4930		4010		2690	
OCDD [ng/kg d.w.]	17000		56400		48800		49900	
TEQ (ND=0.5 LoD)	**558**		**817**		**537**		**382**	

TEQ: Toxicity Equivalence Quotient; calculated using .05 the detection limit for non-detects.
J - Reported value is below the lower calibration limit.

Table B-6
Site B-001 Analytical Results
EPA Method 1613b - Property-Specific Confirmation
Midland Area Soils Year 1 Implementation Annual Report
The Dow Chemical Company, Michigan Operations

Lab ID:	Vial 5 Tray 1 Sample #2 (120997)					Vial 6 Tray 1 Sample #3 (120998)					Vial 7 Tray 1 Sample #4 (120999)				
Client sample ID:	Prim 514 Sixth St					Dup 514 Sixth St					Trip 514 Sixth St				
Sample Date	7/5/2012					7/5/2012					7/5/2012				
	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum	Qualifier	Parts per Trillion		ISTD	Maximum
Analyte	Code	Concentration	LoD	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEQ (0.5)	Code	Concentration	LoD	Recovery (%)	WHO-TEQ (0.5)
2378-TCDD		265	8.18	56	265		343	11.4	56	343		394	11.7	60	394
12378-PCDD		108	4.06	54	108		147	3.84	51	147		115	3.54	56	115
123478-HCDD		88.5	8.90	50	8.85		151	13.0	47	15.1		110	11.4	50	11.0
123678-HCDD		265	10.7	51	26.5		425	14.5	47	42.5		314	13.1	52	31.4
123789-HCDD		165	7.68	51	16.5		264	9.99	47	26.4		203	9.31	51	20.3
1234678-H7CDD		5250	6.59	49	52.5		6910	5.62	45	69.1		6210	5.65	49	62.1
OCDD		53000	8.45	47	15.9		65900	9.79	44	19.8		63600	7.40	49	19.1
2378-TCDF	C	93.4	3.36	50	9.34	C	104	2.82	47	10.4	C	106	2.46	56	10.6
12378-PCDF		63.5	5.84	54	1.90		74.1	5.59	53	2.22		78.3	6.46	51	2.35
23478-PCDF	C	114	3.27	52	34.2	C	118	2.96	51	35.4	C	119	3.15	59	35.7
123478-HCDF		203	8.02	48	20.3		234	11.0	48	23.4		237	9.63	49	23.7
123678-HCDF		136	7.49	50	13.6		159	10.8	46	15.9		156	9.32	50	15.6
234678-HCDF	C	133	5.61	49	13.3	C	155	6.16	49	15.5	C	146	5.53	54	14.6
123789-HCDF	B, C	8.29	3.02	48	0.829	B, E, C	9.82	2.99	46	0.982	B, C	9.95	3.69	52	0.995
1234678-H7CDF		2110	2.50	48	21.1		2320	2.17	45	23.2		2280	2.90	49	22.8
1234789-H7CDF		116	2.63	47	1.16		152	2.59	45	1.52		131	2.56	48	1.31
OCDF		4380	4.11	42	1.31		5210	4.44	41	1.56		5130	4.43	43	1.54
Total WHO-TEC		**610**		1	**610**		**793**		1	**793**		**782**		1	**782**

B - Concentration in blank within 10x of analyte concentration.
C - Confirmation data reported from SP2331 Column.
E - Estimated maximum possible concentration. Isotope ion ratio is outside of EPA method range (~15 %). Reported value is the lowest concentration of the two ions.

Attachment C

Data Validation Report

Attachment C
Laboratory Data Validation Summary

Introduction

Thorough review of analytical data is performed to provide a mechanism for ongoing control and evaluation of data quality and provide measures of data quality in terms of accuracy, precision, representativeness, and comparability. The objectives for the analytical data are:

- To collect samples required for statistical assessment;
- To collect and analyze samples under controlled situations using standard methods; and
- To obtain usable and defensible analytical results.

With these objectives in mind, the analytical data generated during 2012 have been reviewed and validated by both lab and project personnel. The following sections summarize the data quality elements, and note any quality exceptions.

