Periodic Review Report

For

CMS ASSOCIATES REMEDIATION SITE
Site no. 915168

210 French Road
Town of Cheektowaga
Erie County NY

March 2018

Prepared for:

CMS Property Associates, LLC
228 Linwood Avenue
Buffalo NY 14209

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FIGURES

APPENDICES

I INTRODUCTION

1.1 Summary of Site

The CMS Property Associates Remediation Site, designated site no. 915168 on the *NYS Registry of Inactive Hazardous Waste Sites, is* at 210 French Road in the Town of Cheektowaga, Erie County, NY. Figure 1 shows the site location.

The site was the subject of a soil spill cleanup after CMS excavated and removed what turned out to be a leaking, underground, 2,000-gallon, storage tank in March 1996. CMS completed a soil cleanup and in 1998 began operating a groundwater extraction/treatment system (GWE/TS) to capture and treat contaminated groundwater in the bedrock. In early 2005, the NYSDEC reclassified the site from Class 2 to Class 4, which means that it was properly closed but requires continued management and operation of the Remedial Measures.

In late 2005, CMS sold the property to Cugini Ventures LLC, and currently the adjacent Rosina Food Products, Inc., leases the property from Cugini to warehouse—among other items—maintenance supplies, used mechanical equipment, equipment parts, and packaging/shipping materials. Also in 2005, CMS installed a SVI system in a portion of the 210 French building, and in 2015, it enlarged and improved the SVI system. The GWE/TS (that CMS continues to own and operate) is in a room at the northwest corner of the building.

1.2 Nature and Extent of Contamination

The LUST apparently contained fuel products, and chlorinated hydrocarbon solvents and other VOC wastes—although the complete range of compounds in the tank was not characterized before it was excavated. During the removal, it was evident that an unknown quantity of the tank contents had leaked both into the surrounding soil and onto the surface of the bedrock on which the tank was installed.

The LUST had contaminated about 350 tons of soil, and subsequent groundwater monitoring revealed that VOCs had entered the bedrock groundwater regime and moved beyond the tank location. Compounds observed in the monitoring wells consisted of mostly dense chlorinated solvents, dense insecticides and pesticides, dense refrigerants and halogens, light gasoline-related petroleum hydrocarbons (BTEX,) aromatic hydrocarbons, and some light chlorinated solvents. Nearly 50 VOC compounds have been identified, although not all are observed in every well, and total VOC concentrations vary by orders of magnitude between monitoring well locations.

Site characterizations soon after the LUST and contaminated soil were removed revealed that contamination had reached five perimeter monitoring wells at the property boundaries, and extended offsite especially toward the northwest and east. The extent of the contaminate plume was undetermined at that time, however.

Subsequent monitoring confirmed that contamination extends off site—primarily toward the northwest, east, and southeast. Contamination at considerably lower VOC concentrations extends relatively short distances beyond the west, north, and south property lines.

1.3 Remedial History and Effectiveness of the Program

Initially, four Remedial Measures were chosen for the CMS Site:

1. Removing and properly disposing of the LUST to eliminate the contamination source.
2. Excavating the surrounding contaminated soil and treating it on-site.
3. Installing a vacuum-enhanced, multi-phase groundwater extraction and treatment system (GWE/TS) to control the groundwater contaminate plume.
4. Imposing Institutional Controls (deed restrictions on the use of the property) to minimize the potential for human contact with contaminates.

The first two IRMs have reduced Total VOC concentrations in perimeter monitoring wells by up to 98-percent.

The GWE/TS system was placed in an outdoor shed and it began operating in June 1998, but a December 1999 fire destroyed the equipment. CMS replaced and relocated it to inside the building, and placed it back on line in April 2000. For the first ten years, the GWE/TS had not operated as it had been designed and specified—so it never reached its full potential to control groundwater VOC movement. The extraction wells were retrofitted to the correct design arrangement in 2009–2010.

The GWE/TS has helped to decrease VOCs at the perimeter wells, but the magnitude of improvement is mixed—some wells exhibit significantly greater reductions than others do. In particular, the highest VOC concentrations remain in the perimeter wells to the east and southeast. In the perimeter wells where we have 1996 post-LUST-removal data, Total VOCs have been reduced by a range of 32% to 99%.

In 2006, two sub-slab depressurization systems were installed in the 210 French building, subsequent to 2005 Soil Vapor Intrusion sampling. Additional SVI Evaluations were prepared for selected surrounding buildings and for the 210 French building in October 2013 and September 2014 respectively. No SVI issues were discovered in the off-site buildings—so no remediation was required. The SVI Evaluation for the 210 French building revealed that the indoor air contained only low-level VOCs, and that the then-existing SSDS remediated about 80% of the footprint that exhibited above-action-level VOCs. In spring 2015, the existing SSDS was improved by installing additional sub-slab suction points and two new roof-mounted blowers. Subsequent testing demonstrated that the SVI remediation objectives were met.

Progress Made Toward Meeting the Remedial Objectives of the Site

The remedial objective to control vapor intrusion into the 210 French building has been attained.

Regarding the remedial objectives to control the contaminant plume and reduce groundwater VOCs, because the GWE/TS wells were retrofitted and reconfigured in 2011, we are using that as a new baseline year to evaluate what impact the RM has on media contamination. There has been a reduction in the groundwater plume since the 2011 baseline, and groundwater sampling indicates that VOC concentrations at the outer edges generally continue to decrease, albeit at different rates depending on the locations.

It may take several years to determine the long-term effect of the reconfigured extraction wells, but the GWE/TS continues to remove VOC mass from the source area—which is an immediate benefit in helping to meet those remedial objectives.

Ability of the Remedial Program to Achieve Remedial Objectives for the Site

The Institutional Controls for the site have achieved their remedial objectives to minimize the potential for human contact with contaminants.

The SVI remediation of the 210 French building had achieved its remedial objective.

The effectiveness of the GWE/TS to meet groundwater cleanup objectives is inconclusive. An evaluation of its zone of influence was attempted during a six-month study from December 2014 to June 2015. Unfortunately, the study was unsuccessful due to equipment issues that resulted in gaingi only partial data. Another attempt to determine the system's zone of influence may be attempted during 2018 if groundwater levels are appropriate.

Nevertheless, ongoing groundwater level monitoring indicates that the GWE/TS cannot maintain a depressed level in the extraction wells during periods of high precipitation and snowmelt. There has been a consistent "groundwater mound" at the extraction wells since the initial remediation effort (see March 2000 *Record of Decision*.) The GWE/TS does lower the groundwater level in the extraction wells when operating during dry weather, but it is unclear to what extent, if any, surrounding contamination is drawn toward and captured. The low transmissivity of the bedrock and low amount of groundwater extracted, indicate that the induced zone of depression and vacuum enhancement may not move great amounts of *surrounding* contamination toward the extraction wells. However, the GWE/TS is effective in capturing persistent VOCs in the bedrock groundwater at the former LUST location proper that could migrate to the north (groundwater down-gradient direction.)

1.4 Site Management Plan

The 2015 *Site Management Plan* incorporates the remedial effort, and it will be be updated during 2018 to reflect the two newest monitoring wells, outcome of MW-5, and other site information.

1.5 Compliance with the Institutional Controls

In the past CMS has complied with, and the current property owner is complying with, the Institutional Controls. No change to the ICs is is necessary.

1.6 Compliance with the Engineering Controls

CMS continues to comply with operating the SVI remediation system in the 210 French building and the site GWE/T System Engineering Controls.

The site-wide annual inspection shows that all systems are operating as intended.

1.7 Recommendations Based on Engineering Judgment for Necessary Changes to the Remedy, Engineering Controls, or Site Management Plan

1. Update the *Site Management Plan* as necessary.

2. MW-5 was damaged when portions of the parking lot were repaved, and it has been necessary to remove it from use, and a Work Plan was submitted to Region 9 to decommission the well. MW-5 needs to be:
   a. Properly decommissioned.
   b. Evaluated, using prior sampling results, to determine if it needs to be replaced, and if so, at what location.

3. Continue monitoring shallow overburden well MW-16 to determine whether perched groundwater being recharged from permeable areas north of the 210 French building, relates to the recharge of bedrock groundwater and to the "groundwater mound" that persists in the area around the former LUST.
   (*Ongoing effort.*)

4. Update the elevation survey for the site.

5. Once the resurvey is done, using depth-to-bedrock probes determine/map the top of bedrock elevations to help determine:
   a. The route and fate of contaminants from the LUST that may have travelled across the bedrock surface.
   b. How bedrock micro-variability may be impacting the recharge of bedrock groundwater in the area around the former LUST.

6. Further investigate the blockage in the suction line at well MW-2 and whether it can be removed.

The following addresses data gaps and their sequencing is based on CMS's financial resources. Some remedial efforts and investigations discussed in prior PRRs, could not be accomplished on their anticipated schedule because of the financial hardship due to the penalty in the 2013 Consent Order, DEC requiring CMS to repeat the prior SVI sampling, the need for indoor-air sampling that CMS had not anticipated when it initiated the 2010 SVI Evaluation, and the SVI remediation of the 210 French building.

7. Closely watch monitoring wells MW-14 and MW-15 to determine if an off-site well on Boxwood Drive is warranted to determine the extent or movement of the contaminant plume that exists to the east of the 210 French building.
(Ongoing 2018-2019.)

8. Determine the bedrock hydraulic conductivity at key monitoring wells using the slug tests to further characterize site hydrogeology and to refine the *Conceptual Site Model.* This effort had begun, but drought conditions during the testing (groundwater being below the well sand pack level) caused erroneous well recovery data.
(Anticipated spring 2018.)

9. Using existing information and the calculated bedrock hydraulic conductivity, determine the contaminant mass flux across and the mass discharge off of the site.
   (Anticipated 2018.)

10. Determine the zone of influence of the GWE/TS and evaluate if any reasonable modifications will enhance its ability to increase the area of collection.
   (Possibly during *2018.*)

11. Evaluate the plume stability and the fate of VOC parent/daughter compounds to determine historical trends and the natural attenuation of contaminants. The goal being to further refine the *Conceptual Site Model,* and to identify and evaluate any further improvements to the GWE/TS that could enhance its ability to collect VOCs and control the contaminant plume.
   (Anticipated 2018-2019.)

12. Evaluate an optimized GWE/TS against a *Monitored Natural Attenuation* option.
   (Anticipated 2019.)

13. Evaluate if a more-aggressive RM is appropriate. Methods that might be considered are ISCO by applying electron-donor or other catalysts to enhance VOC biotransformation and dechlorination, accelerated groundwater flushing by injecting the GWE/TS effluent, or using thermal destruction to degrade groundwater contaminants.
   (Anticipated Spring 2019.)

II SITE OVERVIEW

2.1 Site Location and Features

The CMS Associates Remediation Site contains 3.74 acres at 210 French Road in Cheektowaga, NY, east of Union Road (NYS Route 277.) French Road and Industrial Parkway border it to the south and north (see Figure 1 for location.) It contains a single-story, 44,750-square-foot, concrete slab-on-grade, masonry-block building, and a large asphalt and gravel parking lot—sections of which have had new bituminous overlays and spot repairs in 2008, 2009, 2011, and 2015.

