

## Memorandum

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| To      | Ronda Blayer, MDEQ<br>Dale Bridgford, MDEQ   | Page 1                                    |
| CC      | Thomas E. Stilley, DuPont<br>Sathya Yalvigi, Chemours<br>Craig A. Bartlett, Chemours     |   |
| Subject | <b>Proposed Revision to Monitoring Program<br/>Chemours Montague, Montague, Michigan</b> |   |
| From    | George E. Gregory III, AECOM   | DuPont #:507046<br>AECOM: 18986753.201510 |
| Date    | April 24, 2015   |   |

This memorandum presents a proposal for modification to the current sampling and analysis performed at the E.I. du Pont de Nemours and Company (DuPont) facility in Montague, Michigan. This facility has been transferred to The Chemours Company FC, LLC (Chemours).

The current monitoring program is a combination of two programs: a semiannual program that monitors concentration trends across the site and a quarterly mixing-zone compliance program that assesses the constituents that are not within the capture zone of the groundwater recovery system. Since the mixing-zone compliance wells were installed in November 2009, the mixing zone has remained in compliance with both acute and chronic Groundwater Surface Water Interface criteria provided by the Michigan Department of Environmental Quality (MDEQ). During the same time period, the constituent concentrations in groundwater monitoring wells near the interceptor wells have also been stable (most of the adjustments in concentrations had occurred after the pumping rates were adjusted in 2008). A review of specific trends is included with each semiannual report.

Because conditions are stable, DuPont implemented an evaluation of the monitoring program using the Simplified Long-Term Monitoring Optimization (SLTMO) Tool from Locus Technologies. This assessment was used to provide recommendations for modifying the monitoring program that results in no loss of information to evaluate the site and confirms that remedial objectives for groundwater are being met and the site remains protective. Attachment A provides the documentation for the SLTMO tool and describes in detail how it functions.

During the evaluation, the list of monitoring wells for the potentiometric measurements was also reviewed. A revised list of monitoring wells for potentiometric monitoring is proposed.

### **Current Monitoring Program**

As noted above, the current groundwater monitoring program includes a semiannual site-wide program and a quarterly mixing-zone compliance program. Results from both programs are reported in a semiannual report to the MDEQ. Table 1 summarizes the current sampling programs that are

performed to monitor constituent concentrations of site-related volatile organic compounds (VOCs) in groundwater.

Two other programs (residential well sampling at William Road and at Lake Shore Drive) are not on this list because no changes are recommended for them.

### **Evaluation of Program by SLTMO Tool**

As described in the SLTMO documentation, the first step in reviewing the monitoring program was to confirm that the site data met the requirements of the tool (described in Section 2.2 of the document, Attachment A). The data set evaluated extended from May 2008 until June 2014. Earlier data were not included because of the changes made to the pumping system in 2008.

After it was confirmed that the site data met the requirements of the SLTMO tool, the data set was statistically screened, removing extreme outliers (those more than 3 standard deviations outside the other results), determining if there was a trend, and providing an initial recommended sampling frequency based on all constituents. Results from this screening analysis are provided in Table 2. Each row of this table summarizes the review of each site-related VOC constituent for each monitored location.

Table 3 provides a general summary of statistics for each of the 14 site-related VOC constituents that are analyzed for in the monitoring program. The purpose of the summary is to identify the key VOC constituents at the site. This is done so that constituents that are highly variable but typically below a screening limit are not considered in the final SLTMO run. As shown on Table 3, seven constituents have had results exceeding the "Upper Limit." Three constituents (carbon tetrachloride, tetrachloroethene, and trichloroethene) have clearly been detected with the most frequency (as shown by the "Number of Detects Above Action Limit" column). Chloroform and cis-1,2 dichloroethene are degradation products that occur in the same wells as carbon tetrachloride and trichloroethene. Any monitoring program that is designed to monitor for carbon tetrachloride and trichloroethene will properly monitor trends in chloroform and cis-1,2 dichloroethene. The remaining two constituents (benzene and toluene) are occasionally detected in monitoring well MW-224-060. As can be inferred from Table 2, toluene is the more variable constituent in MW-224-060; therefore, toluene is included was a "key constituent" for the final SLTMO run.

Based on the focused constituent list, the SLTMO tool re-evaluated the sampling frequency for each well. Table 4 displays the results of the evaluation using the four key parameters. The Recommended Frequency based on the SLTMO process is shown in the far-right column.

### **Proposed Groundwater Sampling Schedule**

AECOM and Chemours reviewed the recommendations of the SLTMO tool, taking into account the well locations and the desire to avoid unnecessarily complex field schedules. Table 5 summarizes the current sampling frequency and the recommended frequencies developed from SLTMO. Table 5 then presents a final recommendation which is based on a review using professional judgment. Locations are grouped geographically. As can be seen in Table 5, the recommended sampling frequency of wells is annually.

### **Sample Collection Procedures**

Most monitoring wells are purged and sampled following low-flow sample collection procedures with a submersible (Grundfos Redi-Flo) pump. Field purge parameters are measured during well purging to confirm that samples are representative of the aquifer formation. The exception to this purge method is for monitoring well MW-208-020, which is sampled using a bailer. The interceptor wells and air stripper ports are sampled using their associated sample spigots. No changes to the above sampling procedures are recommended. After samples are collected, they will be shipped under chain-of-

custody to the analyzing laboratory (Eurofins Lancaster Laboratories, Inc.) for analysis of site VOCs by EPA SW-846 Method 8260. This list of site VOCs is in Table 4. No changes to the site VOC list are proposed.

**Potentiometric Surface Measurements**

In addition to monitoring constituent concentrations, depth-to-water measurements will be collected annually to confirm hydraulic gradients. The previous list of wells for potentiometric monitoring was focused on areas from the former manufacturing facility and White Lake. This revised list (see Table 6) is in the most efficient order to collect the data. Figure 1 displays these locations.

The list has been modified as follows:

- Ten locations have been added that are in the vicinity of the Northeast, North, Bury Pit, and Pierson Creek Landfills.
- Twenty-two locations have been removed that were duplicative of other measurement points. The rows that these wells are shown on are shaded medium gray to reflect their designation as inactive. Typically, the wells removed are those that are relatively close to other monitoring wells in areas distant from the interceptor wells and White Lake. Removing these wells will not negatively affect the interpretation of the groundwater potentiometric surface.
- In deciding between which wells to remove, a preference was generally given to wells that are part of a cluster. This information is helpful to monitor vertical hydraulic gradients. Typically, the deeper interval is used when interpreting the groundwater potentiometric surface.

Depth-to-water measurements will be completed within a 24-hours prior to well purging and sampling. This will eliminate atmospheric pressure and purging influences. Water-level measurements will be taken from the reference point on the top of the well casing to an accuracy of 0.01 feet.

**Reporting**

Results of groundwater monitoring at the Montague facility would continue to be documented in a report that will be submitted to the MDEQ in the first quarter following the sampling event.

All sample analytical results and groundwater measurements will be tabulated, and the complete analytical laboratory report will be included as an appendix to the report. The report will include laboratory data reports, field notes of purge parameters, groundwater elevation maps.

Isoconcentration maps of carbon tetrachloride, tetrachloroethene, and 1,1,2-trichlorofluoroethane (CFC-113) will be presented in the report, along with a discussion comparing the concentrations to previous results with trend charts in an appendix, similar to previous reports.

Our team would like to implement the changes shown in Tables 5 and 6 in 2015. If you have any questions or comments, please contact me at 832-422-4423.

Sincerely,



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

Attachments:

Tables

Figures

Attachment A: Simplified Long-Term Monitoring Optimization (SLTMO) Tool Documentation

## **Tables**

**Table 1**  
**Current Sampling Program**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Sampling Event                                       | Typical Timing              | Purpose                                    | Wells Sampled   | Constituent List |
|--|-----------------------------|--|---|------------------|
| First quarter of each year (1Q compliance sampling)  | March or April <sup>1</sup> | Confirm mixing zone compliance.            | 12 mixing zone compliance wells and the purge performance well (MW-WLP-005-100)       | Site VOC List    |
| Second quarter of each year (2Q compliance sampling) | May                         |  |   |                  |
| First half semi-annual sampling (typically in May)   | May                         | Evaluate groundwater concentration trends. | 27 monitoring wells, four interceptor wells, and inlet and outlet air stripper ports. |                  |
| Third quarter of each year (3Q compliance sampling)  | August                      | Confirm mixing zone compliance.            | 12 mixing zone compliance wells and the purge performance well (MW-WLP-005-100)       |                  |
| Fourth quarter of each year (4Q compliance sampling) | October                     |  |   |                  |
| Second half semi-annual sampling (typically in Oct)  | October                     | Evaluate groundwater concentration trends. | 27 monitoring wells, four interceptor wells, and inlet and outlet air stripper ports. |                  |

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|--|---|
| Mixing-zone compliance monitoring wells: | MW-LSD-001-080, MW-LSD-001-130, MW-LSD-002-080, MW-LSD-002-127, MW-LSD-003-080, MW-LSD-003-124, MW-WLP-002-085, MW-WLP-002-145, MW-WLP-003-080, MW-WLP-003-120, MW-WLP-004-070, and MW-WLP-004-105.   |
| Purge performance monitoring well:       | MW-WLP-005-100  |
| Interceptor wells:                       | IW-05-112, IW-06-140, IW-07-144, and IW-08-142  |
| Monitoring Wells:                        | MW-201-125, MW-206-040, MW-206-080, MW-210-080, MW-210-120, MW-211-060, MW-211-080, MW-212-120, MW-214-060, MW-220-060, MW-224-060, MW-225-060, MW-226-120, MW-228-080, MW-229-125, MW-208-020, MW-250-054, PCL-006-077, MW-251-072, MW-595-125, MW-OCT-001-130, MW-WLP-001-125, MW-301-125, MW-302-130, MW-303-125, MW-304-123, and MW-305-135 |

<sup>1</sup>: depending on weather and access

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency   | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|---|---|-------------------|--------------------|------------------------|
| IW-05-112   | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-05-112   | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals  |   | 92                | Decreasing         |                        |
| IW-05-112   | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-05-112   | Benzene                        | 71-43-2        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 0.5               | No Trend: Variable |                        |
| IW-05-112   | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-05-112   | Chloroform                     | 67-66-3        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-05-112   | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0  |   | 8                 | No Trend: Variable |                        |
| IW-05-112   | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-05-112   | Methylene Chloride             | 75-09-2        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 2                 | No Trend: Static   |                        |
| IW-05-112   | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals  |   | 9                 | Decreasing         |                        |
| IW-05-112   | Toluene                        | 108-88-3       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-05-112   | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-05-112   | Trichloroethene                | 79-01-6        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | R2>=0.6, Decreasing or no slope, Most recent concentration <= Cutoff, StDev of most recent residual<=2 StDev of Residuals |   | 5                 | Decreasing         |                        |
| IW-05-112   | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-06-140   | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 0.8               | No Trend: Variable |                        |
| IW-06-140   | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2<0.6, Median<=50, (Max-Min)/Median<=1.0   |   | 200               | No Trend: Variable |                        |
| IW-06-140   | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-06-140   | Benzene                        | 71-43-2        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-06-140   | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0  |   | 4                 | No Trend: Variable |                        |
| IW-06-140   | Chloroform                     | 67-66-3        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Median<10, (Max-Min)/Median<=3.0   |   | 12                | Increasing         |                        |
| IW-06-140   | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-06-140   | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 0.5               | No Trend: Variable |                        |
| IW-06-140   | Methylene Chloride             | 75-09-2        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 2                 | No Trend: Static   |                        |
| IW-06-140   | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals  |   | 690               | Decreasing         |                        |
| IW-06-140   | Toluene                        | 108-88-3       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 4                 | Decreasing         |                        |
| IW-06-140   | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-06-140   | Trichloroethene                | 79-01-6        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 3                 | Increasing         |                        |
| IW-06-140   | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 7                 | Increasing         |                        |
| IW-07-144   | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| IW-07-144   | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals  |   | 70                | Decreasing         |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| IW-07-144   | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| IW-07-144   | Benzene                        | 71-43-2        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| IW-07-144   | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals                 |   | 14                | Decreasing         |                        |
| IW-07-144   | Chloroform                     | 67-66-3        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| IW-07-144   | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| IW-07-144   | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| IW-07-144   | Methylene Chloride             | 75-09-2        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| IW-07-144   | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals                 |   | 170               | Decreasing         |                        |
| IW-07-144   | Toluene                        | 108-88-3       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| IW-07-144   | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| IW-07-144   | Trichloroethene                | 79-01-6        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| IW-07-144   | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 10/6/2008              | 6/17/2014            | 11/1/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| IW-08-142   | 1,1,1-Trichloroethane          | 71-55-6        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               |                       |  |   |                   | Not Evaluated      |                        |
| IW-08-142   | 1,1-Dichloroethane             | 75-34-3        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | Benzene                        | 71-43-2        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | Carbon Tetrachloride           | 56-23-5        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | Chloroform                     | 67-66-3        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | cis-1,2 Dichloroethene         | 156-59-2       | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               |                       |  |   |                   | Not Evaluated      |                        |
| IW-08-142   | Dichlorodifluoromethane        | 75-71-8        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | Methylene Chloride             | 75-09-2        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | Tetrachloroethene              | 127-18-4       | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               |                       |  |   |                   | Not Evaluated      |                        |
| IW-08-142   | Toluene                        | 108-88-3       | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |



**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| IW-08-142   | trans-1,2-Dichloroethene       | 156-60-5       | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | Trichloroethene                | 79-01-6        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| IW-08-142   | Trichlorofluoromethane         | 75-69-4        | N        | 3                                   | 5/16/2013              | 6/17/2014            |   |                                       | Too Few Data Points               | Biennial              | Between 3 and 5 data points, most recent value and geometric mean both less than annual cutoff, time spread between events 0.75-2.25 yrs |   |                   | Not Evaluated      |                        |
| MW-201-125  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-201-125  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals                 |   | 410               | Decreasing         |                        |
| MW-201-125  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-201-125  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-201-125  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-201-125  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-201-125  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Semi-Annual           | R2>=0.6, Increasing slope, Slope>0.3*Median  | Y   | 11                | Increasing         |                        |
| MW-201-125  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-201-125  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-201-125  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals                 |   | 13                | Decreasing         |                        |
| MW-201-125  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-201-125  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-201-125  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0  |   | 9                 | No Trend: Variable |                        |
| MW-201-125  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-206-040  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-206-040  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-206-040  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-206-040  | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-206-040  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals                 |   | 9                 | Decreasing         |                        |
| MW-206-040  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 1                 | No Trend: Variable |                        |
| MW-206-040  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-206-040  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-206-040  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-206-040  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals                 |   | 26                | Decreasing         |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency                                  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-206-040  | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-206-040  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-206-040  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-206-040  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-206-080  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-206-080  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 7                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Semi-Annual           | R2<0.6, Median=>50, (Max-Min)/Median>1.5                       |   | 350               | No Trend: Variable | Y                      |
| MW-206-080  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-206-080  | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-206-080  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0                       |   | 7                 | No Trend: Variable |                        |
| MW-206-080  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-206-080  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-206-080  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-206-080  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-206-080  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0        |   | 14                | No Trend: Variable |                        |
| MW-206-080  | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-206-080  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-206-080  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-206-080  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.6               | No Trend: Variable |                        |
| MW-208-020  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-208-020  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0                       |   | 3                 | No Trend: Variable |                        |
| MW-208-020  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-208-020  | Benzene                        | 71-43-2        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-208-020  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-208-020  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-208-020  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-208-020  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-208-020  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-208-020  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0                       |   | 4                 | No Trend: Variable |                        |
| MW-208-020  | Toluene                        | 108-88-3       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-208-020  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-208-020  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-208-020  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/12/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-210-080  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-210-080  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 4                 | Decreasing         |                        |
| MW-210-080  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-210-080  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |

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**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency   | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|---|---|-------------------|--------------------|------------------------|
| MW-210-080  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 0.5               | No Trend: Variable |                        |
| MW-210-080  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-080  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-080  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-080  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 2                 | No Trend: Static   |                        |
| MW-210-080  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals  |   | 18                | Decreasing         |                        |
| MW-210-080  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 0.5               | No Trend: Variable |                        |
| MW-210-080  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-080  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-080  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0  |   | 5                 | No Trend: Variable |                        |
| MW-210-120  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 2                 | No Trend: Static   |                        |
| MW-210-120  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 1                 | No Trend: Variable |                        |
| MW-210-120  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 0.5               | No Trend: Variable |                        |
| MW-210-120  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-210-120  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-211-060  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-211-060  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 2                 | No Trend: Variable |                        |
| MW-211-060  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-211-060  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-211-060  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | R2>=0.6, Decreasing or no slope, Most recent concentration <= Cutoff, StDev of most recent residual<=2 StDev of Residuals |   | 5                 | Decreasing         |                        |
| MW-211-060  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.  |   | 0.5               | Decreasing         |                        |
| MW-211-060  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-211-060  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 0.5               | No Trend: Static   |                        |
| MW-211-060  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.   |   | 2                 | No Trend: Static   |                        |
| MW-211-060  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | R2<0.6, Median=50, (Max-Min)/Median<=1.0  |   | 210               | No Trend: Variable |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-211-060  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-211-060  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-060  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.7               | No Trend: Variable |                        |
| MW-211-060  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals |   | 6                 | Decreasing         |                        |
| MW-211-080  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 1                 | No Trend: Variable |                        |
| MW-211-080  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-211-080  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0  |   | 29                | No Trend: Variable |                        |
| MW-211-080  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-211-080  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-211-080  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-212-120  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-212-120  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-212-120  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Semi-Annual           | R2<0.6, Median<10, (Max-Min)/Median Between 3.0 and 3.5  |   | 28                | No Trend: Variable |                        |
| MW-212-120  | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-212-120  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-212-120  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-214-060  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-214-060  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-214-060  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency                                  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend          | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|----------------------|------------------------|
| MW-214-060  | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable   |                        |
| MW-214-060  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-214-060  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-214-060  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-214-060  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-214-060  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static     |                        |
| MW-214-060  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-214-060  | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable   |                        |
| MW-214-060  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-214-060  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-214-060  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 2                 | No Trend: Static     |                        |
| MW-220-060  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-220-060  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static     |                        |
| MW-220-060  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-220-060  | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable   |                        |
| MW-220-060  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-220-060  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-220-060  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-220-060  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-220-060  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static     |                        |
| MW-220-060  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable   |                        |
| MW-220-060  | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable   |                        |
| MW-220-060  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-220-060  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-220-060  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-224-060  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable   |                        |
| MW-224-060  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static     |                        |
| MW-224-060  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 3                 | No Trend: Variable   |                        |
| MW-224-060  | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 2 Variable |                        |
| MW-224-060  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-224-060  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-224-060  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable   |                        |
| MW-224-060  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-224-060  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static     |                        |
| MW-224-060  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static     |                        |
| MW-224-060  | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Semi-Annual           | R2<0.6, Median<10, (Max-Min)/Median>3.5                        |   | 15                | No Trend: Variable   |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency                                  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-224-060  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-224-060  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-224-060  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-225-060  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-225-060  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-225-060  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-225-060  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-226-120  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-226-120  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Semi-Annual           | R2<0.6, Median>=50, (Max-Min)/Median Between 1.0 and 1.5       |   | 40                | No Trend: Variable |                        |
| MW-226-120  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-226-120  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-226-120  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-226-120  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-226-120  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 6                 | No Trend: Variable |                        |
| MW-226-120  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.6               | No Trend: Variable |                        |
| MW-226-120  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-226-120  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | R2<0.6, Median>=50, (Max-Min)/Median<=1.0                      |   | 68                | No Trend: Variable |                        |
| MW-226-120  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-226-120  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-226-120  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0                       |   | 7                 | No Trend: Variable |                        |
| MW-226-120  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-228-080  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-228-080  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-228-080  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.         |   | 0.5               | No Trend: Variable |                        |
| MW-228-080  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-228-080  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Semi-Annual           | Geometric mean less than cutoff for annual sampling frequency.         | Y   | 5.5               | No Trend: Variable |                        |
| MW-229-125  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-229-125  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Semi-Annual           | R2<0.6, Median=50, (Max-Min)/Median>1.5                                | Y   | 120               | No Trend: Variable |                        |
| MW-229-125  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.         |   | 0.5               | No Trend: Variable |                        |
| MW-229-125  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-229-125  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-250-054  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 5/10/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.         |   | 0.55              | No Trend: Variable |                        |
| MW-250-054  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0                |   | 21                | No Trend: Variable |                        |
| MW-250-054  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-250-054  | Benzene                        | 71-43-2        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-250-054  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-250-054  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.         |   | 0.5               | No Trend: Variable |                        |
| MW-250-054  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0                |   | 16                | No Trend: Variable |                        |
| MW-250-054  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-250-054  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-250-054  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=1.0                |   | 220               | No Trend: Variable |                        |
| MW-250-054  | Toluene                        | 108-88-3       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 5/10/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.         |   | 0.5               | No Trend: Variable |                        |
| MW-250-054  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.         |   | 0.5               | No Trend: Variable |                        |
| MW-250-054  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Semi-Annual           | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median Between 2.0 and 2.5 |   | 7                 | No Trend: Variable |                        |
| MW-250-054  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-251-072  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.8               | No Trend: Variable |                        |
| MW-251-072  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-251-072  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-251-072  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-251-072  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/18/2014            | 11/3/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-301-125  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-301-125  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | R2<0.6, Median=50, (Max-Min)/Median<=1.0   |   | 1900              | No Trend: Variable |                        |
| MW-301-125  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 1                 | No Trend: Variable |                        |
| MW-301-125  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 2                 | No Trend: Static   |                        |
| MW-301-125  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-301-125  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals |   | 10                | Decreasing         |                        |
| MW-301-125  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 2                 | Decreasing         |                        |
| MW-301-125  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-301-125  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-301-125  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0   |   | 8                 | No Trend: Variable |                        |
| MW-301-125  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-301-125  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-301-125  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 5                 | No Trend: Variable |                        |
| MW-301-125  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-302-130  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-302-130  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 7                                   | 5/8/2008               | 6/18/2014            | 6/16/2011                               | 6/18/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals |   | 23                | Decreasing         | Y                      |
| MW-302-130  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-302-130  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-302-130  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-302-130  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |



**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|-------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-302-130  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 2                 | No Trend: Variable |                        |
| MW-302-130  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.7               | Decreasing         |                        |
| MW-302-130  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-302-130  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 4                 | No Trend: Variable |                        |
| MW-302-130  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-302-130  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-302-130  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0  |   | 21                | No Trend: Variable |                        |
| MW-302-130  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 5                 | No Trend: Variable |                        |
| MW-303-125  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-303-125  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-303-125  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-303-125  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | R2=-0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals |   | 8                 | Decreasing         |                        |
| MW-303-125  | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-304-123  | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-304-123  | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Semi-Annual           | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median Between 2.0 and 2.5   | Y   | 93                | No Trend: Variable |                        |
| MW-304-123  | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-304-123  | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-304-123  | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-304-123  | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-304-123  | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Semi-Annual           | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median>2.5   |   |                   | No Trend: Variable |                        |
| MW-304-123  | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-304-123  | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-304-123  | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Semi-Annual           | R2<0.6, Median=50, (Max-Min)/Median>1.5  | Y   | 220               | No Trend: Variable |                        |
| MW-304-123  | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-304-123  | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-304-123  | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0   |   | 11                | No Trend: Variable |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID    | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|----------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-304-123     | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 1                 | No Trend: Variable |                        |
| MW-305-135     | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-305-135     | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 7                                   | 5/8/2008               | 6/18/2014            | 6/16/2011                               | 6/18/2014                             |                                   | Semi-Annual           | R2<0.6, Median<10, (Max-Min)/Median>3.5  |   | 2                 | No Trend: Variable | Y                      |
| MW-305-135     | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-305-135     | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-305-135     | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-305-135     | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-305-135     | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Semi-Annual           | R2<0.6, Median<10, (Max-Min)/Median>3.5  |   | 13                | No Trend: Variable |                        |
| MW-305-135     | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-305-135     | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-305-135     | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals |   | 13                | Decreasing         |                        |
| MW-305-135     | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-305-135     | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-305-135     | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Semi-Annual           | R2<0.6, Median<10, (Max-Min)/Median>3.5  |   | 12                | No Trend: Variable |                        |
| MW-305-135     | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/18/2014            | 11/4/2010                               | 6/18/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 2                 | No Trend: Variable |                        |
| MW-595-125     | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-595-125     | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-595-125     | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 1                 | Increasing         |                        |
| MW-595-125     | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-595-125     | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-595-125     | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-LSD-001-080 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | Benzene                        | 71-43-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID    | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency                                  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|----------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-LSD-001-080 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-LSD-001-080 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 2                 | Decreasing         |                        |
| MW-LSD-001-080 | Toluene                        | 108-88-3       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-LSD-001-080 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-080 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-130 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-130 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | R2<0.6, Median=>50, (Max-Min)/Median<=1.0                      |   | 150               | No Trend: Variable |                        |
| MW-LSD-001-130 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-130 | Benzene                        | 71-43-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-LSD-001-130 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-130 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-130 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 5/1/2012                                | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.6               | Decreasing         |                        |
| MW-LSD-001-130 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-LSD-001-130 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-LSD-001-130 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0        |   | 11                | No Trend: Variable |                        |
| MW-LSD-001-130 | Toluene                        | 108-88-3       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-LSD-001-130 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-001-130 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0                       |   | 7                 | No Trend: Variable |                        |
| MW-LSD-001-130 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-LSD-002-080 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | Benzene                        | 71-43-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-LSD-002-080 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | Toluene                        | 108-88-3       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-LSD-002-080 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-080 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-127 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-002-127 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | R2<0.6, Median=>50, (Max-Min)/Median<=1.0                      |   | 220               | No Trend: Variable |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID    | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency                                  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend            | 3 STD Outliers Removed |
|----------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|------------------------|------------------------|
| MW-LSD-002-127 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 1                 | Decreasing             |                        |
| MW-LSD-002-127 | Benzene                        | 71-43-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 1 Variable   |                        |
| MW-LSD-002-127 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-002-127 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 1 Variable   |                        |
| MW-LSD-002-127 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 1 Variable   |                        |
| MW-LSD-002-127 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 3 Variable   |                        |
| MW-LSD-002-127 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static       |                        |
| MW-LSD-002-127 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Semi-Annual           | Geometric mean less than cutoff for annual sampling frequency. | Y   | 6                 | No Trend: Variable     |                        |
| MW-LSD-002-127 | Toluene                        | 108-88-3       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 0.5 Variable |                        |
| MW-LSD-002-127 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-002-127 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 5 Variable   |                        |
| MW-LSD-002-127 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static       |                        |
| MW-LSD-003-080 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | Benzene                        | 71-43-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static       |                        |
| MW-LSD-003-080 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | Toluene                        | 108-88-3       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 0.5 Variable |                        |
| MW-LSD-003-080 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-080 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-124 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-124 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Semi-Annual           | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0        | Y   |                   | No Trend: 13 Variable  |                        |
| MW-LSD-003-124 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-124 | Benzene                        | 71-43-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: 0.5 Variable |                        |
| MW-LSD-003-124 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-124 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-124 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-124 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |
| MW-LSD-003-124 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static       |                        |
| MW-LSD-003-124 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static       |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID    | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency                                  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|----------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-LSD-003-124 | Toluene                        | 108-88-3       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-LSD-003-124 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-LSD-003-124 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.9               | No Trend: Variable |                        |
| MW-LSD-003-124 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/14/2009             | 6/16/2014            | 8/20/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-OCT-001-130 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | Benzene                        | 71-43-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | Chloroform                     | 67-66-3        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-OCT-001-130 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-OCT-001-130 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | Toluene                        | 108-88-3       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-OCT-001-130 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-OCT-001-130 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/8/2008               | 6/19/2014            | 11/3/2010                               | 6/19/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-001-125 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   |                   | No Trend: Variable |                        |
| MW-WLP-001-125 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Semi-Annual           | R2<0.6, Median>=50, (Max-Min)/Median<=1.0                      | Y   | 540               | No Trend: Variable |                        |
| MW-WLP-001-125 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-001-125 | Benzene                        | 71-43-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-001-125 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Semi-Annual           | R2<0.6, Median>=50, (Max-Min)/Median<=1.0                      | Y   | 110               | No Trend: Variable |                        |
| MW-WLP-001-125 | Chloroform                     | 67-66-3        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 2                 | No Trend: Static   |                        |
| MW-WLP-001-125 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-001-125 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-001-125 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-WLP-001-125 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | R2<0.6, Median>=50, (Max-Min)/Median<=1.0                      |   | 1600              | No Trend: Variable |                        |
| MW-WLP-001-125 | Toluene                        | 108-88-3       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-001-125 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-001-125 | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 2                 | No Trend: Variable |                        |
| MW-WLP-002-085 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/7/2008               | 6/17/2014            | 11/2/2010                               | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-WLP-002-085 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | Benzene                        | 71-43-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |

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| Location ID    | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency                                  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|----------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-WLP-002-085 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-WLP-002-085 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | Toluene                        | 108-88-3       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.7               | No Trend: Variable |                        |
| MW-WLP-002-085 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-085 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-WLP-002-145 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | Benzene                        | 71-43-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-WLP-002-145 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | Toluene                        | 108-88-3       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.8               | No Trend: Variable |                        |
| MW-WLP-002-145 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-002-145 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-080 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 3                 | No Trend: Variable |                        |
| MW-WLP-003-080 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | R2<0.6, Median=50, (Max-Min)/Median<=1.0                       |   | 240               | No Trend: Variable |                        |
| MW-WLP-003-080 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-080 | Benzene                        | 71-43-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-080 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | R2<0.6, Median=50, (Max-Min)/Median<=1.0                       |   | 120               | No Trend: Variable |                        |
| MW-WLP-003-080 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 2                 | No Trend: Variable |                        |
| MW-WLP-003-080 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-080 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 5/1/2012                                | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-003-080 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-WLP-003-080 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 7                 | Increasing         |                        |
| MW-WLP-003-080 | Toluene                        | 108-88-3       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-003-080 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-080 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.6               | Decreasing         |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID    | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|----------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-WLP-003-080 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-WLP-003-120 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | Benzene                        | 71-43-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-WLP-003-120 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | Toluene                        | 108-88-3       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-003-120 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-003-120 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-070 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 2                 | No Trend: Variable |                        |
| MW-WLP-004-070 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | R2>=0.6, Median>=50, (Max-Min)/Median<=1.0   | Y   | 150               | Increasing         |                        |
| MW-WLP-004-070 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-070 | Benzene                        | 71-43-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-070 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | R2>=0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0   | Y   | 50                | Increasing         |                        |
| MW-WLP-004-070 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 2                 | No Trend: Variable |                        |
| MW-WLP-004-070 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-070 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-070 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 2                 | No Trend: Static   |                        |
| MW-WLP-004-070 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | R2>=0.6, Decreasing or no slope, Most recent concentration > Cutoff, StDev of most recent residual<=2 StDev of Residuals |   | 97                | Decreasing         |                        |
| MW-WLP-004-070 | Toluene                        | 108-88-3       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-004-070 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-070 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-070 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-105 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.9               | No Trend: Variable |                        |
| MW-WLP-004-105 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | R2<0.6, Median Between 10 AND 50, (Max-Min)/Median<=2.0  |   | 39                | No Trend: Variable |                        |
| MW-WLP-004-105 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-105 | Benzene                        | 71-43-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-105 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | R2<0.6, Median<10, (Max-Min)/Median<=3.0   |   | 8                 | No Trend: Variable |                        |
| MW-WLP-004-105 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency.   |   | 0.8               | No Trend: Variable |                        |
| MW-WLP-004-105 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.  |   | 0.5               | No Trend: Static   |                        |

**Table 2**  
**Statistical Results by Well and Parameter**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID    | Parameter                      | Parameter Code | Filtered | No. Of Data Points Used In Analysis | Earliest Sampling Date | Latest Sampling Date | Earliest Sampling Date Used In Analysis | Latest Sampling Date Used In Analysis | Reason for Discontinuing Analysis | Recommended Frequency | Reason For Assigned Frequency                                  | Adjusted One Step For Recent Increasing Trend | Most Recent Value | SLTMO Trend        | 3 STD Outliers Removed |
|----------------|--------------------------------|----------------|----------|-------------------------------------|------------------------|----------------------|---|---------------------------------------|-----------------------------------|-----------------------|--|---|-------------------|--------------------|------------------------|
| MW-WLP-004-105 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-105 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-WLP-004-105 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-105 | Toluene                        | 108-88-3       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-004-105 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-105 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-004-105 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Semi-Annual           | R2<0.6, Median>=50, (Max-Min)/Median>1.5                       |   | 160               | No Trend: Variable |                        |
| MW-WLP-005-100 | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | Benzene                        | 71-43-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-005-100 | Chloroform                     | 67-66-3        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 2                 | No Trend: Variable |                        |
| MW-WLP-005-100 | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | Methylene Chloride             | 75-09-2        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| MW-WLP-005-100 | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | Toluene                        | 108-88-3       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| MW-WLP-005-100 | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | Trichloroethene                | 79-01-6        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| MW-WLP-005-100 | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 12/15/2009             | 6/16/2014            | 8/21/2012                               | 6/16/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | 1,1,1-Trichloroethane          | 71-55-6        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | 1,1,2-Trichlorotrifluoroethane | 76-13-1        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| PCL-006-077    | 1,1-Dichloroethane             | 75-34-3        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | Benzene                        | 71-43-2        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | Carbon Tetrachloride           | 56-23-5        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | Chloroform                     | 67-66-3        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | cis-1,2 Dichloroethene         | 156-59-2       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | Dichlorodifluoromethane        | 75-71-8        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | Methylene Chloride             | 75-09-2        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 2                 | No Trend: Static   |                        |
| PCL-006-077    | Tetrachloroethene              | 127-18-4       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | Toluene                        | 108-88-3       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Annual                | Geometric mean less than cutoff for annual sampling frequency. |   | 0.5               | No Trend: Variable |                        |
| PCL-006-077    | trans-1,2-Dichloroethene       | 156-60-5       | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | Trichloroethene                | 79-01-6        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |
| PCL-006-077    | Trichlorofluoromethane         | 75-69-4        | N        | 8                                   | 5/6/2008               | 6/17/2014            | 10/13/2010                              | 6/17/2014                             |                                   | Biennial              | All results are nondetects.                                    |   | 0.5               | No Trend: Static   |                        |



**Table 3**  
**Statistics for Site Volatile Organic Compounds List**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Parameter Name                 | No Of<br>Records | Units | No.<br>Detects | No.<br>Nondetects | Number Of Detected<br>Locations | Number Of Detects<br>Above Action Limit | Number Of Nondetects<br>Above Action Limit | Upper Limit | Maximum Detected Value<br>(0=all ND) | Location Of<br>Maximum Result |
|--------------------------------|------------------|-------|----------------|-------------------|---------------------------------|---|--|-------------|--------------------------------------|-------------------------------|
| 1,1,1-TRICHLOROETHANE          | 1449             | ug/L  | 277            | 1172              | 21                              | 0                                       | 0  | 200         | 20                                   | MW-229-125                    |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | 1453             | ug/L  | 896            | 557               | 38                              | 0                                       | 0  | 170000      | 5300                                 | MW-229-125                    |
| 1,1-DICHLOROETHANE             | 1443             | ug/L  | 117            | 1326              | 12                              | 0                                       | 0  | 2500        | 11                                   | MW-224-060                    |
| BENZENE                        | 1449             | ug/L  | 195            | 1254              | 22                              | 19                                      | 9  | 5           | 16                                   | MW-224-060                    |
| CARBON TETRACHLORIDE           | 1456             | ug/L  | 422            | 1034              | 27                              | 301                                     | 10   | 5           | 1300                                 | MW-206-040                    |
| CHLOROFORM                     | 1449             | ug/L  | 443            | 1006              | 33                              | 21                                      | 0  | 80          | 150                                  | MW-229-125                    |
| CIS-1,2 DICHLOROETHENE         | 1334             | ug/L  | 222            | 1112              | 17                              | 5                                       | 0  | 70          | 150                                  | MW-304-123                    |
| DICHLORODIFLUOROMETHANE        | 1079             | ug/L  | 126            | 953               | 23                              | 0                                       | 0  | 4800        | 90                                   | MW-WLP-001-125                |
| METHYLENE CHLORIDE             | 1343             | ug/L  | 4              | 1339              | 4                               | 0                                       | 52   | 5           | 3                                    | MW-229-125                    |
| TETRACHLOROETHENE              | 1456             | ug/L  | 857            | 599               | 37                              | 673                                     | 1  | 5           | 10000                                | MW-229-125                    |
| TOLUENE                        | 1456             | ug/L  | 191            | 1265              | 42                              | 8                                       | 0  | 790         | 5800                                 | MW-224-060                    |
| TRANS-1,2-DICHLOROETHENE       | 1365             | ug/L  | 58             | 1307              | 7                               | 0                                       | 0  | 100         | 100                                  | MW-206-080                    |
| TRICHLOROETHENE                | 1449             | ug/L  | 350            | 1099              | 24                              | 212                                     | 13   | 5           | 220                                  | MW-201-125                    |
| TRICHLOROFLUOROMETHANE         | 1449             | ug/L  | 115            | 1334              | 11                              | 0                                       | 0  | 7300        | 1100                                 | MW-206-040                    |

Constituents maxima that exceed MDEQ tap water criteria are shaded orange.  
 Constituents in bold are part of the focused list for the SLMT0 evaluation.

**Table 4**  
**Statistical Summary by Well and SMTLO Recommended Frequency**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID | Analytical Entity | No. Of Parameters | Recommended Quarterly Sampling Count | Recommended Semi-Annual Sampling Count | Recommended Annual Sampling Count | Recommended Biennial Sampling Count | Current Sampling Frequency | Recommended Frequency (using focused COC list) |
|-------------|-------------------|-------------------|--------------------------------------|--|-----------------------------------|-------------------------------------|----------------------------|--|
| IW-05-112   | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 2                                 | 2                                   | Semi-Annual                | Annual   |
| IW-06-140   | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 4                                 | 0                                   | Semi-Annual                | Annual   |
| IW-07-144   | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 3                                 | 1                                   | Semi-Annual                | Annual   |
| IW-08-142   | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 2                                   | Semi-Annual                | Biennial                                       |
| MW-201-125  | MTG-GW Monitoring | 4                 | 0                                    | 1                                      | 2                                 | 1                                   | Semi-Annual                | Semi-Annual                                    |
| MW-206-040  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 2                                 | 2                                   | Semi-Annual                | Annual   |
| MW-206-080  | MTG-GW Monitoring | 4                 | 0                                    | 1                                      | 2                                 | 1                                   | Semi-Annual                | Semi-Annual                                    |
| MW-208-020  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 2                                 | 2                                   | Semi-Annual                | Annual   |
| MW-210-080  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 2                                 | 2                                   | Semi-Annual                | Annual   |
| MW-210-120  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 2                                 | 2                                   | Semi-Annual                | Annual   |
| MW-211-060  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 4                                 | 0                                   | Semi-Annual                | Annual   |
| MW-211-080  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 3                                 | 1                                   | Semi-Annual                | Annual   |
| MW-212-120  | MTG-GW Monitoring | 4                 | 0                                    | 1                                      | 0                                 | 3                                   | Semi-Annual                | Semi-Annual                                    |
| MW-214-060  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-220-060  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 1                                 | 3                                   | Semi-Annual                | Annual   |
| MW-224-060  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-225-060  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-226-120  | MTG-GW Monitoring | 4                 | 0                                    | 2                                      | 1                                 | 1                                   | Semi-Annual                | Semi-Annual                                    |
| MW-228-080  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-229-125  | MTG-GW Monitoring | 4                 | 0                                    | 2                                      | 0                                 | 2                                   | Semi-Annual                | Semi-Annual                                    |
| MW-250-054  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 3                                 | 1                                   | Semi-Annual                | Annual   |
| MW-251-072  | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |

**Table 4**  
**Statistical Summary by Well and SMTLO Recommended Frequency**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID    | Analytical Entity | No. Of Parameters | Recommended Quarterly Sampling Count | Recommended Semi-Annual Sampling Count | Recommended Annual Sampling Count | Recommended Biennial Sampling Count | Current Sampling Frequency | Recommended Frequency (using focused COC list) |
|----------------|-------------------|-------------------|--------------------------------------|--|-----------------------------------|-------------------------------------|----------------------------|--|
| MW-301-125     | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 3                                 | 1                                   | Semi-Annual                | Annual   |
| MW-302-130     | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 2                                 | 1                                   | Semi-Annual                | Annual   |
| MW-303-125     | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 2                                 | 2                                   | Semi-Annual                | Annual   |
| MW-304-123     | MTG-GW Monitoring | 4                 | 0                                    | 2                                      | 1                                 | 1                                   | Semi-Annual                | Semi-Annual                                    |
| MW-305-135     | MTG-GW Monitoring | 4                 | 0                                    | 3                                      | 0                                 | 1                                   | Semi-Annual                | Semi-Annual                                    |
| MW-595-125     | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 2                                 | 2                                   | Semi-Annual                | Annual   |
| MW-LSD-001-080 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 1                                 | 3                                   | Semi-Annual                | Annual   |
| MW-LSD-001-130 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 3                                 | 1                                   | Semi-Annual                | Annual   |
| MW-LSD-002-080 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-LSD-002-127 | MTG-GW Monitoring | 4                 | 0                                    | 1                                      | 2                                 | 1                                   | Semi-Annual                | Semi-Annual                                    |
| MW-LSD-003-080 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-LSD-003-124 | MTG-GW Monitoring | 4                 | 0                                    | 1                                      | 1                                 | 2                                   | Semi-Annual                | Semi-Annual                                    |
| MW-OCT-001-130 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-WLP-001-125 | MTG-GW Monitoring | 4                 | 0                                    | 2                                      | 2                                 | 0                                   | Semi-Annual                | Semi-Annual                                    |
| MW-WLP-002-085 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-WLP-002-145 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-WLP-003-080 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 4                                 | 0                                   | Semi-Annual                | Annual   |
| MW-WLP-003-120 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |
| MW-WLP-004-070 | MTG-GW Monitoring | 4                 | 0                                    | 2                                      | 1                                 | 1                                   | Semi-Annual                | Semi-Annual                                    |
| MW-WLP-004-105 | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 3                                 | 1                                   | Semi-Annual                | Annual   |
| MW-WLP-005-100 | MTG-GW Monitoring | 4                 | 0                                    | 1                                      | 1                                 | 2                                   | Semi-Annual                | Semi-Annual                                    |
| PCL-006-077    | MTG-GW Monitoring | 4                 | 0                                    | 0                                      | 0                                 | 4                                   | Semi-Annual                | Biennial                                       |