Sample Hold Times

Sample hold time for methods 1613b and MAS 8280 are listed as 1 year. All samples were tested within holding time.

Target Analyte List

Target analyte lists are provided for both methods in Table 4-2 of the QAPP, Attachment C, of the approved Work Plan (URS, May 2012). All analytes were tested for in the respective methods.

Reporting Limits

The target reporting limits for both analytical methods are listed in Table 4-2 of the QAPP, Attachment C, of the approved Work Plan. One hundred twenty-seven (127) results were reported as below detected limit; however, the detection limits are greater than those listed in Table 4-2. One hundred twenty-three (123) of these were associated with Method Blanks.

The remaining four (4) results were associated with property samples using Method 8280. Two (2) results were related to 1,2,3,7,8-PCDD, one (1) was related to 2,3,4,7,8-PCDF, and one (1) was related to 2,3,7,8-TCDF. In each case, the elevated detection limit is accounted for in the calculation of the ETEQ value using one half of the reporting level. All of the property samples with reporting limits greater than

those listed in Table 4-2 had resulting estimated TEQ values less than 60 ppt. These elevated reporting levels did not impact remedial decisions.

Laboratory (Method) Blanks

Method blanks are discussed in Section 4.4.4 of the QAPP, Attachment C, of the approved Work Plan. Method blanks should be included in each analytical batch and result in concentrations less than the levels specified in Table 4-2 of the QAPP. There were eleven (11) exceptions where this did not occur, as listed below.

Method 8280 MAS

Three results for 1,2,3,7,8-PCDD had reported concentrations greater than the Target Method Reporting Limits provided in Table 4-2.

Method 1613b

The following analytes for the method blank analyses had reported concentrations greater than the Target Method Reporting Limits:

- Seven (7) results for OCDD; and
- One (1) result for 2,3,7,8-TCDF.

Applying the appropriate toxic equivalency factor (TEFs) to the detected levels, each of these blanks has potential to result in less than 1 ppt TEQ. Based on these findings, there was very limited potential to have laboratory contamination, and remedial decisions were not affected.

Field Replicates

Field replicate specifications are provided in Section 4.4.2 of the QAPP, Attachment C, of the approved Work Plan. For 2012, the frequency of replicate analysis was 10%, with replicates equally representative of samples in both the North and East Areas. In the North Area, 95 decision units were sampled overall, and replicates from nineteen (19) samples were tested. In the East Area, 51 decision units were sampled and replicates from seven (7) samples were tested.

The acceptance criterion for the replicate results was a relative percent difference (RPD) of 30%. The RPD of all replicates averaged 4.59 %, ranging from 1.09 % to 10.6 %, well below the 30% threshold.

Based on these findings, field replicates were within the specified range for analysis frequency and repeatability.

Ongoing Precision Recovery Samples

Each analytical batch should contain an ongoing precision recovery (OPR) sample, and the acceptance criteria are listed in Table 4 of Method 8280 MAS and Table 6 of Method 1613b. Recovered amounts are compared to the range specified in the appropriate method. Each analytical batch contained an OPR sample, and samples were within the specified range for both methods.

Conclusion

Data generated as part of the 2012 implementation of the approved Work Plan are valid, and exceptions identified above do not significantly impact the quality or reliability of the data. All objectives for the data have been satisfied.