The following properties surround the CMS Remediation Site (see Figure 2):

• Northwest (across Industrial Pkwy)	Latina Food Services warehouse/distribution center. 1 Scrivner Drive.
• North (across Industrial Pkwy)	Sears and UPS Supply Chain distribution center. 60 Industrial Parkway.
• North	Rosina Food Products Customer Welcome Center 109 Industrial Parkway.
• Northeast	Uni-Punch, Inc. (vacant) 56 Boxwood Lane.
• East	South Line Fire District #10 station. 40 Boxwood Lane.
• East	Absolute Canine (pet boarding/daycare) 240 French Road.
• South (across French Rd)	Patio home development along Hickory Grove.
• West	Rosina Food Products, Inc. 170 French Road and 75 Industrial Parkway.

Available utilities include underground public water and natural gas, and aboveground electricity, telephone, and cable TV. According to the 1996 Remedial Investigation prepared for the CMS site, there are no known potable water wells or other groundwater supply wells in the area, and there were no features on or near the site to indicate any material risk for public contact with groundwater contaminants.

Figure 3 depicts the surrounding land uses, which consist of:

- Commercial/light industrial/warehousing to the west, north, and east.
- Multi-family apartments to the southwest.
- A newer single-family patio home development to the south.
- Established single-family neighborhoods to the southeast.
- No nearby public-use areas that present a risk of exposure to groundwater contaminants.

The nearest waterway is Slate Bottom Creek (Class C, ~1,900 feet north-northeast of the Site,) a tributary of Cayuga Creek (Class B and Class C.) There are no state-regulated wetlands within one-mile of the site, but there are several narrow US Fish and Wildlife Service *National Wetland Inventory* sites along Slate Bottom Creek and Cayuga Creek.

The site grade drops four feet from French Road (627.5') to Industrial Parkway (623.5',) and the local drainage pattern mirrors that topography. Runoff is overland, being intercepted and transported by open roadside ditches with driveway culverts and a storm sewer on Industrial Parkway. A drainage swale north of Industrial Parkway carries the runoff north to Slate Bottom Creek (see Figure 3.)

2.2 Nature and History of Contamination Prior to Remediation Effort

According to CMS, a former tenant installed a UST in the 1960s and later abandoned its use. Presumably, at some unknown point in time, that or another tenant disposed of chlorinated solvents in the UST—as either a one-time event or as a continuing practice.

In April 1996, CMS disposed of approximately 1,810 gallons contained in the UST, and then excavated the tank and found it compromised. The contents had leaked into the surrounding soil and onto the bedrock upon which it was installed.

CMS began a Remedial Investigation and initial groundwater sampling at the site perimeter revealed that contamination (chlorinated solvents, and some gasoline components) extended beyond the property boundary. The highest VOCs were toward the northwest (MW-5 at Industrial Parkway – total VOCs ~5,000 ppb) and toward Boxwood Lane to the east (MW-7; total VOCs ~1,500 ppb.) No off-site monitoring was performed at that time.

2.3 Selected Remedial Program for the Site

Two out of the five total remedial measures for the CMS Site were successfully completed, and three are ongoing. There were initially four RMs chosen:

1. The contamination source (LUST) was removed in April 1996 and properly disposed of off site.

2. About 350 tons of contaminated soil was excavated, treated on site until it met NYSDEC TAGM 4046 guidance values, and was spread on the lawn north of the building, and graded, topsoiled, and seeded.

3. Institutional Controls (Deed Declarations) were placed on the site to minimize the possibility for human contact with the contaminants. These are effective and currently remain in place.

4. A vacuum-enhanced, multi-phase groundwater extraction and treatment system (Carbtrol Corporation model MPX-75) was installed to in 1998 to reduce the spread of contaminates. Wells MW-1, -2, -3, and -9, are manifolded to the system and RI reports from 1996 and 1997 discuss the anticipated levels of VOCs to be treated. However, there was no evaluation of bedrock/groundwater elevations, the production capability or elevations of the proposed

extraction wells, the location/elevation of the proposed GWE equipment, or its potential ability to extract groundwater/contaminants from the tight bedrock. The GWE/TS currently operates continuously (24/7.)|

2.4 Additions to the Original Remedial Program

2.4.1 210 French Building Sub-Slab Depressurization Systems Engineering Controls

The fifth and likewise ongoing RM was instituted in 2006 after sampling showed high VOCs under portions of the 210 French building footprint and low-level VOCs in the indoor air. Two independent sub-slab depressurization systems were installed inside the northwest corner (nearest the LUST) and nearer to the east wall of the building, and both operated uninterrupted until 2015.

In 2015, adding additional sub-slab suction points and two new roof-mounted blowers were added to enlarge and enhance this RM. Additionally, several locations in the building received passive remediation (sealing cracks in the concrete floor slab, open wall/slab joints, and floor slab penetrations.) CMS currently operates the SSD Systems continuously (24/7.)

2.4.2 Additional Groundwater Monitoring Wells

The initial remedial program included long-term monitoring at four onsite extraction wells (MW-1, -2, -3, -9) and five site perimeter wells (MW-4, -5, -6, -7, -8.)

In 1998, off-site monitoring wells MW-10 and MW-11 were installed toward the north and northwest, respectively. In 2010, off-site wells MW-12 and MW-13 were installed to the northwest and north respectively, and in 2011, a sixth perimeter well (MW-14) was installed on the east property line.

In 2015, a seventh perimeter well (MW-15) was installed near the southeast corner, and a shallow well to top-of-bedrock (MW-16) was placed north of the 210 French building. It is anticipated that MW-16 will yield information about what circumstances lead to recharge of the bedrock groundwater in the area proximate to the former LUST and the extraction wells.

III PERFORMANCE of the REMEDIAL MEASURES

3.1 Conceptual Site Model

There has been no change to the Site Conceptual Site Model during the reporting period. Additional investigation is proposed for the Site (see Section 1.7, Recommendations)—the result of which will be incorporated into and help refine the CSM.

The *CSM* (see Figure 4) depicts a north-south cross-section of the CMS Site from French Road to north of Industrial Parkway, running approximately through MW-1. Well locations are plotted perpendicular to the profile baseline. For reference, each well indicates the groundwater level that the consultant at the time reported (17 months after CMS removed the LUST.)

3.2 Performance of Groundwater Extraction in Controlling the Piezometric Surface

According to the 1997 RI report, the GWE/T System was installed to arrest the movement of the contaminant plume toward the site perimeter using "shallow groundwater pumping" to lower the confined groundwater head and applying a vacuum on the bedrock in the vicinity of the former LUST. This was presumably envisioned to create an undetermined, unspecified zone of influence in and surrounding the extraction well field (MW-1, -2, -3, -9.) The RI provided an evaluation of neither the anticipated ability of the system to lower the piezometric head, nor the expected zone of influence that the GWE/TS would create. There was also no evaluation of what level the groundwater surface could be lowered to, and what the effect would be on the observed groundwater gradient across the site (typically 4 to 5 feet from south to north.)

The GWE/TS in the “Carbtrol room” of the building is typically checked daily—and the extraction system vacuum, treatment system run time, effluent pump run time, and maintenance items are recorded in a logbook. During the reporting period, there was no significant GWE/TS downtime, or abnormal maintenance performed on or major repairs to the equipment. Only normal maintenance was provided (e.g., air compressor oil and oil filter during annual preventive maintenance, replacing air regulator filters, etc.) The extraction pump and the spare standby pump continue to be high maintenance items due to scale deposited from the groundwater but they are serviced whenever required (cleaning/descaling, replacing diaphragms, valve balls, etc.) They required rebuilding during the reporting period—which is typically an annual occurrence.

Maintaining constant/consistent vacuum on the extraction well network was problematic in past years due to maintenance and equipment repair issues (e.g., a failed suction pump and air solenoid valve, the air compressor inexplicably resetting, etc.) Serious equipment issues have been prevented during this reporting period by more-intensive preventive maintenance.

The extraction wells are connected to the GWE/T equipment inside the building via a single, underground, suction manifold—so losing vacuum at one well can affect system performance. This constraint will need to be addressed in determining the radius of influence of the extraction system.

Likewise because the GWE/TS is tied together via one suction manifold, from a system maintenance/repair standpoint a leak in that manifold, or between it and any extraction well, can affect performance of the entire system.

During the reporting period, the GWE/TS was set to extract groundwater continuously (i.e., operate 24/7) and the digital controller installed in spring 2015 to independently control the extraction and treatment times of the GWE/TS was not used. No treatment of the extracted groundwater was necessary because air sparging that occurs in the extraction wells, reduces the VOCs to well below the discharge permit limits.

The Figure 4 shows the piezometric surface in the confined groundwater in late August 1997—and illustrates a noticeable elevated head at the former LUST (also observed in subsequent years, and noted as a "groundwater mound" in the March 2000, NYSDEC *Record of Decision*.) During groundwater monitoring after the extraction wells were retrofitted in 2010, we observed that the same condition occurs after precipitation events. This indicates that there is significant groundwater recharge in the vicinity of the extraction well field. This hampers the ability of the GWE/TS to lower the piezometric surface on a consistent basis and therefore capture groundwater and VOCs from the area surrounding the extraction wells.

Indications are that, while the GWE/TS can draw down the groundwater level in the extraction wells themselves during dry weather, the effect is not observed distant from the extraction wells. With MW-2 disconnected from the vacuum system, any drawdown effect there appears to be minimal or at least inconsistent at best. We attribute this to the tight bedrock in the localized area and recharge of the persistent "groundwater mound."

Observations and Conclusions Regarding the Groundwater Surface

We use 2011 as the baseline condition to evaluate the GWE/TS performance because, only after the extraction wells were rebuilt and retrofitted in 2010, has the RM operated as it was designed and intended. Additionally, after 2011 key groundwater quality data is available from MW-12, MW-13, and MW-14. Figure 5 shows groundwater conditions for the baseline period.

The following are observed relative to the persistent "groundwater mound":

- Adjacent toward the east and northeast is a substantial permeable lawn area, which likely contributes to short-term perched groundwater, and subsequent localized, rapid recharge to the bedrock groundwater.

- There appears to be micro variability in the top-of-rock, so groundwater moving across the bedrock surface could pond at certain locations and contribute to the bedrock groundwater recharge. We had placed depth-to-refusal probes to determine the elevations of the rock surface and an updated site survey (anticipated spring 2018) will be used to determine and contour map the top of bedrock surface.

- Excavating and backfilling the former LUST and contaminated soil areas likely had increased the permeability of the overburden, allowing more perched groundwater to migrate into and pool in the area.

- Most of the surface on and adjacent to the CMS Site is impervious (parking lot and building footprint) so those areas would not contribute to groundwater recharge.

These observations support the hypothesis that the "groundwater mound" is due to surface water percolating through the overburden, traveling across the top of rock, and recharging the bedrock groundwater in the area of the extraction wells. The bedrock in that vicinity could also have greater fracturing—which would contribute to more rapid recharge than at other areas of the site.

Groundwater levels in wells that have applied vacuum are problematic in determining the site groundwater gradient because their water surface is artificially depressed. Therefore, one extraction well is sometimes isolated from the GW/TS vacuum manifold to use it as a control to determine the static groundwater level at the extraction well field. That was typically MW-3, but during 2016 a problem developed at MW-2 and its 1-inch, PVC suction line became clogged and the vacuum dropped to essentially zero. Three attempts were made to dislodge whatever is obstructing the line using air pressure and a plumber with a power auger. All were unsuccessful, and further attempts will be made in 2018 to televise the line to determine what caused the blockage. In the meantime, MW-2 is disconnected from the GWE/TS, and is being used instead of MW-3 to monitor the static groundwater.