**Table 5**  
**Recommended Sampling Program**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID          | Well Group                         | Current Sampling Frequency | Initial Sampling Frequency from SLMTO | Recommended Frequency by SLMTO (focused COC list) | Final Recommendation | Logic of Recommendation   |
|----------------------|------------------------------------|----------------------------|---------------------------------------|---|----------------------|---|
| IW-05-112            | Interceptor wells (IW)             | Semi-Annual                | Annual                                | Annual  | Annual               | SMTLO recommended   |
| IW-06-140            |                                    | Semi-Annual                | Annual                                | Annual  |                      | SMTLO recommended   |
| IW-07-144            |                                    | Semi-Annual                | Annual                                | Annual  |                      | SMTLO recommended   |
| IW-08-142            |                                    | Semi-Annual                | Biennial                              | Biennial  |                      | Consistency with other IWs  |
| Air stripper inlet   | Treatment System                   | Semi-Annual                | NA                                    | NA  | Annual               | Consistency with IWs  |
| Air stripper outflow |                                    | Semi-Annual                | NA                                    | NA  |                      |   |
| MW-201-125           | Near IWs                           | Semi-Annual                | Semi-Annual                           | Semi-Annual                                       | Annual               | These wells are close to the interceptor wells and constituent concentrations in these wells have responded to changes in flow rates from the IWs in the past. Therefore the group is recommended for annual monitoring to match the IW sampling. |
| MW-226-120           |                                    | Semi-Annual                | Semi-Annual                           | Semi-Annual                                       |                      |   |
| MW-229-125           |                                    | Semi-Annual                | Semi-Annual                           | Semi-Annual                                       |                      |   |
| MW-301-125           |                                    | Semi-Annual                | Annual                                | Annual  |                      |   |
| MW-302-130           |                                    | Semi-Annual                | Annual                                | Annual  |                      |   |
| MW-303-125           |                                    | Semi-Annual                | Annual                                | Annual  |                      |   |
| MW-304-123           |                                    | Semi-Annual                | Semi-Annual                           | Semi-Annual                                       |                      |   |
| MW-305-135           |                                    | Semi-Annual                | Semi-Annual                           | Semi-Annual                                       |                      |   |
| MW-WLP-001-125       |                                    | Semi-Annual                | Semi-Annual                           | Semi-Annual                                       |                      |   |
| MW-225-060           |                                    | Semi-Annual                | Annual                                | Biennial  | Dropped              | These two wells have long histories of results below criteria. This is because plume is deeper than the well screen.  |
| MW-228-080           |                                    | Semi-Annual                | Annual                                | Biennial  |                      |   |
| MW-206-040           | Downgradient of frmr Manufacturing | Semi-Annual                | Annual                                | Annual  | Annual               | SMTLO recommends annual frequency for most wells in this group. The two wells recommended for semiannual are due to variability in concentration, not any upward trends.  |
| MW-206-080           |                                    | Semi-Annual                | Semi-Annual                           | Semi-Annual                                       |                      |   |
| MW-210-080           |                                    | Semi-Annual                | Annual                                | Annual  |                      |   |
| MW-210-120           |                                    | Semi-Annual                | Annual                                | Annual  |                      |   |
| MW-211-060           |                                    | Semi-Annual                | Annual                                | Annual  |                      |   |
| MW-211-080           |                                    | Semi-Annual                | Annual                                | Annual  |                      |   |
| MW-212-120           |                                    | Semi-Annual                | Semi-Annual                           | Semi-Annual                                       |                      |   |
| MW-214-060           |                                    | Semi-Annual                | Annual                                | Biennial  | Dropped              | Long history of results below criteria  |
| MW-220-060           | Near William Rd                    | Semi-Annual                | Annual                                | Annual  | Annual               | SMTLO recommended.  |
| MW-595-125           |                                    | Semi-Annual                | Annual                                | Annual  |                      |   |
| MW-OCT-001-130       |                                    | Semi-Annual                | Annual                                | Biennial  |                      |   |

**Table 5**  
**Recommended Sampling Program**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID    | Well Group                           | Current Sampling Frequency | Initial Sampling Frequency from SLMTO | Recommended Frequency by SLMTO (focused COC list) | Final Recommendation | Logic of Recommendation  |
|----------------|--------------------------------------|----------------------------|---------------------------------------|---|----------------------|--|
| MW-208-020     | Pierson Creek Area                   | Semi-Annual                | Annual                                | Annual  | Annual               | Consistency with MW-250-054  |
| MW-250-054     |                                      | Semi-Annual                | Semi-Annual                           | Annual  |                      | SMTLO recommended  |
| PCL-006-077    |                                      | Semi-Annual                | Annual                                | Biennial  | Dropped              | Not needed (very long history of results below criteria)   |
| MW-224-060     | Northeast Landfill                   | Semi-Annual                | Semi-Annual                           | Biennial  | Annual               | Consistency between wells at the Northeast landfill. Detections in MW-224-060 are variable with no upward trend. |
| MW-251-072     |                                      | Semi-Annual                | Annual                                | Biennial  |                      |  |
| MW-LSD-001-080 | Lake Shore Dr Compliance well        | Quarterly                  | Annual                                | Annual  | Annual               | Consistency between all Lake Shore Drive compliance wells. These wells monitor the mixing zone.                  |
| MW-LSD-001-130 |                                      | Quarterly                  | Annual                                | Annual  |                      |  |
| MW-LSD-002-080 |                                      | Quarterly                  | Annual                                | Biennial  |                      |  |
| MW-LSD-002-127 |                                      | Quarterly                  | Semi-Annual                           | Semi-Annual                                       |                      |  |
| MW-LSD-003-080 |                                      | Quarterly                  | Annual                                | Biennial  |                      |  |
| MW-LSD-003-124 |                                      | Quarterly                  | Semi-Annual                           | Semi-Annual                                       |                      |  |
| MW-WLP-002-085 | White Lake Property Compliance Wells | Quarterly                  | Annual                                | Biennial  | Annual               | Consistency between all White Lake Property compliance wells. These wells monitor the mixing zone.               |
| MW-WLP-002-145 |                                      | Quarterly                  | Annual                                | Biennial  |                      |  |
| MW-WLP-003-080 |                                      | Quarterly                  | Annual                                | Annual  |                      |  |
| MW-WLP-003-120 |                                      | Quarterly                  | Annual                                | Biennial  |                      |  |
| MW-WLP-004-070 |                                      | Quarterly                  | Semi-Annual                           | Semi-Annual                                       |                      |  |
| MW-WLP-004-105 |                                      | Quarterly                  | Annual                                | Annual  |                      |  |
| MW-WLP-005-100 | Purge Performance Well               | Quarterly                  | Semi-Annual                           | Semi-Annual                                       | Annual               | Consistent with frequency of mixing zone wells.  |

Constituent List: analysis by EPA SW-846 Method 8260B reporting results for:

1,1,1-TRICHLORO ETHANE; 1,1,2-TRICHLOROTRIFLUOROETHANE; 1,1-DICHLOROETHANE; BENZENE; CARBON TETRACHLORIDE; CHLOROFORM; CIS-1,2-DICHLOROETHENE; DICHLORODIFLUOROMETHANE; METHYLENE CHLORIDE; TETRACHLOROETHYLENE; TOLUENE; TRANS-1,2-DICHLOROETHENE; TRICHLOROETHENE; and TRICHLOROFLUOROMETHANE.

**Table 6**  
**Proposed Potentiometric Monitoring Program**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID <sup>1</sup> | Coordinates (Michigan State Plane: South Zone) |              | Top of Casing Elevation (ft MSL) | Elevation of Transducer (IWs Only) |
|--------------------------|--|--------------|----------------------------------|------------------------------------|
|                          | X-Coordinate                                   | Y-Coordinate |                                  |                                    |
| BP-001-070               | 12579851.81                                    | 699131.37    | 657.36                           | -                                  |
| BP-002-100               | 12579837.75                                    | 699124.78    | 659.05                           | -                                  |
| NL-001-060               | 12582127.31                                    | 699097.25    | 640.94                           | -                                  |
| NL-002-100               | 12582119.96                                    | 699088.21    | 639.69                           | -                                  |
| MW-017-055               | 12579851.81                                    | 699131.37    | 641.01                           | -                                  |
| MW-224-060               | 12583714.56                                    | 698483.95    | 642.13                           | -                                  |
| MW-251-072               | 12583702.31                                    | 698385.62    | 642.18                           | -                                  |
| DW-005-120               | 12579851.81                                    | 699131.37    | 644.49                           | -                                  |
| DW-004-107               | 12579851.81                                    | 699131.37    | 641.14                           | -                                  |
| DW-003-097               | 12579851.81                                    | 699131.37    | 639.36                           | -                                  |
| MW-223-060               | 12579851.81                                    | 699131.37    | 638.77                           | -                                  |
| NEL-002-090              | 12579851.81                                    | 699131.37    | 636.72                           | -                                  |
| MW-204-080               | 12579851.81                                    | 699131.37    | 628.42                           | -                                  |
| MW-204-040               | 12579851.81                                    | 699131.37    | 628.68                           | -                                  |
| MW-213-062               | 12579851.81                                    | 699131.37    | 642.30                           | -                                  |
| MW-222-095               | 12579851.81                                    | 699131.37    | 631.96                           | -                                  |
| MW-222-060               | 12579851.81                                    | 699131.37    | 632.48                           | -                                  |
| MW-001-060               | 12579851.81                                    | 699131.37    | 632.42                           | -                                  |
| MW-002-060               | 12579851.81                                    | 699131.37    | 628.89                           | -                                  |
| MW-004-060               | 12579851.81                                    | 699131.37    | 634.98                           | -                                  |
| MW-007-060               | 12579851.81                                    | 699131.37    | 634.07                           | -                                  |
| MW-206-120               | 12579851.81                                    | 699131.37    | 642.54                           | -                                  |
| MW-206-040               | 12579851.81                                    | 699131.37    | 642.14                           | -                                  |
| MW-208-020               | 12579851.81                                    | 699131.37    | 601.75                           | -                                  |
| MW-208-083               | 12579851.81                                    | 699131.37    | 604.09                           | -                                  |
| PCL-006-077              | 12579851.81                                    | 699131.37    | 623.44                           | -                                  |
| MW-250-054               | 12579851.81                                    | 699131.37    | 639.24                           | -                                  |
| MW-211-060               | 12579851.81                                    | 699131.37    | 643.35                           | -                                  |
| MW-211-080               | 12579851.81                                    | 699131.37    | 643.00                           | -                                  |
| MW-210-120               | 12579851.81                                    | 699131.37    | 640.07                           | -                                  |
| MW-210-080               | 12579851.81                                    | 699131.37    | 640.20                           | -                                  |
| MW-023-028               | 12579851.81                                    | 699131.37    | 616.30                           | -                                  |
| MW-022-047               | 12579851.81                                    | 699131.37    | 630.28                           | -                                  |
| MW-217-080               | 12579851.81                                    | 699131.37    | 630.38                           | -                                  |
| MW-217-115               | 12579851.81                                    | 699131.37    | 630.56                           | -                                  |
| MW-230-080               | 12579851.81                                    | 699131.37    | 632.63                           | -                                  |
| MW-220-060               | 12579851.81                                    | 699131.37    | 633.88                           | -                                  |
| MW-595-125               | 12579851.81                                    | 699131.37    | 635.14                           | -                                  |
| MW-231-040               | 12579851.81                                    | 699131.37    | 630.65                           | -                                  |
| MW-231-087               | 12579851.81                                    | 699131.37    | 630.69                           | -                                  |
| MW-218-080               | 12579851.81                                    | 699131.37    | 639.03                           | -                                  |
| MW-219-080               | 12579851.81                                    | 699131.37    | 639.05                           | -                                  |
| MW-215-080               | 12579851.81                                    | 699131.37    | 637.30                           | -                                  |
| MW-216-080               | 12579851.81                                    | 699131.37    | 631.85                           | -                                  |

Locations are arranged in the order in which they are typically measured.

Newly proposed locations are shaded orange. Removed locations in gray.

- : Not applicable.

Only interceptor wells (IWs) have transducers.

**Table 6**  
**Proposed Potentiometric Monitoring Program**  
**Proposed Revision to Monitoring Program**  
**DuPont Montague Works**  
**Montague, Michigan**

| Location ID <sup>1</sup> | Coordinates (Michigan State Plane: South Zone) |              | Top of Casing Elevation (ft MSL) | Elevation of Transducer (IWs Only) |
|--------------------------|--|--------------|----------------------------------|------------------------------------|
|                          | X-Coordinate                                   | Y-Coordinate |                                  |                                    |
| MW-212-120               | 12579851.81                                    | 699131.37    | 638.54                           | -                                  |
| MW-212-080               | 12579851.81                                    | 699131.37    | 637.89                           | -                                  |
| MW-214-060               | 12579851.81                                    | 699131.37    | 636.39                           | -                                  |
| MW-221-080               | 12579851.81                                    | 699131.37    | 638.28                           | -                                  |
| MW-LPW                   | 12579851.81                                    | 699131.37    | 633.87                           | -                                  |
| MW-203-080               | 12579851.81                                    | 699131.37    | 634.34                           | -                                  |
| MW-203-120               | 12579851.81                                    | 699131.37    | 634.08                           | -                                  |
| MW-203-040               | 12579851.81                                    | 699131.37    | 634.59                           | -                                  |
| MW-232-055               | 12579851.81                                    | 699131.37    | 634.00                           | -                                  |
| MW-232-080               | 12579851.81                                    | 699131.37    | 634.00                           | -                                  |
| MW-003-040               | 12579851.81                                    | 699131.37    | 632.89                           | -                                  |
| MW-003-080               | 12579851.81                                    | 699131.37    | 632.96                           | -                                  |
| MW-024-045               | 12579851.81                                    | 699131.37    | 632.65                           | -                                  |
| MW-019-042               | 12579851.81                                    | 699131.37    | 633.06                           | -                                  |
| IW-01-090                | 12579851.81                                    | 699131.37    | 630.04                           | 558.59                             |
| IW-08-142                | 12579851.81                                    | 699131.37    | 585.54                           | 546.63                             |
| MW-228-080               | 12579851.81                                    | 699131.37    | 629.99                           | -                                  |
| PZ-8                     | 12579851.81                                    | 699131.37    | 630.18                           | -                                  |
| PZ-7                     | 12579851.81                                    | 699131.37    | 631.01                           | -                                  |
| IW-05-112                | 12579851.81                                    | 699131.37    | 634.45                           | 532.21                             |
| PZ-5                     | 12579851.81                                    | 699131.37    | 632.80                           | -                                  |
| PZ-6                     | 12579851.81                                    | 699131.37    | 631.85                           | -                                  |
| MW-108-050               | 12579851.81                                    | 699131.37    | 629.07                           | -                                  |
| MW-107-050               | 12579851.81                                    | 699131.37    | 629.19                           | -                                  |
| MW-104-045               | 12579851.81                                    | 699131.37    | 625.55                           | -                                  |
| MW-102-045               | 12579851.81                                    | 699131.37    | 626.16                           | -                                  |
| MW-101-045               | 12579851.81                                    | 699131.37    | 627.13                           | -                                  |
| MW-105-050               | 12579851.81                                    | 699131.37    | 629.43                           | -                                  |
| MW-106-050               | 12579851.81                                    | 699131.37    | 629.70                           | -                                  |
| MW-227-060               | 12579851.81                                    | 699131.37    | 629.59                           | -                                  |
| MW-305-135               | 12579851.81                                    | 699131.37    | 629.59                           | -                                  |
| MW-229-125               | 12579851.81                                    | 699131.37    | 628.02                           | -                                  |
| IW-06-140                | 12579851.81                                    | 699131.37    | 628.24                           | 486.04                             |
| MW-304-123               | 12579851.81                                    | 699131.37    | 629.15                           | -                                  |
| MW-226-060               | 12579851.81                                    | 699131.37    | 629.70                           | -                                  |
| MW-226-120               | 12579851.81                                    | 699131.37    | 630.27                           | -                                  |
| MW-303-125               | 12579851.81                                    | 699131.37    | 632.03                           | -                                  |
| MW-302-130               | 12579851.81                                    | 699131.37    | 632.83                           | -                                  |
| MW-301-125               | 12579851.81                                    | 699131.37    | 633.68                           | -                                  |
| MW-020-052               | 12579851.81                                    | 699131.37    | 632.71                           | -                                  |
| MW-225-060               | 12579851.81                                    | 699131.37    | 630.31                           | -                                  |
| MW-201-125               | 12579851.81                                    | 699131.37    | 632.62                           | -                                  |
| MW-201-060               | 12579851.81                                    | 699131.37    | 631.91                           | -                                  |
| MWLS-001-080             | 12579851.81                                    | 699131.37    | 630.49                           | -                                  |

Locations are arranged in the order in which they are typically measured.