Attachment F

Property-Specific Construction Quality Assurance Worksheets

Dow Midland Soils Remedy Worksheet

Site Address: 1001 Fournie Street
Parcel: 14-16-40-660
Date: 20-Aug-12

Initial Soil Sample		**Soil Remedy Result:**
434	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
434	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
4758	Area of yard (ft^2) (area as sampled)	
0	Area not remedied (ft^2)	
15	Surface Weighted Average (SWA) (ppt)	
0%	% Undisturbed Remaining Soil (URS)	
7.97E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 1001 Haley Street
Parcel: 14-16-40-622
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
292	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
292	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
5075	Area of yard (ft^2) (area as sampled)	
165	Area not remedied (ft^2)	
24	Surface Weighted Average (SWA) (ppt)	
3%	% Undisturbed Remaining Soil (URS)	
5.65E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 1002 Mill Street
Parcel: 14-16-40-638
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
307	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
307	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
5234	Area of yard (ft^2) (area as sampled)	
0	Area not remedied (ft^2)	
15	Surface Weighted Average (SWA) (ppt)	
0%	% Undisturbed Remaining Soil (URS)	
5.73E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 1007 Fournie Street
Parcel: 14-16-40-662
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
285	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
285	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
6470	Area of yard (ft^2) (area as sampled)	
166	Area not remedied (ft^2)	
22	Surface Weighted Average (SWA) (ppt)	
3%	% Undisturbed Remaining Soil (URS)	
5.48E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 1013 Pine Street
Parcel: 14-21-10-396
Date: 130/2012

Initial Soil Sample		**Soil Remedy Result:**
281	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

281	Initial soil result or 95% UCL if replicates were required (ppt)
9651	Area of yard (ft^2) (area as sampled)
0	Area not remedied (ft^2)
15	Surface Weighted Average (SWA) (ppt)
0%	% Undisturbed Remaining Soil (URS)

No Structures on Property. Indoor Dust Evaluation Not Applicable

Dow Midland Soils Woodlands Remedy Worksheet

Site Address: 315 Kent Ct.
Parcel: 14-23-60-164
Date: 13-Jul-12

Soil Samples		**Soil Remedy Result:**
292	Soil Lawn Result (ppt)	**REMEDY**
324	Woodlands Result (ppt)	

If < or = 220, No Remedy
If > 280, Remedy
If >220 but < or = 280, Test Replicates

Replicate Soil Samples*		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	

If > 250, Remedy
If < or = 250, No Remedy

Woodlands Indoor Dust Evaluation:		**Indoor Dust Remedy Result:**
35	Surface Weighted Average (SWA) (ppt)**	**NO REMEDY**
47169	Area of parcel (ft^2)	
372	Area of yard not remedied (ft^2)	
7768	Wooded Area (ft^2)	
4568	Wooded Area not remediated (ft^2)	
10%	% Undisturbed Remaining Soil (URS)	
6.1E-06	*Risk is acceptable if < or = 10^{-5}*	

Notes:
INPUT IN YELLOW CELLS ONLY
16030 SF of total wooded area
9011 SF of wooded area remediated
7019 SF of woodded area remains

Dow Midland Soils Woodlands Remedy Worksheet

Site Address: 319/321 Kent Ct.
Parcel: 14-23-60-168
Date: 13-Jul-12

Soil Samples		**Soil Remedy Result:**
47	Soil Lawn Result (ppt)	**NO REMEDY**
419	Woodlands Result (ppt)	

If < or = 220, No Remedy
If > 280, Remedy
If >220 but < or = 280, Test Replicates

Replicate Soil Samples*		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	

If > 250, Remedy
If < or = 250, No Remedy

Woodlands Indoor Dust Evaluation:		**Indoor Dust Remedy Result:**
98	Surface Weighted Average (SWA) (ppt)**	**NO REMEDY**
18516	Area of parcel (ft^2)	
6168	Area of yard not remedied (ft^2)	
12348	Wooded Area (ft^2)	
3337	Wooded Area not remediated (ft^2)	
51%	% Undisturbed Remaining Soil (URS)	
3.3E-06	*Risk is acceptable if < or = 10^{-5}*	

Notes:
INPUT IN YELLOW CELLS ONLY
16030 SF of total wooded area
9011 SF of wooded area remediated
7019 SF of woodded area remains

Dow Midland Soils Woodlands Remedy Worksheet

Site Address: 323 Kent Ct.
Parcel: 14-23-60-170
Date: 30-Oct-12

Soil Samples		**Soil Remedy Result:**
162	Soil Lawn Result (ppt)	**NO REMEDY**
347	Woodlands Result (ppt)	

If < or = 220, No Remedy
If > 280, Remedy
If >220 but < or = 280, Test Replicates