Retrofitting the groundwater extraction wells appears to have been a positive step because the system can significantly lower the groundwater level in the extraction wells. Figure 6 shows the contrast between the August 1997 piezometric grade line (showing the groundwater “mound”) to June 2011 elevations after the retrofitted extraction-wells began operating.

Groundwater elevation monitoring at MW-4 continues to show significant differences between it and other groundwater elevations on the site. Because MW-4 is only 66-feet east of MW-1, the significantly different groundwater elevations continue to suggest a discontinuity in groundwater connectivity between it and the other wells.

Referencing the CSM (Figure 4) it is obvious that the lower the piezometric surface that the GWE/TS can consistently maintain, the more effectively it will control the groundwater plume. However, lowering the level in the extraction wells has a greater effect on the groundwater gradient to the south (the up-gradient side of the site,) than it does to the north (the down-gradient direction.) Conversely stated, the groundwater surface at the extraction wells must be greatly depressed in order to have a significant effect in the general (northerly) direction that the plume migrates.

Therefore, it is critical to maintain the maximum vacuum possible at the extraction wells—but the effectiveness is limited by the shallower depth of extraction wells MW-1, -2, and -3. This limits the ability of the GWE/TS to affect the general groundwater movement, which is toward the northwest.

Additional Investigations To Address Issues Regarding Groundwater Control

The RIs recommended in Section 1.7) may help answer these unknowns about the groundwater regime:

1. Why the groundwater mound persists at the extraction wells.
2. Why anomalies exist in the groundwater elevations at MW-4.
3. The zone of influence of the GWE/T System.

3.3 Performance of Extraction in Controlling the Contaminant Plume

A key goal of installing the GWE/TS was to control the migration of the contaminant plume by creating a zone of influence that captures groundwater and VOCs from outside the immediate area of the former LUST. It is questionable whether the low bedrock transmissivity will allow that. However, even if the system does not significantly affect the plume movement, extracting VOCs from the source area will still help reduce the further migration of those contaminants. We believe that this is the primary benefit of the operating the GWE/TS on this site.

Observations Regarding Control of the Contaminant Plume

Appendix A summarizes the total VOCs observed in the perimeter, off-site, and groundwater extraction wells since implementing the RMs and rebuilding the extraction wells. In reviewing the well VOC concentrations and looking at the contaminant plume (see Figure 7,) it appears to be under control with the limit of the highest VOC levels continuing to contract.

While the RMs have decreased the initial concentrations that were observed in the perimeter wells, compared to the wells to the south, west, and north, the reduction in VOC levels remain problematic to the southeast (MW-14) where the highest concentrations remain. As the retrofitted GWE/TS and retrofitted extraction wells continue to operate, there should be no VOC movement in that direction and we expect the VOC levels will continue to reduce.

The retrofitted GWE/TS appears to be contributing to lowering VOC concentrations at the perimeter wells, except at MW-6, compared to historical levels. And as noted MW-14 concentrations are reducing, but at a very slow rate. There is insufficient data at MW-15 to draw conclusions about long-term VOC levels there.

The magnitude of groundwater VOCs at MW-14 is higher than what is observed in even the wells in the source area. Being on the upgradient side of the source area, VOC levels at MW-14 are consistent with the *CSM* 's depiction of the tank contents having migrated to the south, across the top-of-bedrock. At some point, contaminated perched groundwater would have encountered fracturing that allowed it to enter the confined bedrock groundwater.

3.4 Mass of Groundwater Contaminates Removed and Treated

The GWE/TS removes VOC product and contaminated groundwater from the immediate vicinity of the former LUST—which removes those contaminants from what could migrate toward the site boundary. The treated effluent has consistently been below the discharge limit of 155 μg/l of the Erie County/Buffalo Sewer Authority permit.

Observations Regarding Groundwater Contaminants Removed

During the reporting period, any GWE/T System downtime includes days the system was off for cleaning, pump servicing, compressor preventive maintenance, etc. There were no unusual equipment failures or replacements, with only normal service needed on the primary and backup groundwater extraction pumps.

The GWE/T System was set to operate continuously (i.e., 24/7) during the reporting period. Since the system was installed in 1998, we estimate the following performance:

Reporting Period	CY 2017
GWE/T System operated	356 days
Cumulative VOC mass removed, lbs	45.512
Mass VOC removed for year, lbs	0.270
Groundwater volume extracted, gal	43,340
Cumulative extracted, gal	953,594

The discharge of the treated groundwater is calculated on a monthly basis, the average daily flow typically varies between 20 gpd to 500 gpd.

There is no method to determine, or compare removals to the VOC mass that was released from the LUST to the soil, bedrock, and groundwater. Nevertheless, the estimates allow a comparison of relative year-to-year performance of the GWE/T System.

3.5 Current Extent of Groundwater Contamination Plume

As of December 2011, contamination extended to all perimeter wells and to the two off-site wells toward the northwest (MW-12) and north (MW-13.) The current estimated extent of the contaminant plume is shown by Figure 9.

Observations Regarding Extent of the Contaminant Plume

Figure 8 and Figure 9 depict the current iso-concentration map showing the estimated extent of the groundwater contaminant plume during the reporting period, compared to the baseline year 2011 (see Figure 7.) The six bedrock monitoring wells that were added to the Remedial Program have been invaluable in helping to define the limit and density of the plume.

The indication from the cumulative groundwater sampling program, is that the extent of the plume continues to reduce, compared to baseline year 2011 (see Figure 7.) However, the bedrock hydraulic transmissivity at each location is unknown, and the iso-concentration maps contours were developed without the aid of RIs to further define site hydrogeology. Therefore, we suggest caution when interpreting the depicted contamination zones, and the plume limits should be considered approximate.

The wide range of *contaminants of concern* (~50) makes it unwieldy to include tabular data of sampling results on a single well location map, because it would be, at best, difficult to read—so we show the results for the contaminants of concern in tabular form in Appendix A. See Appendix B also for a graphical analysis of each monitoring well since the date that the original contamination sources (LUST and soil) were removed, for the period after the GWE/TS Remedial Method began operating, and for the period after the four extraction wells were rebuilt.

Additional Investigations to Address Issues Regarding Contaminant Plume

To address the high VOCs in MW-14, additional investigation is warranted to establish the limit of the groundwater plume toward the east and southeast, and MW-15 that was installed during the reporting period will assist in addressing this concern. An additional well may be warranted to establish the extent and any movement of the plume extending off site to the east and the ongoing monitoring at MW-14 and MW-15 will help to make that determination.

The chosen RMs have not been as effective in controlling the contaminant plume quickly as may have been initially anticipated. Nevertheless, because the GWE/TS never operated as intended and threfore never reached its full potential to control groundwater levels and the contaminant plume, we cannot conclude that the GWE/T RM is inadequate. As the reconfigured extraction wells system are operated and further groundwater quality data is obtained, the efficiency of the GET/TS RM will be evaluated and a determination made whether modifications are warranted. Due to the low bedrock hydraulic conductivity, it may take several years to observe a consistent trend at some perimeter wells.

In addition to the continued well monitoring, we attempted to establish bedrock hydraulic conductivity at each well to provide a more-complete picture of Site hydrogeology. Unfortunately low groundwater due to drought conditions resulted in erroneous well recovery data, and the effort will need to be repeated.

IV COMPLIANCE with SITE INSTITUTIONAL and ENGINEERING CONTROLS

4.1 Compliance with Institutional Controls

The Institutional Controls that are imposed on the Site, limit potential human exposure to the contaminants. The owner(s) of the site are precluded from using:

- Groundwater from beneath the CMS Site without treatment first to render it safe.
- The property for anything other than commercial or industrial use.

These were filed as a Deed Declaration that runs with the land, and therefore are binding on the current owner of the property, Cugino Ventures LLC.

CMS, the property owner, and the building occupant all continue to comply with these restrictions, and the institutional controls attained their intended remedial objective. No modifications or additions to the IC Plan are anticipated.

4.2 Compliance with Engineering Controls

The ongoing engineering controls i=on the Site consist of (1) operating the GWE/T System RM, and (2) operating the SVI remediation systems that were installed in the 210 French Building.

Groundwater Extraction and Treatment System

The GWE/TS Engineering Control is now operating substantially as designed according to the engineering specifications for the system as supplied by the equipment manufacturer and specified by Hazard Evaluations, Inc. in the 1996-1997 RIs. CMS continues to own and operate the GWE/TS.

Description of Performance Monitoring

The performance of the system is checked daily and recording the vacuum in the suction manifold that imparts the vacuum on the extraction wells. During the reporting period, the equipment operated exceptionally well, with no significant issues.

The performance of the system in treating VOCs is determined by semiannual effluent sampling according to the Erie County/Buffalo Sewer Authority permit for the discharge to the sanitary sewer system. The compliance reports are filed with the NYSDEC Region 9 DER and typically, the effluent is sampled during groundwater well monitoring. It was unnecessary to operate the treatment portion of the system during the reporting period, because air sparging that occurs in the extraction wells significantly reduces the VOC concentrations and consequently the treatment system effluent is consistently well below the EC/BSA permit limits.

Secondarily, its long-term GWE/TS performance will be determined by groundwater quality sampling and the amount of VOCs remaining in the extraction and site perimeter wells.

Adjustments to the extraction system (e.g., air compressor and pump operation, vacuum applied

to the suction manifold, well vacuums) are performed as needed. When appropriate (depending on the cause and the effect on the system,) the extraction wells are checked if a problem is recognized such as lost vacuum on the suction manifold or if an unusual condition develops with the extraction pump. The frequency of these inspections is adjusted as necessary if any issue affecting system operation or performance arises.

Routine Maintenance and Inspections

Any maintenance is recorded in the daily inspection logbook that also documents system performance. Additionally all shop tickets and repair reports are maintained. The daily readings are reviewed to identify trends such as low vacuum or a persistent maintenance condition. A copy of this logbook is submitted separately with the PRR.

210 French Building SVI Remediation Systems

The two SSD Systems installed in the 210 French building are operating as they were intended and meet the remedial objectives.

Description of Performance Monitoring

Performance monitoring of the SVI remediation systems in the 210 French Road building is recorded in the same logbook as the GWE/TS. See the logbook submitted separately with the PRR for the SSD Systems' performance.

Routine Maintenance and Inspection Forms

There are currently no maintenance or inspection forms besides the logbook that document the SSDS system performance. Standard forms may be prepared in the future if maintenance on the system becomes necessary.

V COMPLIANCE with SITE MANAGEMENT PLAN

5.1 Status of SMP

The SMP was updated in 2015 to reflect the current RM components, and the Engineering and Institutional Controls. It will be again updated during 2018 to incorporate new monitoring wells and other new site information.

5.2 Monitoring to Determine Treatment System Performance and Effectiveness

Effluent from the GWE/TS is discharged under an Erie County/Buffalo Sewer Authority permit that requires semi-annual compliance monitoring. The submitted reports are copied to Region 9 DER as PDFs, and the EDDs are uploaded to the EQuIS database.