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Only interceptor wells (IWs) have transducers.

**Table 6**  
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**DuPont Montague Works**  
**Montague, Michigan**

| Location ID <sup>1</sup> | Coordinates (Michigan State Plane: South Zone) |              | Top of Casing Elevation (ft MSL) | Elevation of Transducer (IWs Only) |
|--------------------------|--|--------------|----------------------------------|------------------------------------|
|                          | X-Coordinate                                   | Y-Coordinate |                                  |                                    |
| MWLSD-001-130            | 12579851.81                                    | 699131.37    | 630.48                           | -                                  |
| MWLSD-002-080            | 12579851.81                                    | 699131.37    | 629.86                           | -                                  |
| MWLSD-002-127            | 12579851.81                                    | 699131.37    | 630.23                           | -                                  |
| MWLSD-003-080            | 12579851.81                                    | 699131.37    | 630.67                           | -                                  |
| MWLSD-003-124            | 12579851.81                                    | 699131.37    | 631.10                           | -                                  |
| MW-021-048               | 12579851.81                                    | 699131.37    | 630.02                           | -                                  |
| MW-OCT-001-130           | 12579851.81                                    | 699131.37    | 630.57                           | -                                  |
| WLP-001-125              | 12579851.81                                    | 699131.37    | 626.67                           | -                                  |
| MWWLP-002-085            | 12579851.81                                    | 699131.37    | 625.16                           | -                                  |
| MWWLP-002-145            | 12579851.81                                    | 699131.37    | 624.55                           | -                                  |
| MWWLP-003-080            | 12579851.81                                    | 699131.37    | 593.80                           | -                                  |
| MWWLP-003-120            | 12579851.81                                    | 699131.37    | 594.53                           | -                                  |
| MWWLP-004-070            | 12579851.81                                    | 699131.37    | 594.58                           | -                                  |
| MWWLP-004-105            | 12579851.81                                    | 699131.37    | 594.64                           | -                                  |
| MWWLP-005-100            | 12579851.81                                    | 699131.37    | 587.34                           | -                                  |
| SG-WL-Intake             | 12579851.81                                    | 699131.37    | 590.39                           | -                                  |
| IW-07-144                | 12579851.81                                    | 699131.37    | 625.89                           | 505.89                             |

Locations are arranged in the order in which they are typically measured.

Newly proposed locations are shaded orange. Removed locations in gray.

- : Not applicable.

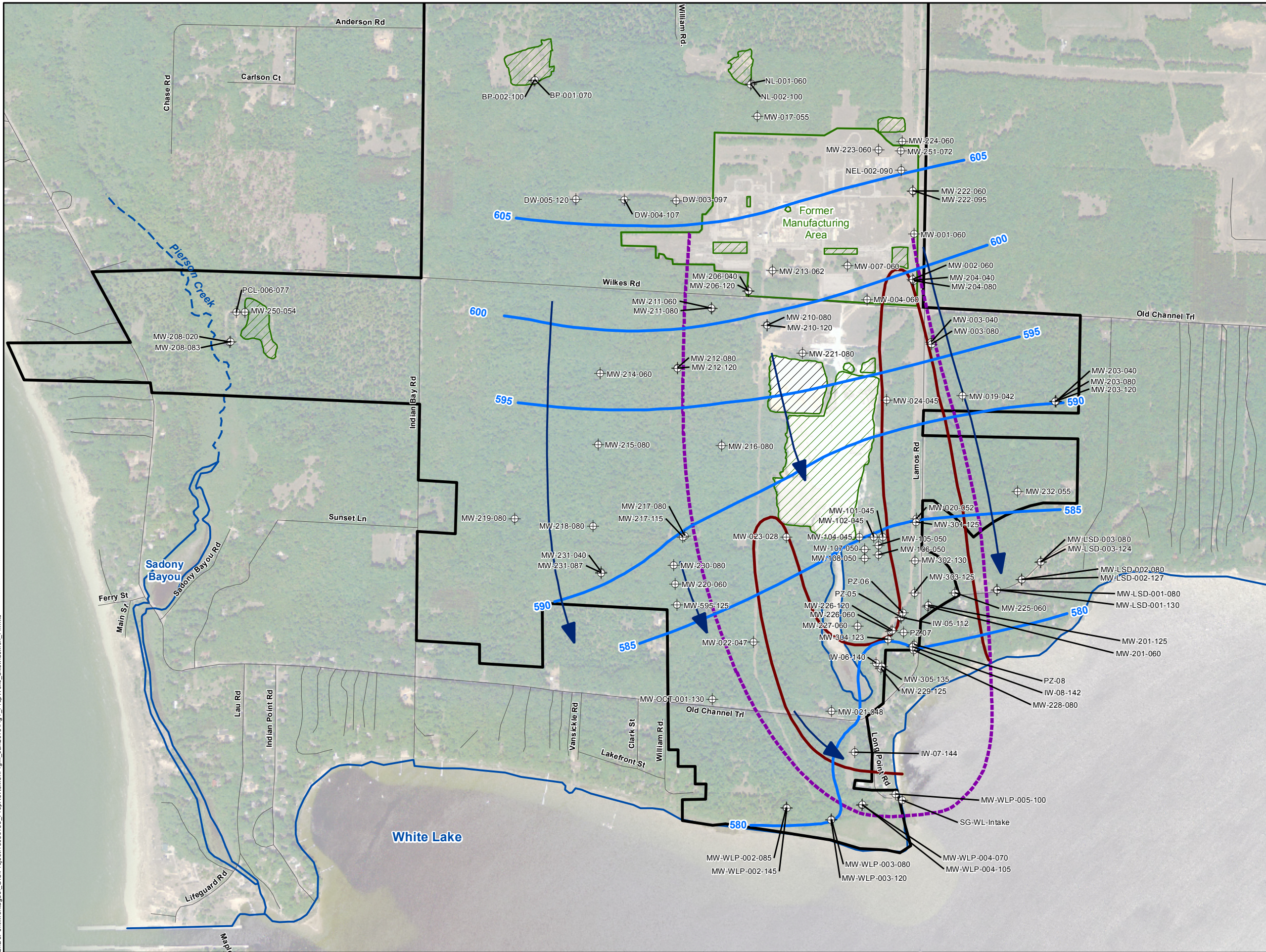
Only interceptor wells (IWs) have transducers.



## Figures



G:\DuPontMontague\_GIS\Project\18986753\_PropRevolMonPrgrm\_Jan2015\Fig1\_PropWells\_StewideMon\_r1.mxd



### Legend

- ⊕ Groundwater Monitoring Location with Well ID
- Potentiometric Surface Contour (in feet)
- ➔ Groundwater Flow Direction (Approximate)
- Limit of FAV Plume (Approximate)
- - - Modeled Capture Zone
- DuPont Property Line (from DuPont Real Estate)
- Road Centerline
- - - Pierson Creek
- ▭ Surface Water Feature
- ▨ Waste Management Unit (WMU) or Area of Concern (AOC)
- ▭ Former Manufacturing Area

NOTES:  
Groundwater contours based on elevations measured in June 2014.

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

#### Area Map

0 500 1,000 2,000  
Feet  
1 inch = 1,000 feet  
MAP FORMATTED FOR "B" (11" X 17") SIZE SHEET.  
TEXT SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

## AECOM

AECOM  
Sabre Building, Suite 300  
4051 Ogletown Road  
Newark, DE 19713

### PROPOSED WELLS FOR SITE-WIDE MONITORING PROGRAM

#### Proposed Revision to Monitoring Program DuPont Montague Facility Montague, Michigan

|                               |                             |
|-------------------------------|-----------------------------|
| FILE NUMBER:                  | PROJECT NUMBER:<br>18986753 |
| DESIGNED BY:<br>GEG           | DATE:<br>1/14/2015          |
| DRAWN BY:<br>CAD              | FIGURE NUMBER:<br>1         |
| DATA QUALITY CHECK BY:<br>GEG |                             |



**Attachment A**

**Simplified Long-Term  
Monitoring Optimization  
(SLTMO) Tool  
Documentation**

**Report**

# **Simplified Long-Term Monitoring Optimization (SLTMO) Tool Documentation**

**Final**

**1 November 2012**



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# TABLE OF CONTENTS

|                                  |           |
|----------------------------------|-----------|
| <b>LIST OF TABLES .....</b>      | <b>i</b>  |
| <b>LIST OF FIGURES.....</b>      | <b>ii</b> |
| <b>1. INTRODUCTION .....</b>     | <b>1</b>  |
| <b>2. OVERVIEW .....</b>         | <b>2</b>  |
| 2.1 Use of SLTMO .....           | 2         |
| 2.2 Program Requirements .....   | 3         |
| <b>3. PROCEDURES .....</b>       | <b>4</b>  |
| <b>4. USER SETUP .....</b>       | <b>10</b> |
| 4.1 Questionnaire .....          | 10        |
| 4.2 EIM Setup .....              | 10        |
| 4.2.1. Location Groups .....     | 11        |
| 4.2.2. Parameter Groups .....    | 11        |
| 4.3 Setup of the Tool .....      | 11        |
| <b>5. CASE STUDIES.....</b>      | <b>20</b> |
| 5.1 Silicon Valley, CA Site..... | 20        |
| 5.2 Phoenix, AZ Site.....        | 21        |
| 5.3 New York, NY Site.....       | 23        |
| 5.4 Case Studies Conclusion..... | 25        |

## REFERENCES

## LIST OF TABLES

| <b>TABLE<br/>NO.</b> | <b><u>TITLE</u></b>                            |
|----------------------|--|
| 5-1                  | Summary of Results for Silicon Valley, CA Site |
| 5-2                  | Summary of Results for Phoenix, AZ Site        |
| 5-3                  | Summary of Results for New York, NY Site       |

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**LIST OF FIGURES**

| <b>FIGURE<br/>NO.</b> | <b><u>TITLE</u></b>                  |
|-----------------------|--------------------------------------|
| 3-1                   | SLTMO Process Flow Overview          |
| 4-1                   | Example Questionnaire Form           |
| 4-2                   | Locations Screenshot                 |
| 4-3                   | More Location Filters Screenshot     |
| 4-4                   | Parameters Screenshot                |
| 4-5                   | More Parameter Filters Screenshot    |
| 4-6                   | Additional Filters Screenshot        |
| 4-7                   | Additional Setup Screenshot          |
| 4-8                   | Organic/Inorganic Options Screenshot |

# **SIMPLIFIED LONG-TERM MONITORING OPTIMIZATION (SLTMO) TOOL DOCUMENTATION**

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## **1. INTRODUCTION**

This paper presents the documentation for the development of the Simplified Long-Term Monitoring Optimization (SLTMO) tool in EIM. Locus has developed this proprietary tool and methodology to assist site managers and/or stakeholders in assessing sampling programs and performing long-term monitoring optimization (LTMO). Current methods/programs such as Monitoring and Remediation Optimization System (MAROS) and Cost-Effective Sampling (CES) require the development of site-specific criteria and a large amount of user input which is time consuming, whereas the SLTMO tool focuses on a site's data and the groundwater velocity. SLTMO utilizes the most recent data points from monitoring wells to evaluate for predictable trends or patterns.

This paper also includes case studies to evaluate the reproducibility of the SLTMO tool. Specifically, the study is intended to evaluate the sampling frequency recommendations provided by the tool based on statistical predictions of future sample results. This paper will provide an overview of the SLTMO tool and the site-specific requirements for its use. In addition, the study will look at the results of SLTMO analysis run at multiple demonstration sites to illustrate the viability of this tool for use on sites with long term groundwater monitoring requirements.



## 2. OVERVIEW

The Simplified Long-Term Monitoring Optimization (SLTMO) is a data analysis tool that is designed to assist technical personnel in assessing their data and optimizing their current sampling programs. SLTMO analyzes, assesses, and makes recommendations by examining the stability or consistency of a site's data. Site-specific criteria, such as groundwater velocity and size of the site are used in the analyses. Similar programs have been developed and used to optimize groundwater sampling, such as Cost-Effective Sampling (Ridley and MacQueen, 2005), and Monitoring and Remediation Optimization System (MAROS) (Aziz et. al., 2006), but these programs can be difficult to apply and require tremendous user input and oversight. EIM's SLTMO tool greatly simplifies the process. The tool requires less input and is designed with a user-friendly format.

The SLTMO program was developed based on a combination of statistical techniques, in-depth knowledge of the groundwater contaminants and remediation sites, and acceptance criteria data. Acceptance criteria data from the National Environmental Laboratory Accreditation Program's (NELAP) Proficiency Testing results (NELAP, 2012) was utilized in the development of SLTMO. NELAP is a program that implements the National Environmental Laboratory Accreditation Conference standards. These acceptance criteria provided guidance in the development of the decision criteria for the SLTMO program and determining significance in changes in analytical data over time. Additional fine-tuning was done through extensive testing and empirical analysis to develop this robust tool.

The SLTMO program is developed to assess groundwater contaminants, specifically volatile organic compounds (VOCs) and hydrocarbons. However, the program can be used to assess any groundwater contaminant. The program allows for the necessary adjustments to analyze inorganic compounds. Some inorganic compounds may require adjustments to address higher maximum contaminant levels (MCLs) or action levels, and this can be done within the SLTMO program. VOCs with higher action levels or cleanup levels may be evaluated through adjustments in the program. The tool's default settings target low MCL VOCs and hydrocarbons such as trichloroethylene (TCE), tetrachloroethylene (PCE), and benzene.

### 2.1 Use of SLTMO

The tool is designed to provide guidance to complement a site manager's overall site evaluation. The program's recommendations must be assessed by qualified personnel for review and finalization. The SLTMO tool can provide the users a great deal of information about contaminant activities in a specific well (overall increasing, overall decreasing, static – no discernible trend, no detections, inconsistent concentrations – high variability, recent increase, recent decrease, latest sampling date, earliest sampling date, number of data points). However, the program does not take into account all site conditions; there may be site activities which the tool is not aware of which may impact the groundwater. This is why a technical review of the results is essential.