Replicate Soil Samples*		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	

If > 250, Remedy
If < or = 250, No Remedy

Woodlands Indoor Dust Evaluation:		**Indoor Dust Remedy Result:**
163	Surface Weighted Average (SWA) (ppt)**	**NO REMEDY**
20572	Area of parcel (ft^2)	
7940	Area of yard not remedied (ft^2)	
12632	Wooded Area (ft^2)	
5679	Wooded Area not remediated (ft^2)	
66%	% Undisturbed Remaining Soil (URS)	
6.3E-06	*Risk is acceptable if < or = 10^{-5}*	

Notes:
INPUT IN YELLOW CELLS ONLY
16030 SF of total wooded area
9011 SF of wooded area remediated
7019 SF of woodded area remains

Dow Midland Soils Remedy Worksheet

Site Address: 515 E Buttles St
Parcel: 14-16-50-096
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
2660	Soil Result (ppt)	**REMEDY**

If < or = 220, No Remedy
If > 280, Remedy
If >220 but < or = 280, Test Replicates

Replicate Soil Samples		**Soil Replicate Remedy Result:**
2220	Initial soil result (ppt)	
1770	Replicate result (ppt)	**REMEDY**
1610	Replicate result (ppt)	
1867	Average (ppt)	
316.3	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
2400	95% UCL (Student's t Upper Confidence Limit)	

If > 250, Remedy
If < or = 250, No Remedy

2400	Initial soil result or 95% UCL if replicates were required (ppt)
9872	Area of yard (ft^2) (area as sampled)
0	Area not remedied (ft^2)
15	Surface Weighted Average (SWA) (ppt)
0%	% Undisturbed Remaining Soil (URS)

No Structures on Property. Indoor Dust Evaluation Not Applicable

Dow Midland Soils Remedy Worksheet

Site Address: 516 Mill Street
Parcel: 14-21-10-524
Date: 20-Aug-12

Initial Soil Sample		**Soil Remedy Result:**
279	Soil Result (ppt)	**TEST REPLICATES**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
232	Initial soil result (ppt)	**REMEDY**
225	Replicate result (ppt)	
250	Replicate result (ppt)	
236	Average (ppt)	
12.9	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
257	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
257	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
9734	Area of yard (ft^2) (area as sampled)	
164	Area not remedied (ft^2)	
19	Surface Weighted Average (SWA) (ppt)	
2%	% Undisturbed Remaining Soil (URS)	
4.93E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 606 Haley Street
Parcel: 14-21-10-402
Date: 24-Jul-12

Initial Soil Sample		**Soil Remedy Result:**
287	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
287	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
5736	Area of yard (ft^2) (area as sampled)	
0	Area not remedied (ft^2)	
15	Surface Weighted Average (SWA) (ppt)	
0%	% Undisturbed Remaining Soil (URS)	
5.37E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 612 Haley Street
Parcel: 14-21-10-400
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
311	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
311	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
7131	Area of yard (ft^2) (area as sampled)	
0	Area not remedied (ft^2)	
15	Surface Weighted Average (SWA) (ppt)	
0%	% Undisturbed Remaining Soil (URS)	
5.80E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address:	706 Haley Street
Parcel:	14-21-10-390
Date:	30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
287	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
287	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
5529	Area of yard (ft^2) (area as sampled)	
0	Area not remedied (ft^2)	
15	Surface Weighted Average (SWA) (ppt)	
0%	% Undisturbed Remaining Soil (URS)	
5.37E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 711 Fournie Street
Parcel: 14-21-10-316
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
259	Soil Result (ppt)	**TEST REPLICATES**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
216	Initial soil result (ppt)	**REMEDY**
249	Replicate result (ppt)	
267	Replicate result (ppt)	
244	Average (ppt)	
25.9	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
288	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
288	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
6596	Area of yard (ft^2) (area as sampled)	
0	Area not remedied (ft^2)	
15	Surface Weighted Average (SWA) (ppt)	
0%	% Undisturbed Remaining Soil (URS)	
5.39E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 716 Haley Street
Parcel: 14-21-10-386
Date: 20-Aug-12

Initial Soil Sample		**Soil Remedy Result:**
492	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
492	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
6350	Area of yard (ft^2) (area as sampled)	
576	Area not remedied (ft^2)	
58	Surface Weighted Average (SWA) (ppt)	
9%	% Undisturbed Remaining Soil (URS)	
9.89E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 805 Haley Street
Parcel: 14-16-40-614
Date: 20-Aug-12