Since the GWE/T System went on line in 1998, the effluent has consistently been well below the permit limits, and oftentimes VOCs have been non-detectable using EPA Method 625 (as provided for in the discharge permit.) More recently, effluent has bees analyzed using the lower-detection-limit Method 8021, and currently Method 8260. Using any of the three test methods, the treatment system effluent is typically an order of magnitude below the 1.55 mg/l permit discharge limit.

During the reporting period the GWE/TS effluent was sampled as follows:

Date	Total VOCs GWE/T System Effluent (μg/l)
March 21, 2017	75.03
June 6, 2017	55
November 2. 2017	500.6

Note: Discharge permit limit is 1,550 μg/l

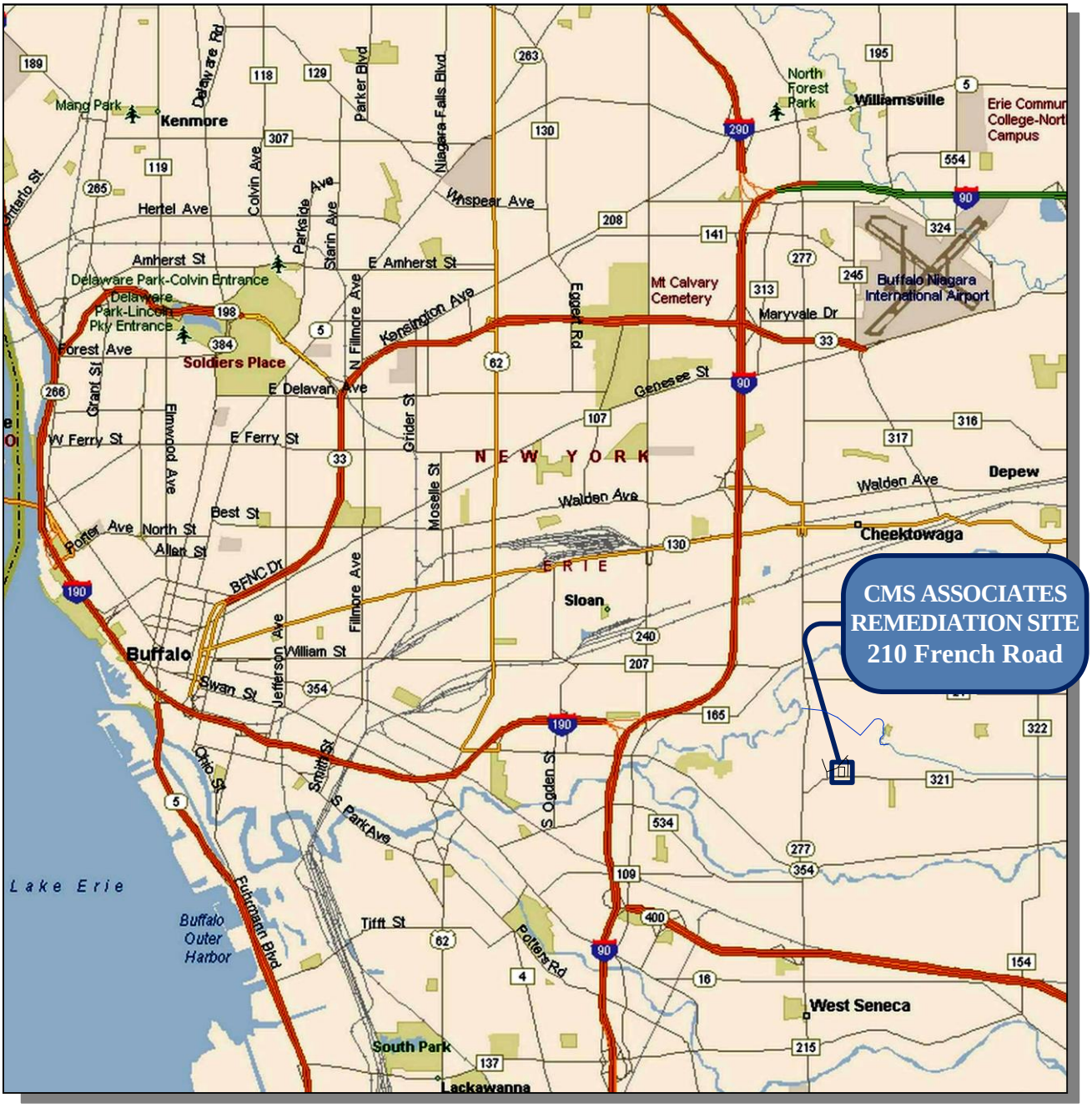
5.3 SVI Remediation System Monitoring

The SSD Systems in the 210 French building are monitored to ensure that the sub slab maintains a negative pressure, and the results are recorded in a logbook maintained in the GWE/TS equipment room. During the reporting period, the SSD Systems have operated as designed and are meeting the Remedial Objective.

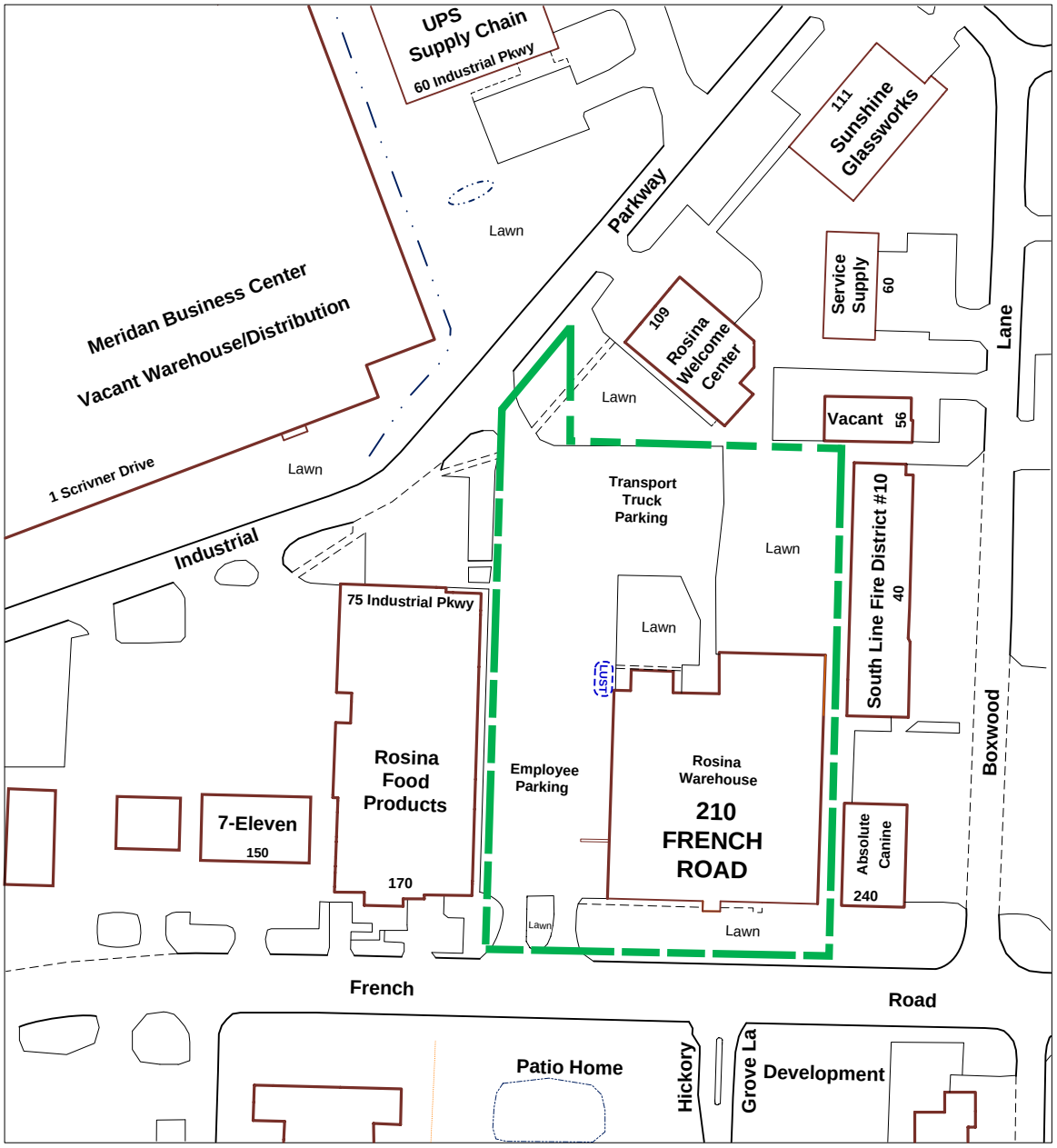
5.4 Groundwater Elevation and Quality Monitoring

Appendix A summarizes the results of groundwater monitoring—and no change is recommended in the sampling plan or the analyte list (see Appendix C.)

FIGURES



CMS Property Associates Remediation Site **Periodic Review Report**
Figure 1 **SITE LOCATION**
Ken W. Kloeber Consulting Engineers



Key:

LUST — *Former LUST Location*

CMS Site Property Boundary

N

0 60 100 200

Approximate Feet

CMS Property Associates Remediation Site
Periodic Review Report

Figure 2

Surrounding Properties

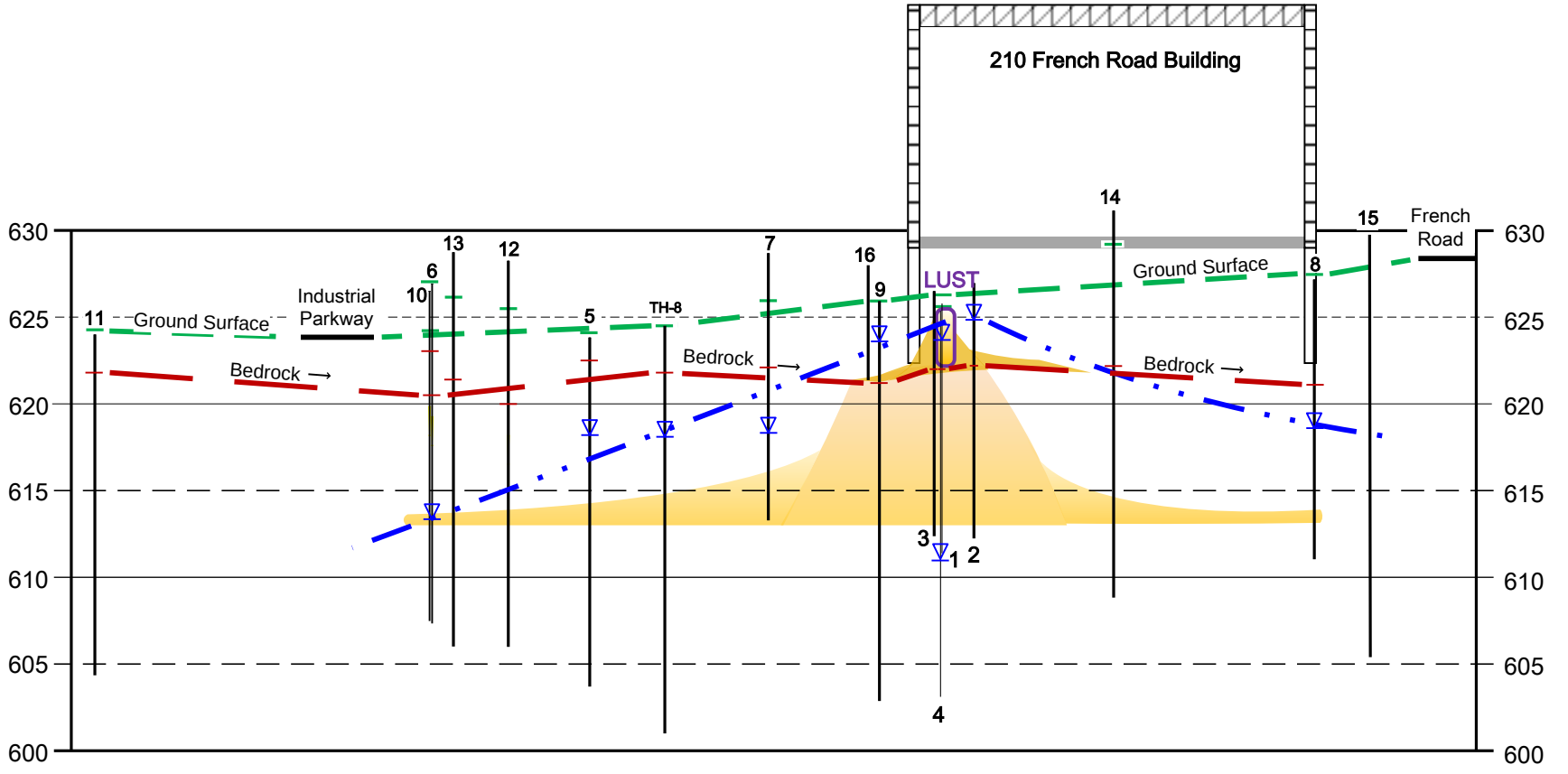
Ken W. Kloeber Consulting Engineers

CMS Property Associates Remediation Site
Periodic Review Report

Figure 3

Area Land Uses

Ken W. Kloeber Consulting Engineers



Key:

Groundwater Monitoring Wells

5 — *Well No.*

Ground Surface

Ground Water Elevation

Bedrock Surface

Existing Site Grade

Top of Bedrock

Assumed Piezometric Surface after LUST removed (Aug 1997)

0 60 100 Feet 200

Approximate Horizontal Scale

N

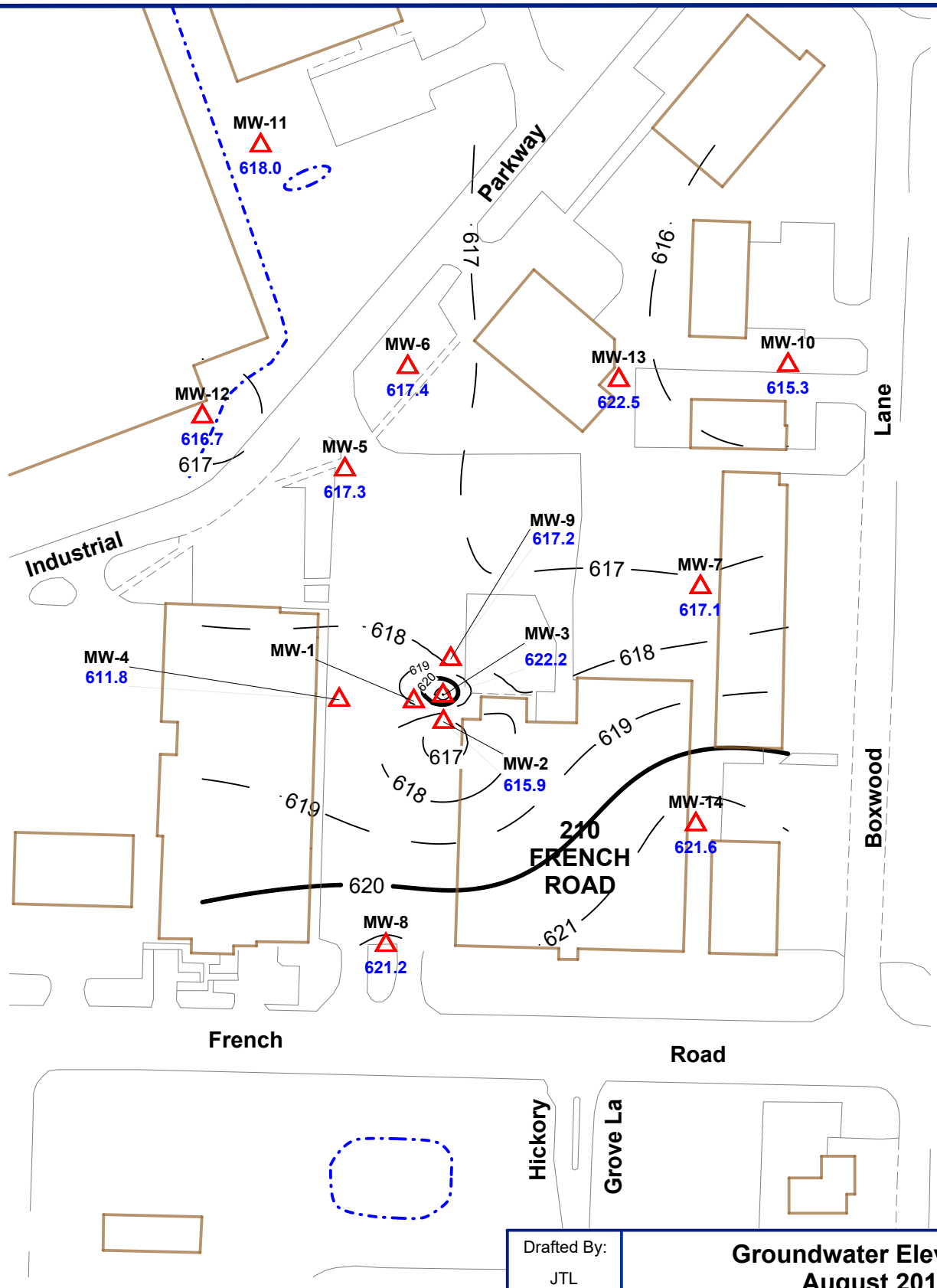
Note: Site cross-section is an approximate north-south line through well MW-1. Elevations are NAVD88.

CMS Property Associates Remediation Site
Periodic Review Report

Figure 4

Conceptual Site Model

Ken W. Kloeber Consulting Engineers



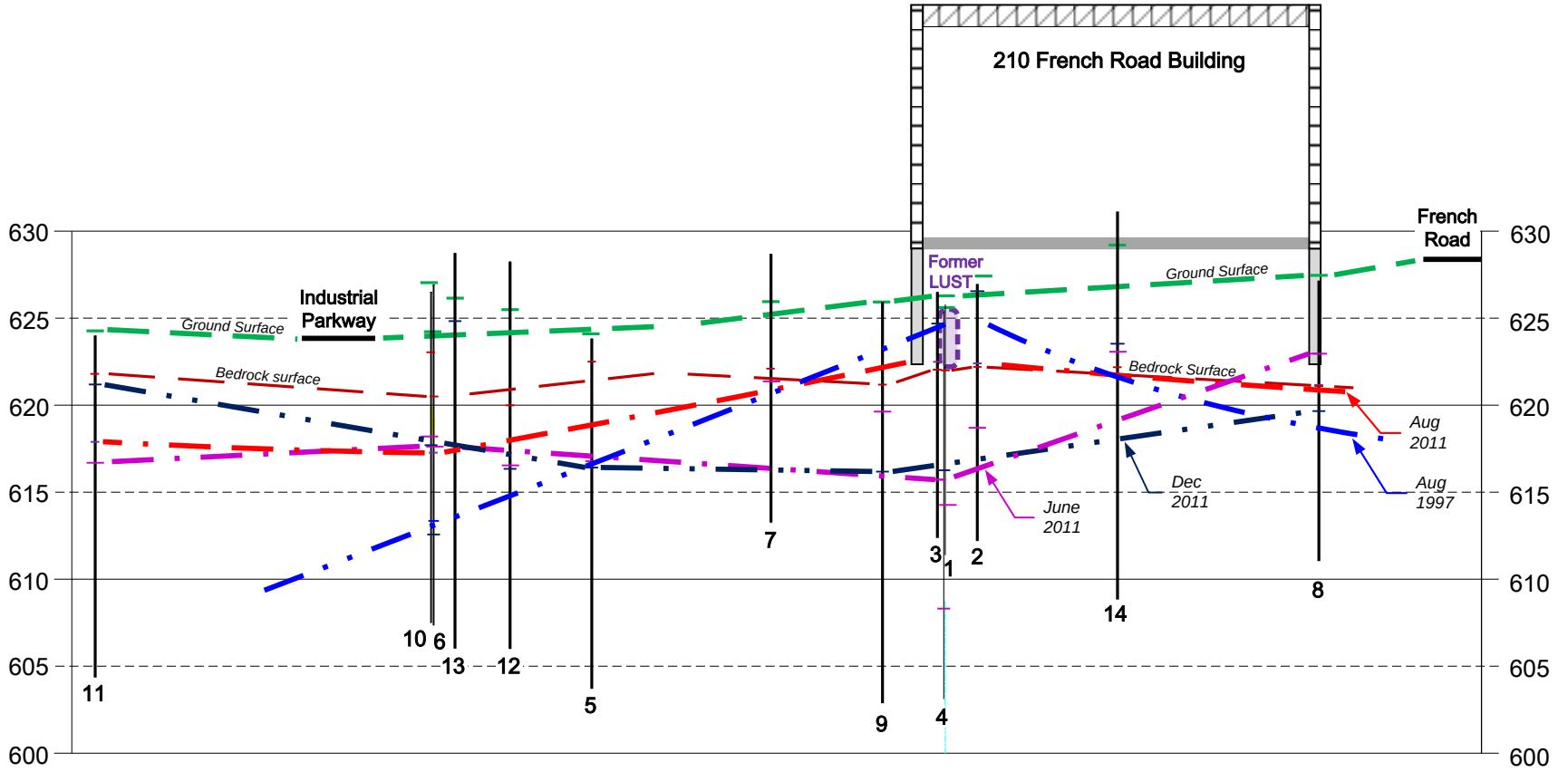
Notes:
- MW-4 and MW-13 were discounted
- The piezometric head in the extraction wells is artificially depressed by the GWE/TS

Legend:

Main Drainage Swale

Storm Water detention Basin

Drafted By: JTL	**Groundwater Elevations August 2011**
Checked By: DMC	CMS Associates Remediation Site 210 French Road Cheektowaga, New York
Date: 10-26-2017	**Groundwater & Environmental Services, Inc.** 708 North Main, Suite 201, Blacksburg, VA 24060
North	Map Scale (ft) 0 100 200 — **Figure 5**



Key:

Groundwater Monitoring Wells

Ground Surface

Water Elevation

Bedrock Surface

MW No.