The tool is designed to output four potential recommendation frequencies: biennial, annual, semi-annual, and quarterly. This range of frequencies is typically observed for sampling programs in the environmental industry. The program does not go beyond recommending sampling frequencies higher than quarterly or lower than biennial. Sampling more frequently than quarterly involves a significant increase in sampling program costs. Sampling less frequently than biennial is not typically seen in the industry and less likely to be approved by regulatory agencies. In both extremes, significant rationale would be needed to make those kinds of recommendations and this type of evaluation is beyond the scope of the SLTMO process. In addition, the tool does not attempt to recommend cessation of monitoring, or addition of new monitoring points. It is up to the appropriate site managers and/or stakeholders who are knowledgeable of the site to make such assessments.

## 2.2 Program Requirements

To obtain sampling frequency recommendations from the SLTMO tool, the following requirements are essential for obtaining the best results. However, if all of the requirements are not in place or appropriate for the site, the SLTMO tool may still be used to review and assess a site's data. The minimum requirements to use the tool are as follows:

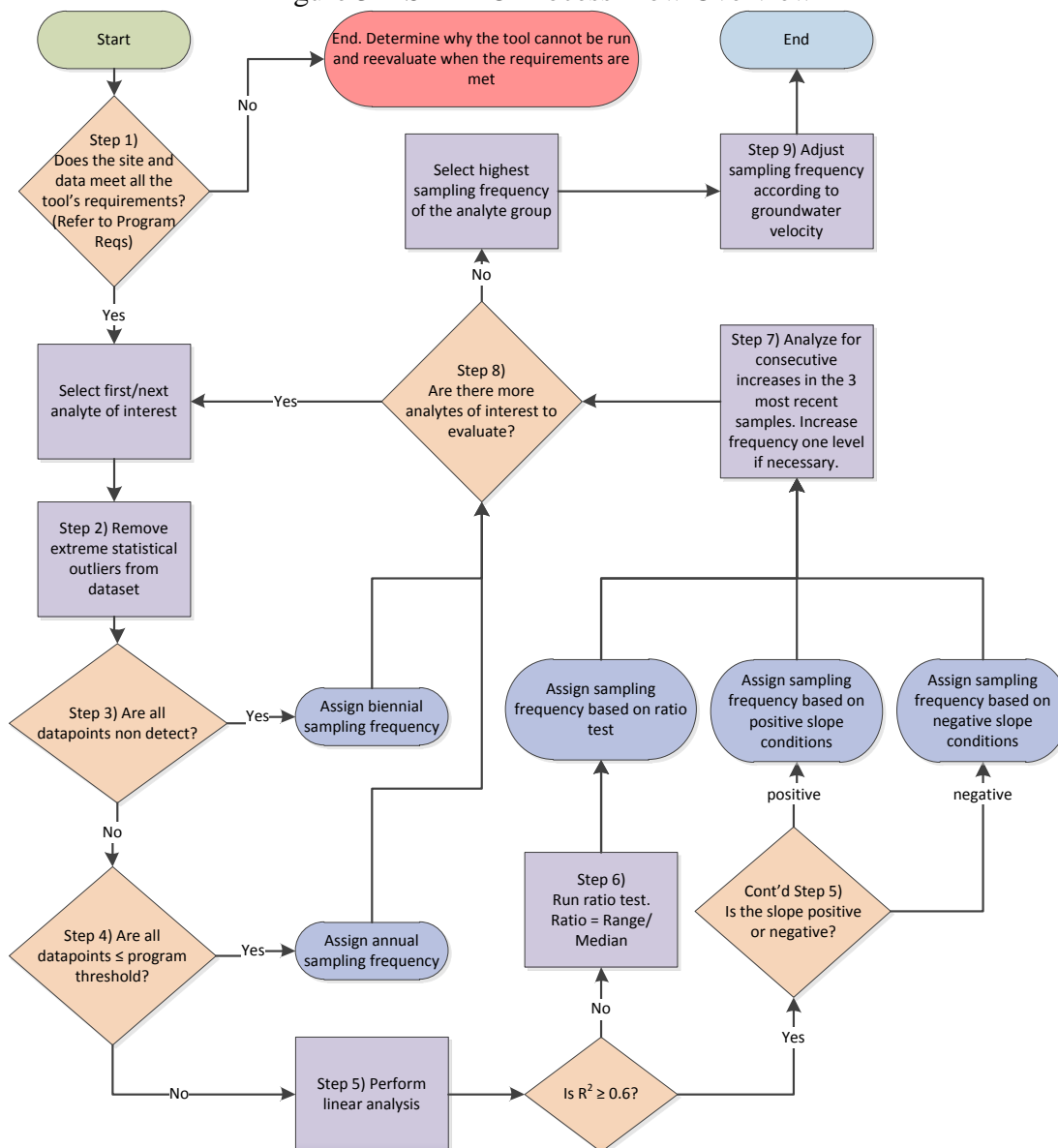
- The location and migration direction of the source(s) contamination.
- The groundwater velocity and direction.
- The minimum size of the site is 200ft by 200ft.
- Minimal groundwater elevation changes. If a site experiences significant groundwater level fluctuations due to seasonal changes or tidal influence, the site may not be appropriate for sampling frequency recommendation assessment.
- Clean wells (sentinel wells) down-gradient of the source(s) contamination. Sentinel wells are used to assure the public and the regulators, that the groundwater plume boundary is defined.
- No active underground storage tanks or underground piping carrying hazardous constituents. Sampling frequency recommendations should not be made in areas with active source areas, where additional contaminants may be introduced to the groundwater.
- Minimum of 6 data points spread over a 1.5-year period. Data over a 3-year period or more is recommended. Data over multiple years is desired to account for potential seasonal variation.
- No data gaps greater than 2.25 years or less than 60 days.
- Location coordinates (e.g. northing/easting or latitude/longitude). This information is used to ensure that no two monitoring locations have the same coordinates and that consistent location IDs are used. It is strongly recommended that a site verifies their location IDs before running this analysis. If locations IDs are mislabeled, inappropriate recommendations can result.

Using this program with incomplete information or in inappropriate conditions (active sources, unknown sources, unknown groundwater velocity, etc.), may produce inaccurate or inappropriate results. All results should be review by technical personnel knowledgeable of the site. The SLTMO program is designed to be a guidance tool, and all results should be review by technical personnel to verify appropriateness of the recommendations.

### 3. PROCEDURES

This section discusses the required procedures for implementing the SLTMO at each well location and evaluated per analyte of interest. Figure 3-1 provides a process flow overview of the SLTMO procedures.

Figure 3-1 SLTMO Process Flow Overview



Step 1) The user must confirm that there is sufficient data for the analysis. These requirements ensure that the quantity and quality of the data supports the tool's analysis. These requirements are consistent with EPA guidance (USEPA and USACE, 2005). Locus' minimum requirement is 6 data points over a 1.5-year data period, but data over a 3-year period or more is recommended. STLMO also requires that the temporal spacing between data points is sufficient. The program requires a minimum of 60 days between data points and a maximum of 2.25 years. In general, the dataset ideally has even temporal spacing and temporal spacing close enough such that no significant information is lost in the time gap but also far apart enough such that trends can be distinguished. While 6 data points is the minimum requirement, the program allows the user to include more data points if desired. In most cases, 6 data points can be used to produce defensible results.

Step 2) Extreme statistical outliers are removed from the data set for analysis using the Tukey method (Tukey et. al., 1983), unless the data point is the most recent. A good LTMO program needs to address outliers (USEPA and USACE, 2005). Extreme statistical outliers are removed for the purpose of eliminating distorted data points and avoiding false interpretations. Extreme statistical outliers can be caused by numerous factors including poor handling of samples, cross contamination, analytical equipment error, human transcription errors, and so forth. Extreme statistical outliers for the most recent data are maintained because the data point may indicate the beginning of an upward or downward trend.

Step 3) If all of the data points are below the detection limit, then assign the SLTMO tool's minimum monitoring standard of biennial. Analytes with all nondetect concentrations pose the least concern for site managers and thus are appropriately assigned the lowest sampling frequency.

If this case is triggered and the biennial sampling frequency is assigned, then the tool directs the program Step 8) to assess the next analyte of interest. If the case is not triggered, the program goes on to Step 4).

Step 4) If all data points are less than or equal to the program's threshold, then assign an annual sampling frequency and no further evaluation will be necessary for the given analyte. The program's threshold requirement is designed to address analytes with concentrations that are near or below the MCL or action level. Analytes that have concentrations near or below the MCLs or action levels pose less of a concern to site managers than those with concentrations significantly above them. Therefore, a minimum standard sampling frequency of annual is assigned. The tool requires that the user inputs the program threshold value which is applied to all the analytes of interest in the run. MCLs and action levels can vary per analyte. The program threshold input should be appropriate for the analytes of interest and can be customized to be more conservative as the user desires. The user may also select a list of standards uploaded in EIM. The selection of the program threshold should be justified by a technical professional familiar with the analyte and the applicable regulatory requirements. If

the user does not provide a program threshold, the tool defaults to 10 ppb which is a value slightly above MCLs of most VOCs and hydrocarbons. The 10 ppb value has been thoroughly tested and is found to produce results appropriate for VOCs and hydrocarbons.

If this case is triggered and the annual sampling frequency is assigned, then the tool directs the program Step 8) to assess the next analyte of interest. If the case is not triggered, the program goes on to Step 5).

Step 5) The SLTMO tool performs a linear analysis for qualified datasets and the goodness of fit ( $R^2$ ) is determined. The SLTMO tool establishes that an  $R^2$  of 0.6 is a minimum requirement for evaluations based on slope. Where  $R^2$  is equal to or greater than 0.6 then:

***For Negative Slopes:***

- If the slope of the regression line is negative and the value of the most recent data point is greater than the program threshold, assign sampling frequency based on the absolute value of the residual (R) of the most recent data point. R in this case, refers to the difference between the data point and the arithmetic mean of the analyte concentrations at that location.
  - If  $|R| \leq 2$  standard deviations from the sample mean, assign an annual sampling frequency.
  - If  $2 < |R| \leq 3$  standard deviations from the sample mean, assign a semi-annual sampling frequency.
  - If  $|R| > 3$  standard deviations from the sample mean, assign a quarterly sampling frequency.
- If the slope of the regression line is negative and the value of the most recent data point is less than or equal to the program threshold, assign sampling frequency based on twice the absolute value of the residual (R) of the most recent data point. R in this case, refers to the difference between the data point and the arithmetic mean of the analyte concentrations at that location.
  - If  $2|R| \leq 2$  standard deviations from the sample mean, assign a biennial sampling frequency.
  - If  $2 < 2|R| \leq 3$  standard deviations from the sample mean, assign an annual sampling frequency.
  - If  $3 < 2|R| \leq 4$  standard deviations from the sample mean, assign a semi-annual sampling frequency.
  - If  $2|R| > 4$  standard deviations from the sample mean, assign a quarterly sampling frequency.

***For Positive Slopes:***

Calculate the value defined as the annual change in concentration estimated by the regression line.

- If value  $\leq (0.1 \times \text{median})$ , assign an annual sampling frequency.
- If  $(0.1 \times \text{median}) < \text{value} \leq (0.3 \times \text{median})$ , assign a semi-annual sampling frequency.
- If value  $> (0.3 \times \text{median})$ , assign a quarterly sampling frequency.

Sampling frequency criteria for positive and negative slope conditions were developed using a heuristic approach with application of the SLTMO process on several sites. In the negative slope condition, the use of the R is an indicator of the change in the most recent value. The negative slope conditions are designed such that a location with a greater R value is assigned a higher sampling frequency to appropriately capture the rapid changes occurring at that location. A dataset that has a lower R is indicative of more stable conditions in which case a lower sampling frequency is more appropriate.

In the positive slope condition, the tool relies on the annual change estimated by the regression line and the median as decision criteria for the sampling recommendations. The median was selected for the decision criteria because the median was found to be stronger performer than the mean in test runs. In general, the greater the annual change estimated by the regression line, the higher the recommended sampling frequency. The value is compared against a fraction of the median to normalize the comparison. This allows the annual concentration difference to be evaluated relative to the magnitude of the concentrations. As an example, an annual increase of TCE in groundwater from 50  $\mu\text{g/L}$  to 100  $\mu\text{g/L}$  is a much more significant change than an increase from 1050  $\mu\text{g/L}$  to 1100  $\mu\text{g/L}$ .

The decision criteria are different from the negative slope conditions because there is a greater risk and uncertainty associated with upward concentration trends. Use of R was found to be a poor metric for recommending sampling frequency with increasing concentrations. Hence, a different set of decision criteria were developed.

In the case that  $R^2$  is equal to or greater than 0.6 and a sampling frequency is assigned, then the tool directs the program Step 7). If the case is not triggered, the program goes on to Step 6).

Step 6) If there is no discernible slope, meaning the  $R^2$  is less than 0.6, then the tool cannot assess data based on slope conditions. The tool addresses such cases by assessing the variability of the data measured by ratio of the range to the median. The variability of the data is assessed in the following manner:

- For median  $< 10$  ppb
  - If ratio  $< 3.0$ , assign an annual sampling frequency.
  - If  $3.0 \leq \text{ratio} < 3.5$ , assign a semi-annual sampling frequency.
  - If ratio  $\geq 3.5$ , assign a quarterly sampling frequency.
- For  $10 \text{ ppb} \leq \text{median} < 50 \text{ ppb}$ 
  - If ratio  $< 2.0$ , assign an annual sampling frequency.
  - If  $2.0 \leq \text{ratio} < 2.5$ , assign a semi-annual sampling frequency.

- . If ratio  $\geq 2.5$ , assign a quarterly sampling frequency.
- For median  $\geq 50$  ppb
  - . If ratio  $< 1.0$ , assign an annual sampling frequency.
  - . If  $1.0 \leq \text{ratio} < 1.5$ , assign a semi-annual sampling frequency.
  - . If ratio  $\geq 1.5$ , assign a quarterly sampling frequency.

The ratio is an indicator of the spread and variability of the dataset normalized by the median. In general, datasets with a high ratio (i.e. a high spread and variability) are indicative of unstable conditions and thus a higher sampling frequency is assigned. Low ratios are indicative of more stable conditions.

Sampling frequency criteria for no discernible slope conditions were developed on a heuristic approach. The development of this set of decision criteria was thoroughly tested for VOCs and hydrocarbons. The tool makes a distinction of different criteria at 10 ppb and 50 ppb due to influences of analytical variability. Based on observations of duplicate data of VOCs and hydrocarbons with low detection limits, data points less than 10 ppb tend to have greater analytical error due to proximity to the detection limit. Data points between 10 and 50 ppb are moderately influenced by analytical error and data points greater than 50 ppb are least likely influenced by analytical error. The criteria may be custom adjusted for other kinds of analytes, other than VOCs and hydrocarbons, which may have different detection limits.