Initial Soil Sample		**Soil Remedy Result:**
365	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
365	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
6014	Area of yard (ft^2) (area as sampled)	
648	Area not remedied (ft^2)	
53	Surface Weighted Average (SWA) (ppt)	
11%	% Undisturbed Remaining Soil (URS)	
7.54E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 811 Fournie
Parcel: 14-16-40-654
Date: 4-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
277	Soil Result (ppt)	**TEST REPLICATES**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
242	Initial soil result (ppt)	**REMEDY**
237	Replicate result (ppt)	
278	Replicate result (ppt)	
252	Average (ppt)	
22.4	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
290	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
290	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
7473	Area of yard (ft^2) (area as sampled)	
1360	Area not remedied (ft^2)	
65	Surface Weighted Average (SWA) (ppt)	
18%	% Undisturbed Remaining Soil (URS)	
6.47E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 819 Fournie
Parcel: 14-16-40-658
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
369	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
369	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
6647	Area of yard (ft^2) (area as sampled)	
288	Area not remedied (ft^2)	
30	Surface Weighted Average (SWA) (ppt)	
4%	% Undisturbed Remaining Soil (URS)	
7.14E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 820 Mill Street
Parcel: 14-16-40-640
Date: 20-Aug-12

Initial Soil Sample		**Soil Remedy Result:**
297	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
297	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
5601	Area of yard (ft^2) (area as sampled)	
0	Area not remedied (ft^2)	
15	Surface Weighted Average (SWA) (ppt)	
0%	% Undisturbed Remaining Soil (URS)	
5.55E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 909 E Indian Street
Parcel: 14-21-10-534
Date: 20-Aug-12

Initial Soil Sample		**Soil Remedy Result:**
291	Soil Result (ppt)	**REMEDY**

If < or = 220, No Remedy
If > 280, Remedy
If >220 but < or = 280, Test Replicates

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	
0	Replicate result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	

If > 250, Remedy
If < or = 250, No Remedy

291	Initial soil result or 95% UCL if replicates were required (ppt)
9651	Area of yard (ft^2) (area as sampled)
0	Area not remedied (ft^2)
15	Surface Weighted Average (SWA) (ppt)
0%	% Undisturbed Remaining Soil (URS)

No Structures on Property. Indoor Dust Evaluation Not Applicable

Dow Midland Soils Remedy Worksheet

Site Address: 913 Grove
Parcel: 14-21-10-552
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
303	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
303	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
5150	Area of yard (ft^2) (area as sampled)	
346	Area not remedied (ft^2)	
34	Surface Weighted Average (SWA) (ppt)	
7%	% Undisturbed Remaining Soil (URS)	
6.06E-06	*Risk is acceptable if < or = 10^{-5}*	

Dow Midland Soils Remedy Worksheet

Site Address: 916 Grove Street
Parcel: 14-21-10-520
Date: 30-Oct-12

Initial Soil Sample		**Soil Remedy Result:**
303	Soil Result (ppt)	**REMEDY**
If < or = 220, No Remedy		
If > 280, Remedy		
If >220 but < or = 280, Test Replicates		

Replicate Soil Samples		**Soil Replicate Remedy Result:**
0	Initial soil result (ppt)	**NO REMEDY**
0	Replicate result (ppt)	
0	Replicate result (ppt)	
0	Average (ppt)	
0.0	Standard Deviation (ppt)	
2.92	t (0.95, 2)	
0	95% UCL (Student's t Upper Confidence Limit)	
If > 250, Remedy		
If < or = 250, No Remedy		

If Soil Remedy Required, Evaluate Indoor Dust:		**Indoor Dust Remedy Result:**
303	Initial soil result or 95% UCL if replicates were required (ppt)	**NO REMEDY**
6896	Area of yard (ft^2) (area as sampled)	
202	Area not remedied (ft^2)	
23	Surface Weighted Average (SWA) (ppt)	
3%	% Undisturbed Remaining Soil (URS)	
5.83E-06	*Risk is acceptable if < or = 10^{-5}*	