5

Existing Site Grade

Top of Bedrock

Assumed Piezometric Surface Between Wells

N

0 60 100 Feet 200

Approximate Horizontal Scale

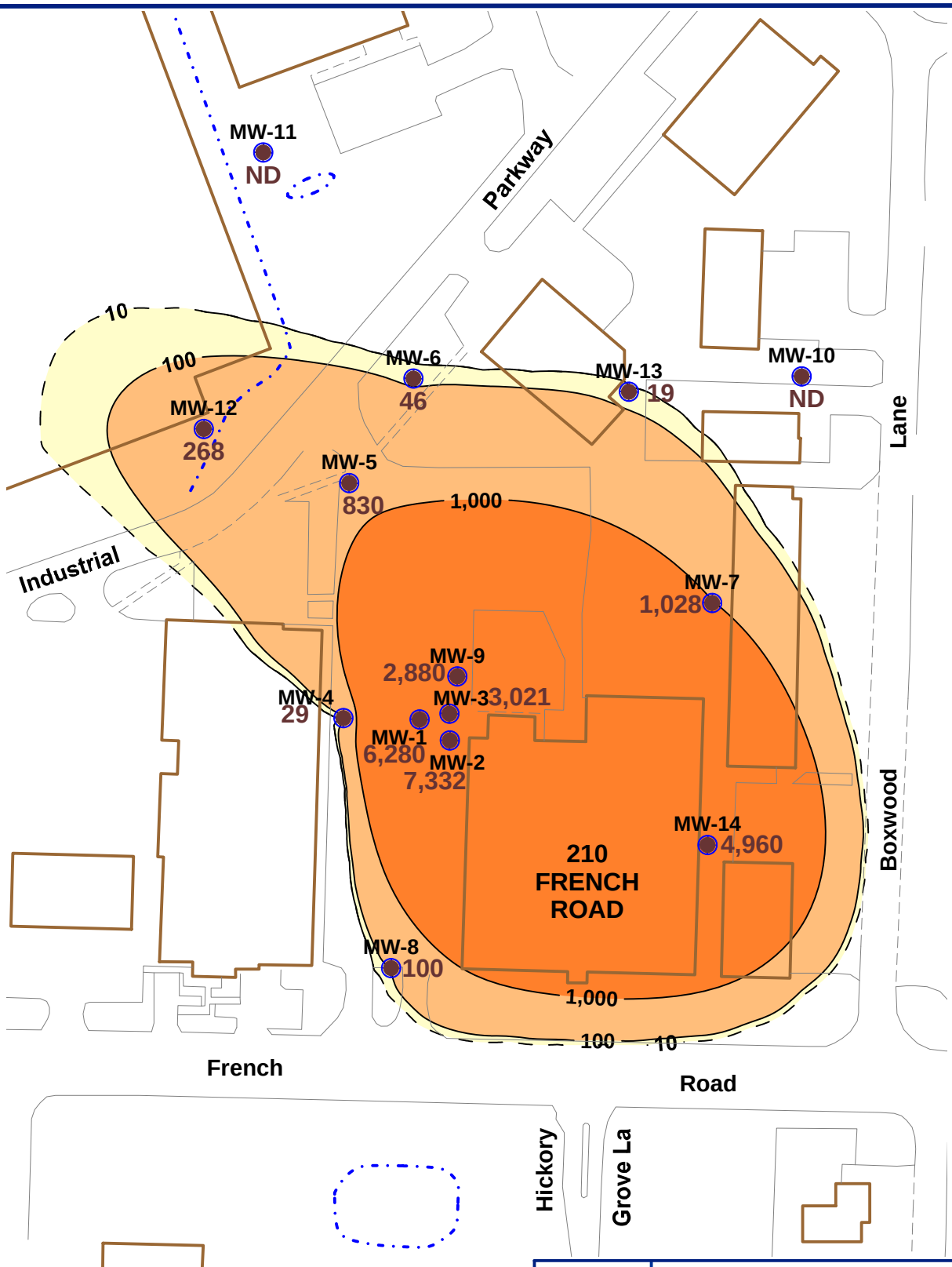
Note: Site cross-section is an approximate north-south line through well MW-1. Elevations are NAVD88. Assumed piezometric surface is from well elevations and is generalized between wells.

CMS Property Associates Remediation Site
Periodic Review Report

Figure 6

Confined Groundwater Piezometric Surface

Ken W. Kloeber Consulting Engineers



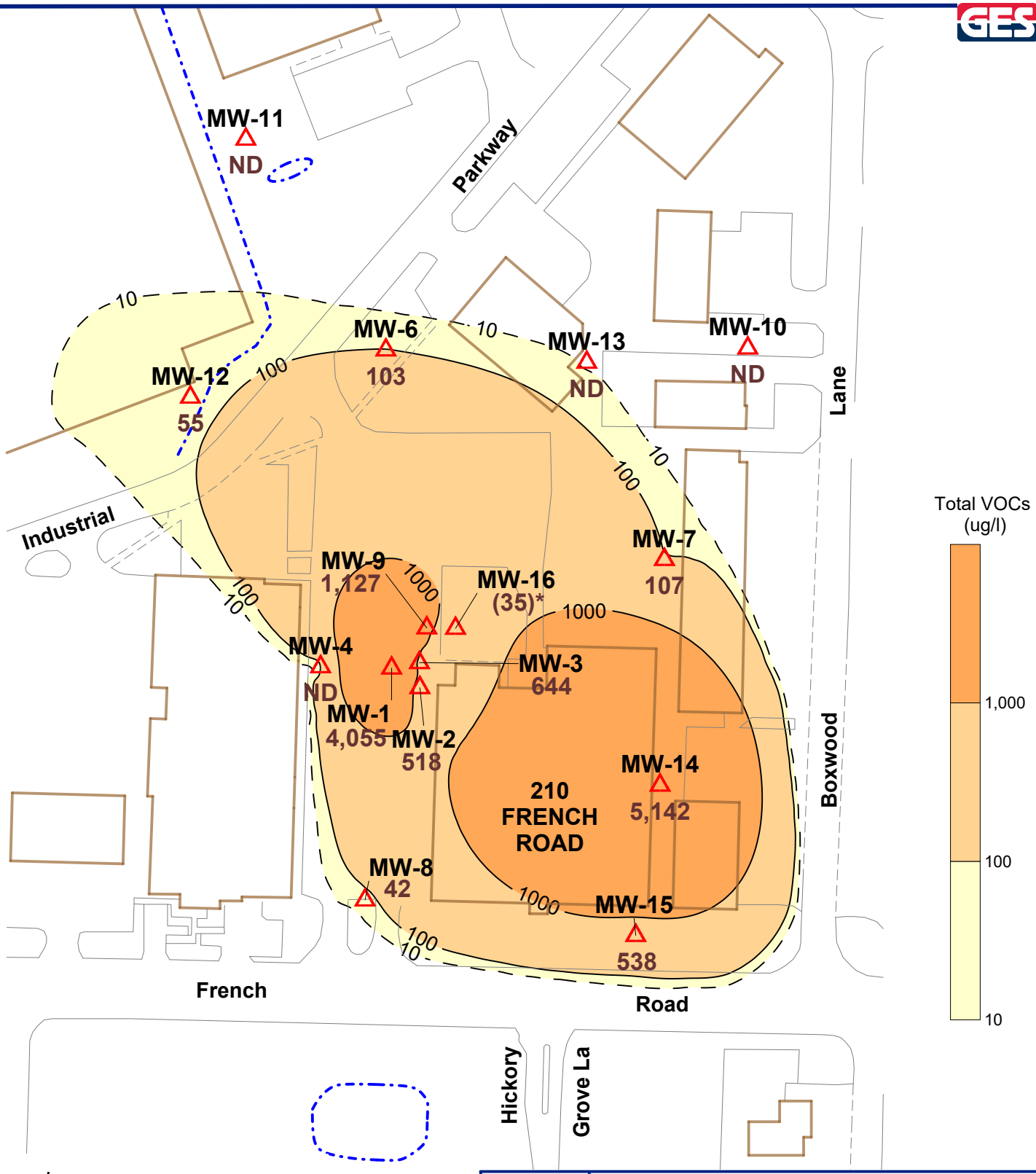
Legend:

19 Total VOC Groundwater Concentration (ug/L)

Inferred Contour Line

Storm Water Detention

Drafted By: AMC	**Average Total VOCs in Groundwater 2011**
Checked By: DL	CMS Associates Remediation Site 210 French Road Cheektowaga, New York
	Groundwater & Environmental Services, Inc. 1750 Kraft Drive, Suite 2700, Blacksburg, VA 24060
North	Map Scale (ft) 0 100 200
	Figure 7



Legend:

* Shallow overburden well

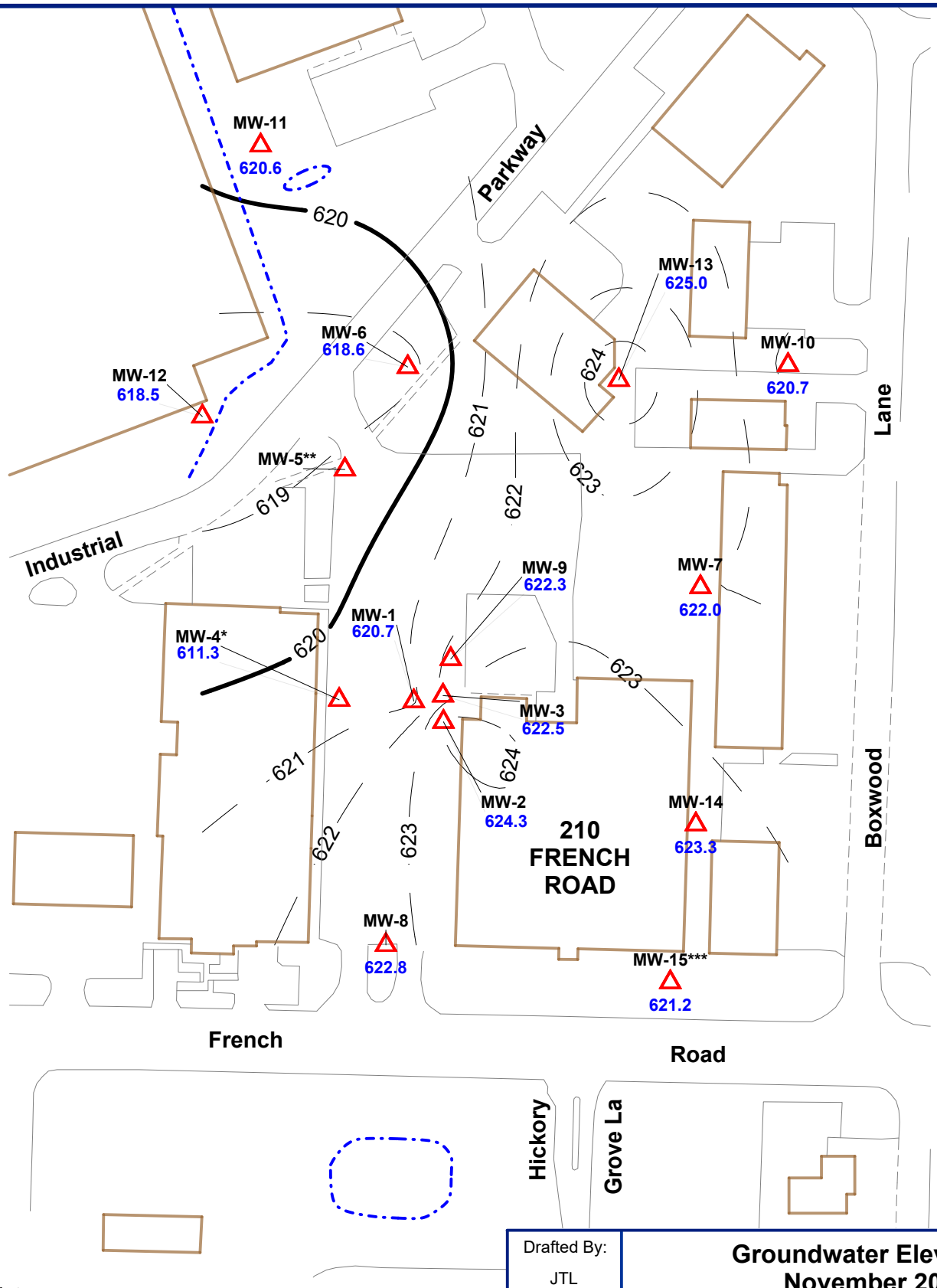
19 Total Groundwater VOCs (ug/L)