Step 7) The SLTMO tool includes a mechanism to account for any significant recent increases which may not be captured by the program's other decision processes. In this step, the tool analyzes the data to determine if the three most recent samples of the dataset were consecutively increasing. If consecutive increases are detected and the most recent concentration is above the program threshold, then the sampling frequency is increased by one level.

For example, if conditions in this step are met and the program has already assigned an annual sampling frequency, then the program reassigns the data one step up which is a semi-annual sampling frequency. In cases where the assigned sampling frequency is quarterly, the highest recommended by the program, then no action is taken.

Step 8) Go to Step 1) and run analysis for next analyte of interest in the analyte group. Once all the analytes of interest have been run for a specific group, the conservative approach is taken and the highest recommended sampling frequency from the group becomes the recommendation for the group for the given location.

Step 9) All recommendations are adjusted according to the groundwater velocity of the site. The recommendations are adjusted as follows:



| Initial Recommendation | velocity < 100 ft/year | 100 ft/year $\leq$ velocity < 250 ft/year | velocity $\geq$ 250 ft/year |
|------------------------|------------------------|---|-----------------------------|
| Biennial               | No Adjustment          | Annual                                    | Semi-annual                 |
| Annual                 | No Adjustment          | No Adjustment                             | Semi-annual                 |
| Semi-annual            | No Adjustment          | No Adjustment                             | No Adjustment               |
| Quarterly              | No Adjustment          | No Adjustment                             | No Adjustment               |

In general, a high groundwater flow at a site is indicative of a more rapid change in groundwater quality. Therefore, an increase in the sampling frequency is appropriate. This step targets recommendations that are low sampling frequencies for sites with a high groundwater velocity.



## 4. USER SETUP

Before running the SLTMO tool, the user is required to setup the tool and prepare additional items including answering critical questions about the site and preparing proper groups in EIM.

### 4.1 Questionnaire

A questionnaire needs to be filled out to determine if the site meets the necessary requirements to provide useful recommendations. After determining the site meets the necessary requirements, the user may proceed with implementing SLTMO. The following table is the standard questionnaire form that should be answered by the site manager or knowledgeable personnel.

Figure 4-1 Example Questionnaire Form

| ID | Data Input Question   | Example Response of an Ideal Site for SLTMO       |
|----|---|---|
| 1  | Is the site well characterized? Is the source of the contamination known?                                     | Yes   |
| 2  | What is the groundwater velocity and direction?   | North, 50 ft/yr (Note: many appropriate answers)  |
| 3  | Are there active underground tanks, and/or piping carrying potentially hazardous constituents?                | No  |
| 4  | Are there clean down-gradient wells that can act as sentinel wells?   | Yes   |
| 5  | Is there a minimum of 6 data points, spread over a 1.5 year period? Note: 3 years or more of data is desired. | Yes   |
| 6  | Are there data gaps larger than 2.25 years?   | No  |
| 7  | What are the monitoring locations of interest for this site?  | MW-1, MW-2, MW-3 (Note: many appropriate answers) |
| 8  | What are the analytes of interest for this site?  | TCE, PCE, VC (Note: many appropriate answers)     |
| 9  | Is the site larger than 200ft by 200ft?   | Yes   |

### 4.2 EIM Setup

Before using the SLTMO tool, it is helpful to set up locations groups and parameter groups of interest. The setup of these groups is located on the navigation bar on the left-side of the EIM page: go to **Setup > Output Options > Location Groups** or **Parameter Groups**.

#### **4.2.1. Location Groups**

When setting up location groups, it is important to group wells by similar groundwater velocities, as the program procedures include adjustments by the groundwater velocity. Grouping is typically done by the hydrostratigraphic unit or aquifer zone.

#### **4.2.2. Parameter Groups**

When setting up parameter groups, it is useful to group analytes by analytical method. Even if only a few analytes within a method are of interest, a subgroup can be created. By keeping analytes grouped based on analytical methods, the results are more useful for making sampling recommendations. In addition, it is very useful to run the SLTMO tool for all analytes in an analytical method to see if other analytes, in addition to the site's chemicals of concern (COCs) would influence the sampling recommendations. Performing a preliminary run of all the analytes also provides an excellent overview of the site's data.

### **4.3 Setup of the Tool**

The following setup describes the choices on each of the SLTMO program tabs. After all required information (\*) is placed into the tab sheets, the *Submit* Button can be selected and the tool will run per the setup configuration.

1. On the **Locations** Tab:
  - 1.1. *Name file (\*)* with a unique name. It is helpful to include run information in the run name.  
Example of a file name is: SiteName\_LocGroup\_Analytes\_NumberOfDataPoints\_RunDate
  - 1.2. *Pick locations, or location group(s)(\*)*. Locations or sub-sites can also be picked on the **More Location Filters** Tab. Only one type of location filter may be used between the four available options: individual locations, location groups, subsites, or hydrostratigraphic units.

Figure 4-2 Locations Screenshot

**STLMO Analysis**

Locations | More Location Filters | Parameters | More Parameter Filters | Additional Filters | Additional Setup | Organic/Inorganic Options

Assign A Name To Your Analysis\*:

**Choose One Or More Locations**

**Available Locations**

- MW10A
- MW10B
- MW5A
- MW5B
- MW6A
- MW6B
- MW7A
- MW7B
- MW8A
- MW8B
- MW9A
- MW9B

>> > < <<

**Selected Locations**

**Choose One Or More Location Groups**

**Available Location Groups**

- MWs
- QTRLY GW Wells
- Quarterly GW Monitoring
- Site A Q105
- Site A Q404
- SLTMO Testing Group
- Zone A
- Zone B
- Zone C

>> > < <<

**Selected Location Groups**

Submit Exit

Figure 4-3 More Location Filters Screenshot

**STLMO Analysis**

| Locations | <b>More Location Filters</b> | Parameters | More Parameter Filters | Additional Filters | Additional Setup | Organic/Inorganic Options |
|-----------|------------------------------|------------|------------------------|--------------------|------------------|---------------------------|
|-----------|------------------------------|------------|------------------------|--------------------|------------------|---------------------------|

**Choose One Or More Subsites**

Available Subsites

>>

>

<

<<

**Selected Subsites**

**Choose One Or More Hydrostratigraphic Units**

Available Hydrostratigraphic Units

>>

>

<

<<

**Selected Hydrostratigraphic Units**

Submit Exit

2. On the **Parameters** Tab:

- 2.1. *Pick parameters, parameter group, or method (\*)* (organic and inorganic compounds should be kept separate). Specific analytical methods can be chosen on the **More Parameter Filters** Tab. The program's default setup is set for analyzing organic compounds. More adjustments need to be made for inorganic compounds. If an inorganic analyte(s) or method is chosen, on the *Analysis Category* pull down menu under the **Parameter** Tab, choose *Metal/Other Inorganics*.

Figure 4-4 Parameters Screenshot

The screenshot displays the 'STLMO Analysis' window with the 'Parameters' tab selected. At the top, there are seven tabs: 'Locations', 'More Location Filters', 'Parameters' (active), 'More Parameter Filters', 'Additional Filters', 'Additional Setup', and 'Organic/Inorganic Options'. Below the tabs, the 'Analysis Category' is set to 'Organics'. The main area is divided into two sections: 'Choose One Or More Parameter Groups' and 'Selected Parameter Groups'. The 'Available Parameter Groups' list includes: 1,2-DCA, 1,2-DCE, 1,4-dioxane, 8260 COCs, 8260B+Fr113+K+MTBE, 8270C+1,4-Dioxane, All analytes, and SLTMO COCs. Between the two lists are four buttons: '>>', '>', '<', and '<<'. At the bottom left, there are 'Submit' and 'Exit' buttons.

Figure 4-5 More Parameter Filters Screenshot

**STLMO Analysis**

| Locations | More Location Filters | Parameters | More Parameter Filters | Additional Filters | Additional Setup | Organic/Inorganic Options |
|-----------|-----------------------|------------|------------------------|--------------------|------------------|---------------------------|
|-----------|-----------------------|------------|------------------------|--------------------|------------------|---------------------------|

**Choose One Or More Methods**

**Available Methods**

- 150.1
- 502.2
- 524.2
- 6010B-STLC
- 6010B-TCLP
- 7470A-TCLP
- 8021B
- 8260
- A4500NH
- A4500PE
- A5310D
- ASTM D1298-85

**Selected Methods**

**Choose One Or More Parameter Categories**

**Available Method Synonyms**

- 150.1
- 314.0
- 314.0 MOD.
- 3510C/8081A
- 415.1
- 6010B
- 6010B-STLC
- 6010B-TCLP
- 7196A
- 7199
- 7470A
- 7470A-TCLP

**Selected Method Synonyms**

Submit Exit

3. On the **Additional Filters** Tab, the choices are:
- 3.1. *Number of data points to be used in the analysis* - The program requires a minimum of 6 data points to perform the SLTMO analysis. However, if more data is available, additional runs should be performed to determine the optimum number of data points that produce the most appropriate results for the site. In most cases, 6 of the most recent data points within the selected timeframe can be used to produce defensible results, however for sites that experience significant seasonal variations or tidal changes, using more data spread over a greater time span may produce more reasonable results. Performing SLTMO runs with different number of data points, and comparing the results is the best way to determine the optimum program setup. If "none" is selected for this entry, all of the available data will be included in the analysis.
  - 3.2. *Data time frame* – The user must specify the time interval of the data to be used in the program.
  - 3.3. *Filtered/Unfiltered* - This option allows the user to specify if they want to only use filtered or non-filtered sample results. If no option is picked, then all data will be included in the analysis.
  - 3.4. *Minimum time span* - This option allows the user to alternatively constrain the dataset by time span rather than number of data points. This minimum time span is 1.5 years and may be increased.
  - 3.5. *Minimum interval in days between sampling events* – This option serves as a check to ensure that the data points are not too close together. The program requires at minimum of 60 days between data points. A higher minimum may be input. If the dataset fails this check, an error message will result.

Figure 4-6 Additional Filters Screenshot

**STLMO Analysis**

| Locations  | More Location Filters | Parameters | More Parameter Filters | <b>Additional Filters</b>   | Additional Setup | Organic/Inorganic Options |
|--|-----------------------|------------|------------------------|---|------------------|---------------------------|
| <b>Use Data From:</b><br>Jan / 1 / 2006<br><b>To:</b><br>Dec / 31 / 2012   |                       |            |                        | <b>Filtered:</b><br><input type="radio"/> Unfiltered<br><input type="radio"/> NO SELECTION<br><input type="radio"/> Filter Status Unknown<br><input type="radio"/> Filtered |                  |                           |
| <b>Maximum No. Of Data Points To Consider (Subject To Date Constraints Selected Above):</b><br><input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input checked="" type="radio"/> None <input type="radio"/> Other <sup>1</sup> |                       |            |                        |   |                  |                           |
| If "Other" Is Selected Above, Specify A Value For The Maximum: <input type="text"/>  |                       |            |                        |   |                  |                           |
| <b>Minimum Time Span<sup>1</sup>:</b> 1.5 years  |                       |            |                        |   |                  |                           |
| <b>Minimum Interval In Days Between Sampling Events:</b><br><input type="radio"/> 60 <input checked="" type="radio"/> 75 <input type="radio"/> 90  |                       |            |                        |   |                  |                           |
| <sup>1</sup> 1.5 years is converted to 16 months in the analysis to accomodate wells sampled on a quarterly schedule that were most recently sampled in the past month.  |                       |            |                        |   |                  |                           |
| <input type="button" value="Submit"/> <input type="button" value="Exit"/>  |                       |            |                        |   |                  |                           |





#### 4. On the **Additional Setup** Tab:

##### 4.1. *Set all nondetects equal to*, the choices are:

- Lowest ND Value
- Geometric Mean of All NDs. The programs default setting is set to use the geometric mean of the NDs. If the detection limits of a data set vary substantially or one ND value is substantially different than the others, this can produce inaccurate analysis results. Using the geometric mean of the NDs produces the most reasonable recommendations.

##### 4.2. *Processing of duplicates*

- *When both results are detects*, the choices are:
  - Use Average
  - Use Maximum value
- *When both results are nondetects*, the choices are:
  - Use Average
  - Use Maximum
  - Use Minimum
- *When the higher result is a detect and the lower a nondetect (ND)*, the choices are:
  - Use the detected Value
  - Use Nondetect value
- *When the lower result is a detect and the higher a nondetect (ND)*, the choices are:
  - Use average (Label Of Aggregate=Detected) – this choice take an average of the detected value and the nondetect value and characterizes the choice as detected
  - Use average (Label Of Aggregate=Not detected) – this choice take an average of the detected value and the nondetect value and characterizes the choice as nondetect.
  - Use detected value
  - Use nondetect

Figure 4-7 Additional Setup Screenshot

**STLMO Analysis**

Locations | More Location Filters | Parameters | More Parameter Filters | Additional Filters | **Additional Setup** | Organic/Inorganic Options

Set All Nondetects Equal To:

☐ Lowest ND Value ☒ Geometric Mean Of All NDs

Processing Of Duplicates:

Combine Duplicates: ☒

If Option To Combine Duplicates Is Checked, Select One Option From Each Box To The Right:

When Both Results Are Detects: Use Average

When The Higher Result Is a Detect And The Lower A Nondetect (ND): Use Detected Value

When Both Results Are Nondetects: Use Average

When The Lower Result Is a Detect And The Higher A Nondetect (ND): Use Average (Label Of Aggregate=Detected)

Submit Exit

5. On the **Organic/Inorganic Options** Tab: These options allow the user to define alternative program criteria.
- 5.1. For *Both Metals/Other Inorganics and Organics*: This option allows the user to set a different program threshold limit from the program default limit, which is 10 ppb. This option is useful for organic and inorganic compounds that have higher cleanup standards.
- 5.2. For *Metals/Other Inorganics Only*: This option allows the user to set a program threshold limit per analyte based a set of standards uploaded into EIM. The user also has an option to apply a factor to the standards, 50%(0.50), 75%(0.75), 80%(0.80), or 100%(1.0), such as the maximum contaminant level (MCL), National Pollutant Discharge Elimination System (NPDES) limits, or user-specified values entered into the system. Standards must be uploaded into EIM by the user via action limits under Setup > Output Options > Action Limits or via file upload under Input > Data Uploads > Load Other Files. If *No Selection* is chosen, then the program will use the default value of 10 ppb, and no *Adjustment factor* will be used. If specified levels are used and the concentrations are below these specified levels, these cases will produce lower sampling frequency recommendations.