Inferred Contour Line

Main Drainage Swale

Storm Water Retention Basin

Drafted By: JTL	**Total Groundwater VOCs November 2017**
Checked By: DMC	CMS Associates Remediation Site 210 French Road Cheektowaga, New York
Date: 3-16-2018	**Groundwater & Environmental Services, Inc.** 708 North Main, Suite 201, Blacksburg, VA 24060
North	Map Scale (ft): 0 100 200 — **Figure 8**



Notes:

* Elevation at MW-4 was not used in contouring

** MW-5 was out of service

Legend:

Main Drainage Swale

Storm Water Detention

Drafted By: JTL	**Groundwater Elevations November 2017**
Checked By: DMC	CMS Associates Remediation Site 210 French Road Cheektowaga, New York
Date: 10-26-2017	**Groundwater & Environmental Services, Inc.** 708 North Main, Suite 201, Blacksburg, VA 24060
North	Map Scale (ft) 0 100 200 — **Figure 9**

APPENDIX A

Tabular Summary of Groundwater Quality Monitoring – through Dec 2017

Groundwater Total VOC Concentrations (µg/l) after Removing Leaking UST

MW		-1	-2	-3	-9	-4	-5	-6	-7	-8
Date		Extraction Wells				Perimeter Wells				
Leaking UST removed March 5, 1996										
		Wells Installed 5/3/96								
5/15/96	Phase I	27,440	94,560	19,130		Wells Installed May 1996				
5/29/96		--	--	--		20,970	12,990	--		
5/31/96		--	--	--		--	--	86	Wells Installed 9/26/96	
6/5/96		--	--	--		138	4,028	--		
6/15/96		42,180	130,070	49,387		443	3,727	147	--	--
10/9/96	Phase II	--	130,600	55,700	Well Installed 7/18/97	620	5,230	277	1,500	249
10/30/9		--	153,300	--		--	--	--	--	--
3/20/97		--	117,861	29,134		600	5,800	100	2,000	72
1/7/98	Phase III	--	6,830	--	--	--	--	--	--	--
2/11/98		--	457	--	--	--	6,700	111	2,000	--

Groundwater Total VOCs (µg/l) after Installing Recovery / Treatment System

MW		-1	-2	-3	-9	-4	-5	-6	-7	-8	-10	-11
Date		Extraction Wells				Perimeter Wells					Off-Site Wells	
Post Recovery & Treatment Sampling (operational 6/4/98):												
8/12/98		--	3,740	--	--	--	4,080	--	751	--	Wells Installed 11/23-24/98	
10/12/98		27,400	30,100	10,600	29,800	--	--	--	--	--		
1/13/99	Phase	--	--	--	--	--	--	--	--	--	nd	nd
2/10/99	III	5,240	8,920	14,300	--	--	--	--	--	--	--	--
5/28/99		8,500	12,270	10,600	3,210	--	--	--	--	--	--	--
6/25/99	Phase	--	33,000	--	--	16	5,040	102	1,100	282	nd	nd
10/22/99	IV	40,990	28,400	28,400	10,490	--	--	--	--	--	--	--
Extraction System shut down 12/1/1999 when fire destroyed system -- replaced and back on line 4/6/2000												
NYSDEC *Record of Decision* March 2003												
6/13/00		6,530	379	29,400	5,220	--	--	--	--	--	--	--
11/1/01		2,027	2,152	7,114	8,015	226	2,631	23	2,092	74	nd	nd
9/25/02		2,442	3,943	5,621	9,813	--	2,462	23	241	138	nd	nd
6/29/03		--	--	--	--	--	3,177	20	870	--	nd	nd
6/30/03		2,174	5,081	17,918	12,984	--	--	--	--	--	--	--
8/9/03		6,372	375	5,890	3,926	31	1,740	31	676	140	nd	nd
11/7/03		3,830	8,900	18,500	8,700	14	3,434	--	1,400	115	--	--
3/31/04		6,920	4,280	14,600	1,626	22	1,490	--	804	63	--	--
5/28/04	Phase	9,280	1,624	8,630	1,715	37	3,220	69	610	112	nd	nd
9/26/04	IV	13,030	9,940	34,100	6,580	--	--	--	--	--	--	--
9/28/04		--	--	--	--	23	3,400	69	782	(1)	--	--
5/22/05		9,540	5,060	13,250	3,980	8	2,810	50	850	86	nd	nd
1/31/06		469	4,860	9,800	1,092	0	2,950	33	984	22	nd	nd
6/9/06		9,940	2,836	10,600	5,040	89	1,700	27	680	95	nd	nd
9/29/06		5,500	3,681	4,810	6,060	0	1,770	30	1,078	57	nd	nd
12/17/06		11,590	4,920	4,240	2,200	1	3,010	21	1,420	68	--	--
3/27/07		3,390	2,913	8,580	2,156	4	1,443	28	596	50	--	--
3/17/08		--	--	--	--	57	2,530	25	1,300	47	--	--
3/18/08		6,650	4,630	6,700	2,278	--	--	--	--	--	--	--
10/2/08		--	--	--	--	590	3,290	26	910	62	nd	nd
10/7/08		5,970	6,020	8,850	7,600	--	--	--	--	--	--	--
4/10/09		7,070	8,940	4,600	5,580	4	1,370	42	1,500	60	nd	nd
9/4/09		2,910	4,780	3,960	5,590	52	780	26	540	68	--	--
Extraction system shut down Oct 2009 for well rebuilding and manifold repairs												
2/25/10		7,040	13,970	1,268	670	44	880	21	1,200	--	--	--
3/24/10	--	--	--	--	--	--	--	--	--	64	--	--

Note:
(1) Appeared to be sampling and/or lab result error, and 9/28/04 results were subsequently discarded

Groundwater Total VOCs (µg/l) after Rebuilding Extraction Wells

MW	-1	-2	-3	-9	-4	-5	-6	-7	-8	-14	-10	-11	-12	-13
Date	Extraction Wells				Perimeter Wells						Off-site Wells			
MW-1, -2, -3, -9 Rebuilt / fully operating in April 2010														
4/13/10	8,940	16,790	2,170	1,437	49	1,200	39	1,300	49		nd	nd	Installed 10/21-25/10	
10/29/10	5,070	2,108	1,970	1,480	43	1,780	70	580	169		--	--		
11/20/10	--	--	--	--	--	--	--	--	--		--	--	136	5
2/3/11	--	19,560	8,610	2,910	14	--	34	740	--	Installed 4/7/11	--	--	126	5
4/15/11	4,990	920	5,130	238	8	136	39	1,700	35	5,380	nd	nd	312	5
6/8/11	--	--	--	--	--	556	--	--	--	4,500	--	--	560	3
7/21/11	--	--	--	--	--	950	--	--	--	3,460	--	--	197	16
10/18/11	6,118	4,615	46	8,335	33	355	47	--	146	6,498	1	nd	277	86
12/12/11	--	--	193	--	--	--	--	820	--	--	--	--	--	--
1/31/12	43	2,886	1,753	1,135	8	537	46	125	81	8,308	< 1	--	338	< 1
3/22/12	2,927	5,096	5,088	1,136	33	1,196	45	125	67	7,922	< 1	1	358	10
6/30/12	3,262	3,742	2,577	1,495	3	1,573	55	1,291	134	7,794	< 1	< 1	239	4
10/2/12	111	1,758	133	284	12	1,458	52	587	175	12,548	< 1	< 1	247	6
12/18/12	4,245	865	214	1,860	20	2,202	14	292	359	4,955	< 1	2	325	< 1
4/5/13	556	3,032	922	1,213	27	2,154	193	846	66	5,308	< 1	--	215	4
7/24/14	nd	186	455	2,203	54	1,265	76	571	130	61	< 1	1	64	< 1
12/4/14	2,746	377	233	871	21	1,537	55	196	93	8,006	< 1	< 1	226	< 1
MW-5 connected to suction manifold; MW-3 suction closed in Oct 2008														
4/10/09	7,070	8,940	4,600	5,580	4	1,370	42	1,500	60					
9/4/09	2,910	4,780	3,960	5,590	52	780	26	540	68					
Extraction system shut down Oct 2009 for well rebuilding and manifold repairs														

Groundwater Total VOCs (µg/l) after Rebuilding Extraction Wells

MW	-1	-2	-3	-9	-4	-5	-6	-7	-8	-14	-15	-10	-11	-12	-13	-16
Date	Extraction Wells				Perimeter Wells							Off-site Wells				Shallow
Extraction system shut down Oct 2009 for well rebuilding and manifold repairs																
MW-1, -2, -3, -9 Rebuilt / fully operating in April 2010																
4/13/10	8,940	16,790	2,170	1,437	49	1,200	39	1,300	49			nd	nd	Installed 10/21-25/10		
10/29/10	5,070	2,108	1,970	1,480	43	1,780	70	580	169			--	--			
11/20/10	--	--	--	--	--	--	--	--	--	Installed 4/7/11		--	--	136	5	
2/3/11	--	19,560	8,610	2,910	14	--	34	740	--			--	--	126	5	
4/15/11	4,990	920	5,130	238	8	136	39	1,700	35	5,380		nd	nd	312	5	
6/8/11	--	--	--	--	--	556	--	--	--	4,500		--	--	560	3	
7/21/11	--	--	--	--	--	950	--	--	--	3,460		--	--	197	16	
10/18/11	6,118	4,615	46	8,335	33	355	47	--	146	6,498		1	nd	277	86	
12/12/11	--	--	193	--	--	--	--	820	--	--		--	--	--	--	
1/31/12	43	2,886	1,753	1,135	8	537	46	125	81	8,308		< 1	--	338	< 1	
3/22/12	2,927	5,096	5,088	1,136	33	1,196	45	125	67	7,922		< 1	1	358	10	
6/30/12	3,262	3,742	2,577	1,495	3	1,573	55	1,291	134	7,794		< 1	< 1	239	4	
10/2/12	111	1,758	133	284	12	1,458	52	587	175	12,548		< 1	< 1	247	6	
12/18/12	4,245	865	214	1,860	20	2,202	14	292	359	4,955		< 1	2	325	< 1	
4/5/13	543	3,032	922	1,213	27	2,154	193	846	66	5,308		< 1	--	215	4	
7/24/14	nd	186	455	2,203	54	1,265	76	571	127	61		< 1	1	64	< 1	
12/4/14	2,746	377	233	858	21	1,537	55	196	92	8,006	Installed 10/19/15	< 1	< 1	224	< 1	Installed 10/19/15
6//7/15	2,988	--	756	432	26	73	115	173	109	7,710		nd	nd	151	< 1	
12/17/15	5,146	1,415	289	195	13	taken out of service	104	133	145	4,704	--	nd	< 1	183	< 1	dry
5/2/16	3,226	1,031	2.738	720	28		129	57	26	8,969	838	nd	nd	119	< 1	64
7/21/16	5,615	863	1,408	992	24		85	410	93	3,710	664	10	nd	158	nd	dry
12/21/16	45	nd	177	156	21		82	13	--	3,775	984	nd	nd	29	nd	52
4/21/17	2,587	792	169	554	7		81	79	75	2,798	763	nd	nd	165	nd	36
6/16/17	5,577	722	682	1,068	69		52	157	61	4,902	770	nd	nd	189	7	47
11/2/17	4,055	518	644	1,127	nd		103	107	42	5,142	538	nd	nd	55	nd	35