Figure 4-8 Organic/Inorganic Options Screenshot

**STLMO Analysis**

| Locations  | More Location Filters | Parameters | More Parameter Filters | Additional Filters | Additional Setup | Organic/Inorganic Options |
|--|-----------------------|------------|------------------------|--------------------|------------------|---------------------------|
| <p><b>For Both Metals/Other Inorganics and Organics:</b></p> <p>When All Data Points Are At Or Below This Concentration For A Give Analyte, Assign The Annual Sampling Frequency To The Right. Value Must Be In ug/L. <input type="text" value="5"/></p> <p><b>For Metals/Other Inorganics Only:</b></p> <p>You have various options with respect to metals and other inorganics. First, you can select an action limit and one or more analytes. Secondly, you can elect to analyze any parameters for which background levels have been set up. In either case, EIM will multiply these limits/background levels by a factor (0.5, 0.75, 0.8) selected by you. EIM will then compare these adjusted values with the mean concentrations computed for each well. Provided other conditions are met, EIM will assign an annual sampling frequency to any well and parameter whose mean value falls below the adjusted limit/background level. Otherwise, if you have entered an "Annual Frequency Cutoff" above, EIM will use this value BUT ONLY IF no action limit or background value has been specified for the analyte.</p> <p> <input checked="" type="radio"/> None         <input type="radio"/> Use Limit Selected Below         <input type="radio"/> Use Appropriate Background Level       </p> <div style="border: 1px solid black; padding: 5px;">         Canada Tbl 1 Bkgd Industrial Course Soil<br/>         Canada Tbl 2 Industrial Course Soil Potable GW Conditions<br/>         Canada Tbl 8 Industrial Course Soil within 30m of Water Body<br/>         Effluent Average Monthly 2009 NPDES<br/>         Effluent Daily Max 2009 NPDES<br/>         Lomita Selected SSL for Soil<br/> <b>No Selection</b><br/>         Reasonable Potential Analysis 2009 NPDES<br/>         Residential Shallow Soil Gas CHHSL 2005       </div> <p> <b>Adjustment Factor:</b><br/> <input type="radio"/> 0.50         <input type="radio"/> 0.75         <input type="radio"/> 0.80         <input type="radio"/> 1.0         <input checked="" type="radio"/> Not Applicable       </p> |                       |            |                        |                    |                  |                           |

## 5. CASE STUDIES

To demonstrate the effectiveness of the SLTMO tool, Locus used the tool to analyze data for three case studies with varying site conditions and history. The purpose of these case studies was to determine how it would perform in making predictions and recommendations when the site conditions varied. The main contaminant of concern was analyzed for each site to help make recommendations for sampling frequency and to determine how reproducible the results are. The three demonstration sites are in three significantly different hydrogeological settings:

- Silicon Valley, CA
- Phoenix, AZ
- New York, NY

Six data points are used for each of the three runs performed at the three different sites. A summary of the three runs for each site is as follows:

- Run 1: Current data – starts with the most recent sampling date and goes back for a total of 6 sampling events.
- Run 2: One sampling event back –includes a total of 6 sampling events ending with the event prior to the most recent sampling event. The total length of time covered by the included data is dependent on the current sampling schedule of the site. One of the demonstration sites is on a quarterly sampling schedule, one is on a semi-annual, and the other is currently on an annual sampling schedule.
- Run 3: Two sampling events back - includes a total of 6 sampling events ending at two events prior to the most recent sampling event. The purpose of going back two sampling events is to evaluate the stability of the recommended sampling frequencies with additional data.

### 5.1 Silicon Valley, CA Site

The Silicon Valley site is located in a structural depression between the Santa Cruz Mountains to the south and the Diablo Range to the north on terrain that gently slopes to the north-northeast. The groundwater is set in an alluvial deposit aquifer system. This Silicon Valley Site's main contaminant is trichloroethylene (TCE), and there are 17 well locations with sufficient data to perform 3 consecutive runs of the SLTMO analysis stepping back in time. The site currently has all 17 wells sampled on a semi-annual basis. To get the minimum required number of data points, data was used from 6/30/08 to 6/30/12.

Comparing Run 1 to Run 2, there is 1 location (5.5%) with a sampling frequency recommendation change, and zero (0%) locations with increased sampling frequencies, such as an annual increasing to a semi-annual. Comparing Run 2 to Run 3, there are 2 locations (11%) with sampling frequency changes, one increasing and one decreasing. Decreasing sampling frequencies are expected overtime

for wells being sampled at higher frequencies (quarterly and semi-annual rates), as a result of decreasing concentrations and data variability.

Table 5-1 Summary of Results for Silicon Valley, CA Site

| Location ID | Parameter | Number of Data points Used In SLTMO Analysis | Run 1: Recommended Frequency - Data From 6/30/08 to 6/30/11 | Run 2: Recommended Frequency - Data From 12/31/08 to 12/31/11 | Run 3: Recommended Frequency -Data From 6/30/09 to 6/30/12 |
|-------------|-----------|--|---|---|--|
| 10          | TCE       | 6  | Annual  | Annual  | Annual   |
| 11          | TCE       | 6  | Annual  | Annual  | Semi-Annual  |
| 13          | TCE       | 6  | Semi-Annual   | Semi-Annual   | Annual   |
| 14          | TCE       | 6  | Annual  | Annual  | Annual   |
| 15          | TCE       | 6  | Annual  | Annual  | Annual   |
| 8           | TCE       | 6  | Annual  | Annual  | Annual   |
| 9           | TCE       | 6  | Semi-Annual   | Annual  | Annual   |
| 11U         | TCE       | 6  | Annual  | Annual  | Annual   |
| 2U          | TCE       | 6  | Annual  | Annual  | Annual   |
| 4U          | TCE       | 6  | Biennial  | Biennial  | Biennial   |
| 5U          | TCE       | 6  | Biennial  | Biennial  | Biennial   |
| 7U          | TCE       | 6  | Annual  | Annual  | Annual   |
| 9U          | TCE       | 6  | Annual  | Annual  | Annual   |
| 3U1         | TCE       | 6  | Annual  | Annual  | Annual   |
| 3U2         | TCE       | 6  | Quarterly   | Quarterly   | Quarterly  |
| 4U1         | TCE       | 6  | Annual  | Annual  | Annual   |
| 4U2         | TCE       | 6  | Quarterly   | Quarterly   | Quarterly  |
|             |           |  | % Change  | 6%  | 11%  |
|             |           |  | % Increase  | 0%  | 6%   |

## 5.2 Phoenix, AZ Site

The Phoenix site is located in an arid region, and the groundwater is located in an alluvial-bedrock aquifer system. This Phoenix site's main contaminant is trichloroethylene (TCE), and there are 42 well locations with sufficient data to perform 3 consecutive runs of the SLTMO analysis stepping back in time. The site currently has all 42 wells sampled on a semi-annual basis, however one year earlier these locations were on a quarterly sampling program. The data is a combination of semi-annual and quarterly data. To get the minimum required number of data points, data was used from 9/9/09 and up to 6/30/12.

Comparing Run 1 to Run 2, there is 1 location (2%) with a sampling frequency recommendation change, and zero (0%) locations with increased sampling frequencies, such as an annual increasing to a semi-annual. Comparing Run 2 to Run 3, there are zero locations (0%) with sampling frequency changes.

Table 5-2 Summary of Results for Phoenix, AZ Site

| Location ID | Parameter | Number of Data points Used In Analysis | Run 1:<br>Recommended Frequency - Data From 9/9/09 to 6/30/11 | Run 2:<br>Recommended Frequency - Data From 12/09/09 to 12/31/11 | Run 3:<br>Recommended Frequency - Data From 2/5/10 to 6/30/12 |
|-------------|-----------|--|---|--|---|
| 100A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 101A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 103A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 105A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 106A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 108A        | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 109A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 110A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 112A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 113A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 116A        | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 118A        | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 120         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 122A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 123A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 124A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 125A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 126A        | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 127A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 128A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 129A        | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 130A        | TCE       | 6                                      | Annual  | Annual   | Biennial  |
| 22AR        | TCE       | 6                                      | Semi-Annual   | Semi-Annual  | Semi-Annual   |
| 37A         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 38A         | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 52A         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 54A         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 55A         | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 58A         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 60A         | TCE       | 6                                      | Annual  | Biennial   | Biennial  |
| 61A         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 62A         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 63A         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 64A         | TCE       | 6                                      | Biennial  | Biennial   | Biennial  |
| 65A         | TCE       | 6                                      | Annual  | Annual   | Annual  |
| 68A         | TCE       | 6                                      | Annual  | Annual   | Annual  |

| Location ID | Parameter | Number of Data points Used In Analysis | Run 1:<br>Recommended Frequency - Data From 9/9/09 to 6/30/11 | Run 2:<br>Recommended Frequency - Data From 12/09/09 12/31/11 | Run 3:<br>Recommended Frequency - Data From 2/5/10 to 6/30/12 |
|-------------|-----------|--|---|---|---|
| 84A         | TCE       | 6                                      | Annual  | Annual  | Annual  |
| 90A         | TCE       | 6                                      | Annual  | Annual  | Annual  |
| 95A         | TCE       | 6                                      | Biennial  | Biennial  | Biennial  |
| 96A         | TCE       | 6                                      | Annual  | Annual  | Annual  |
| 98A         | TCE       | 6                                      | Biennial  | Biennial  | Biennial  |
| 99A         | TCE       | 6                                      | Biennial  | Biennial  | Biennial  |
|             |           |  | % Difference  | 2%  | 0%  |
|             |           |  | % Increase  | 0%  | 0%  |

### 5.3 New York, NY Site

The New York site is directly adjacent to a bay, and a portion of the site may be influenced by tidal changes. This New York site's main contaminant is benzene, and there are 51 well locations with sufficient data to perform 3 consecutive runs of the SLTMO analysis stepping back in time. The site currently has all 51 wells sampled on an annual basis, however three years earlier these locations were on a semi-annual sampling program. The data is a combination of semi-annual and annual data. To get the minimum required number of data points, data was used from 5/25/05 to 6/1/12.

Comparing Run 1 to Run 2, there are 4 locations (8%) with a sampling frequency recommendation change, and one (2%) location with increased sampling frequencies. Comparing Run 2 to Run 3, there are 5 locations (10%) with sampling frequency changes, and two locations (4%) with increased sampling frequencies.

Table 5-3 Summary of Results for New York, NY Site

| Location ID | Parameter | Number of data points used in the analysis | Run 1:<br>Recommended Frequency - Data From 5/25/05 to 6/01/10 | Run 2:<br>Recommended Frequency - Data From 5/24/06 to 6/01/11 | Run 3:<br>Recommended Frequency - Data From 6/8/07 to 6/01/12 |
|-------------|-----------|--|--|--|---|
| 0024        | Benzene   | 6  | Biennial   | Biennial   | Biennial  |
| 0030        | Benzene   | 6  | Biennial   | Biennial   | Biennial  |
| 0031        | Benzene   | 6  | Biennial   | Biennial   | Biennial  |
| 0032        | Benzene   | 6  | Biennial   | Biennial   | Biennial  |
| 0033        | Benzene   | 6  | Biennial   | Biennial   | Biennial  |
| 0034        | Benzene   | 6  | Biennial   | Biennial   | Biennial  |
| 0044        | Benzene   | 6  | Biennial   | Biennial   | Biennial  |
| 0065        | Benzene   | 6  | Annual   | Annual   | Annual  |
| 102         | Benzene   | 6  | Annual   | Annual   | Annual  |
| 112         | Benzene   | 6  | Annual   | Annual   | Annual  |
| 114         | Benzene   | 6  | Biennial   | Biennial   | Biennial  |

| Location ID | Parameter | Number of data points used in the analysis | Run 1: Recommended Frequency - Data From 5/25/05 to 6/01/10 | Run 2: Recommended Frequency - Data From 5/24/06 to 6/01/11 | Run 3: Recommended Frequency - Data From 6/8/07 to 6/01/12 |
|-------------|-----------|--|---|---|--|
| 124         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 126         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 127         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 128         | Benzene   | 6  | Annual  | Annual  | Biennial   |
| 136         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 137         | Benzene   | 6  | Annual  | Annual  | Annual   |
| 138         | Benzene   | 6  | Annual  | Annual  | Annual   |
| 139         | Benzene   | 6  | Annual  | Annual  | Annual   |
| 140         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 195         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 196         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 197         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 198         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 199         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 200         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 201         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 202         | Benzene   | 6  | Annual  | Annual  | Annual   |
| 203         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 204         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 205         | Benzene   | 6  | Quarterly   | Quarterly   | Quarterly  |
| 216         | Benzene   | 6  | Semi-Annual   | Quarterly   | Annual   |
| 219         | Benzene   | 6  | Annual  | Annual  | Annual   |
| 233         | Benzene   | 6  | Semi-Annual   | Semi-Annual   | Semi-Annual  |
| 234         | Benzene   | 6  | Quarterly   | Quarterly   | Semi-Annual  |
| 237         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 238         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 239         | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 240         | Benzene   | 6  | Annual  | Annual  | Biennial   |
| 241         | Benzene   | 6  | Annual  | Biennial  | Biennial   |
| 243         | Benzene   | 6  | Semi-Annual   | Annual  | Semi-Annual  |
| 244         | Benzene   | 6  | Biennial  | Annual  | Annual   |
| 262         | Benzene   | 6  | Annual  | Annual  | Quarterly  |
| 263         | Benzene   | 6  | Semi-Annual   | Annual  | Annual   |
| 264         | Benzene   | 6  | Biennial  | Annual  | Annual   |
| 265         | Benzene   | 6  | Quarterly   | Quarterly   | Semi-Annual  |
| 267         | Benzene   | 6  | Semi-Annual   | Annual  | Annual   |
| 269         | Benzene   | 6  | Annual  | Annual  | Annual   |
| 273         | Benzene   | 6  | Annual  | Annual  | Annual   |
| 3           | Benzene   | 6  | Biennial  | Biennial  | Biennial   |
| 5           | Benzene   | 6  | Biennial  | Biennial  | Biennial   |

| Location ID | Parameter | Number of data points used in the analysis | Run 1:<br>Recommended Frequency - Data From 5/25/05 to 6/01/10 | Run 2:<br>Recommended Frequency - Data From 5/24/06 to 6/01/11 | Run 3:<br>Recommended Frequency - Data From 6/8/07 to 6/01/12 |
|-------------|-----------|--|--|--|---|
|             |           |  | % Change   | 8%   | 10%   |
|             |           |  | % Increase   | 2%   | 4%  |

## 5.4 Case Studies Conclusion

Locus' technical staff reviewed the recommendations from each of the case study sites and concluded that the SLTMO tool produces reasonable results with respect to the data evaluated. Locus' technical review is based on a comparison of the reasonableness of the recommendations output by the tool to internal evaluations of the data. At each of the three case studies, the SLTMO tool has proven that reasonable recommendations can be made for varying hydrological settings. The overall consistency between runs demonstrates the reproducibility of the tool and also demonstrates the adequacy of the program's minimum 6 data point requirement.

Locus' technical review does not encompass the history or full site specific conditions of these case study sites. The scope of the SLTMO tool and similarly the scope of Locus' technical review cover only the limited site information and analytical data made available to the tool. All recommendations produced by the tool serve as a guidance to assist knowledgeable site staff in the review and finalization of their groundwater monitoring sampling program.



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