CMS REMEDIATION SITE MW-1	<= pre IRM		post IRM =>					system down 12/12/99 to 4/6/00				post IRM			
Volatile Organic Compound	5/15/96	6/15/96	10/12/98	2/10/99	5/28/99	10/22/99	6/13/00	11/1/01	9/25/02	6/30/03	8/9/03	11/7/03	3/31/04	5/28/04	9/26/04
Detection limit	100														
1,1,1-Trichloroethane	9400	18000	14000	1400		16000	2200	509	564	688	2350	1000	1900	3200	2200
1,1,2,2-Tetrachloroethane		640	1												
1,1,2-Trichloro-1,2,2-trifluoroethane															
1,1,2-Trichloroethane							240								
1,1-Dichloroethane	9800	17000	4900	1800	5200	9000	1600	665	908	569	1750	1400	2600	3300	6000
1,1-Dichloroethene	560						100		35.1				110		
1,2,4-Trichlorobenzene															
1,2,4-Trimethylbenzene													310	280	
1,2-Dichloroethane	100						180								
1,3,5-Trimethylbenzene															
1,4-Dichlorobenzene	540		1												
2-Butanone															
4-Isopropyltoluene															
Benzene															
Bromomethane										85.9					
Carbon disulfide															
Chloroethane															270
Chloroform		630													960
cis-1,2-Dichloroethene	1900	2900	4100	1100		15000	1600	853	734	720	1820	1100	1600	2000	2300
Cyclohexane															
Ethylbenzene															
Hexachlorobutadiene															
Naphthalene															
n-Propylbenzene															
Tetrachloroethene	3700	2900		100	3300										
Toluene		29													
trans-1,2-Dichloroethene															
Trichloroethene	1200		4400	840		990	610		37.1				200	220	
Vinyl chloride									164	111	452	330	200	280	1300
m,p-Xylene	100														
o-Xylene	140														
Total Xylenes		81													
Total VOCs, µg/l	**27,440**	**42,180**	**27,402**	**5,240**	**8,500**	**40,990**	**6,530**	**2,027**	**2,442**	**2,174**	**6,372**	**3,830**	**6,920**	**9,280**	**13,030**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-1	post IRM										
Volatile Organic Compound	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06	3/27/07	3/18/08	10/7/08	4/10/09	9/4/09	2/25/10
Detection limit		10									
1,1,1-Trichloroethane	2300		2600	1800	4600	1100	2200	2300	2700	1100	3100
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane	4500		4800	2300	2100	1400	2300	1700	2000	1100	2600
1,1-Dichloroethene											
1,2,4-Trichlorobenzene											
1,2,4-Trimethylbenzene	250	40				110		410			
1,2-Dichloroethane											
1,3,5-Trimethylbenzene		27									
1,4-Dichlorobenzene											
2-Butanone											
4-Isopropyltoluene											
Benzene		39									
Bromomethane											
Carbon disulfide											
Chloroethane											
Chloroform											
cis-1,2-Dichloroethene	1900		1900	780	3800	580	1800	740	1400	380	930
Cyclohexane											
Ethylbenzene		21									
Hexachlorobutadiene											
Naphthalene		16									
n-Propylbenzene											
Tetrachloroethene											
Toluene		110			210						
trans-1,2-Dichloroethene											
Trichloroethene					240						
Vinyl chloride	590		640	620	430	200	350	820	440	330	510
m,p-Xylene		150									
o-Xylene		50									
Total Xylenes											
Total VOCs, µg/l	**9,540**	**453**	**9,940**	**5,500**	**11,380**	**3,390**	**6,650**	**5,970**	**6,540**	**2,910**	**7,140**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-1	post extraction well rebuild =>										
Volatile Organic Compound	4/13/10	10/29/10	4/16/11	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14
Detection limit			100	125-2500	0.5 - 10	12 - 500	25 - 500	1 - 20	25 - 50	5 - 100	1 - 2
1,1,1-Trichloroethane	2000	1000	970	855	14.9	606	1070	2.1	970	106	
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloro-1,2,2-trifluoroethane					0.14	10	6		5	2	
1,1,2-Trichloroethane											
1,1-Dichloroethane	4600	2700	2500	3790	16.4	1480	1450	8.4	2290	311	
1,1-Dichloroethene					0.32	39.8	13.5		29	2	
1,2,4-Trichlorobenzene											
1,2,4-Trimethylbenzene			70	112	0.48	69.2	49	1.78	43.5	5.7	
1,2-Dichloroethane											
1,3,5-Trimethylbenzene			50		0.11	17.8	10.5	0.44	11	1.9	
1,4-Dichlorobenzene											
2-Butanone								80		14.7	
4-Isopropyltoluene						8.5					
Benzene											
Bromomethane											
Carbon disulfide					0.11		56				
Chloroethane			60	290		38.2	27	6.42	49.5	9.7	
Chloroform			20								
cis-1,2-Dichloroethene	1600	660	1000	473	5.54	411	326	0.68	482	38.9	
Cyclohexane						7.25				1.1	
Ethylbenzene						2.75					
Hexachlorobutadiene											
Naphthalene											
n-Propylbenzene											
Tetrachloroethene											
Toluene						9		0.22	5	1.2	
trans-1,2-Dichloroethene						2.5	5.5				
Trichloroethene			40	42.5	1.47	36.5	12		37	3.2	
Vinyl chloride	530	710	280	555	3.99	156	236	0.86	318	44.7	
m,p-Xylene						13.2					
o-Xylene						19			5	1.2	
Total Xylenes											
Total VOCs, µg/l	**8,730**	**5,070**	**4,990**	**6,118** w/ Js	**43** w/ Js	**2926.7** w/ Js	**3261.5** w/ Js	**100.9** w/ Js	**4245** w/ Js	**543.3** w/ Js	**nd** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-1	<= post extraction well rebuild =>								
Volatile Organic Compound	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	10 - 20	23 - 500	.50 - 10	25 - 500	40 - 400	2 - 20	20-200	20-200	20-200
1,1,1-Trichloroethane	918	868	1270	762	1850	1.94	519	1540	959
1,1,2,2-Tetrachloroethane									
1,1,2-Trichloro-1,2,2-trifluoroethane	3			8					
1,1,2-Trichloroethane									
1,1-Dichloroethane	1330	1420	2750	1710	2960	28	1470	3040	2390
1,1-Dichloroethene	11	27.5	8	22			16.7		
1,2,4-Trichlorobenzene		110	67.5	107					
1,2,4-Trimethylbenzene			31.5		57.9		44.4	74.4	70.8
1,2-Dichloroethane									
1,3,5-Trimethylbenzene		18		17					
1,4-Dichlorobenzene									
2-Butanone									
4-Isopropyltoluene		8							
Benzene									
Bromomethane									
Carbon disulfide									
Chloroethane	14.4	39	93.5	57.5	102		78.4	179	252
Chloroform									
cis-1,2-Dichloroethene	294	277	123	264	135	9.54	212	156	
Cyclohexane		6.5	18						
Ethylbenzene									
Hexachlorobutadiene			5.5						
Naphthalene			89.5						
n-Propylbenzene		9	10	8.5					
Tetrachloroethene	4.2								
Toluene	2.4		7						
trans-1,2-Dichloroethene	2.0		5	5.5					
Trichloroethene	23	19	14	33		4.92	23.2	21.6	
Vinyl chloride	144	186	434	224	510	1.04	223	566	383
m,p-Xylene									
o-Xylene			23	7					
Total Xylenes									
Total VOCs, µg/l	**2746**	**2988**	**5145.5**	**3225.5**	**5614.9**	**45.4**	**2586.7**	**5577.0**	**4054.8**
	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-2	pre IRM <=							=> post IRM					
Volatile Organic Compound	5/15/96	6/15/96	10/9/96	10/30/96	3/20/97	1/7/98	2/11/98	8/12/98	10/12/98	2/10/99	5/28/99	6/25/99	10/22/99
Detection limit	500			3-10,000	5000								
1,1,1-Trichloroethane	45000	84000	82000	81000	84000	2700	230	1500	12000	1600	6200	21000	9400
1,1,2,2-Tetrachloroethane		1700											
1,1,2-Trichloro-1,2,2-trifluoroethane													
1,1,2-Trichloroethane													
1,1-Dichloroethane	32000	26000	31000	30000	19000	2700	130	650	4400	4800	2400	5200	4500
1,1-Dichloroethene	1200												
1,2,3-Trichloropropane													
1,2,4-Trimethylbenzene													
1,2-Dichloroethane	650												
1,3,5-Trimethylbenzene													
1,3-Dichloro-2-propanol													
1,4-Dichlorobenzene	610												
2-Butanone													
Acetone													
Allyl chloride													
Benzene													
Bromomethane													
Carbon tetrachloride				24000									
Chloroethane													
Chloroform		1200											
Chloromethane													
cis-1,2-Dichloroethene	1800	1900	3600	4300		670	33	200	1700	620	870	1900	9800
Cyclohexane													
Ethylbenzene		80			81								
Isopropylbenzene													
Naphthalene													
n-Propylbenzene													
sec-Butylbenzene													
Tetrachloroethene	12000	11000	14000	14000	14000		17	190					
Toluene		290			230								
trans-1,2-Dichloroethene													
trans-1,3-dichloropropene													
Trichloroethene	1300	3300				760	47	1200	12000	1900	2800	4900	4700
Vinyl chloride													
m,p-Xylene													
m-Xylene													
o-Xylene													
Total Xylenes		600			550								
Total VOCs, µg/l	**94560**	**130070**	**130600**	**153300**	**117861**	**6830**	**457**	**3740**	**30100**	**8920**	**12270**	**33000**	**28400**
						sample re-run with lower limits							

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-2	system down 12/12/99 to 4/6/00					<= post IRM =>					
Volatile Organic Compound	6/13/00	11/1/01	9/25/02	6/30/03	8/9/03	11/7/03	3/31/04	5/28/04	9/26/04	5/22/05	1/31/06
Detection limit											
1,1,1-Trichloroethane	320	625	1040	1460	143	3300	1200	560	3200	1300	1400
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane		616	854	1280	85	2600	1100	400	2900	1300	2000
1,1-Dichloroethene											
1,2,3-Trichloropropane											
1,2,4-Trimethylbenzene										110	
1,2-Dichloroethane											
1,3,5-Trimethylbenzene											
1,3-Dichloro-2-propanol											
1,4-Dichlorobenzene											
2-Butanone											
Acetone											
Allyl chloride											
Benzene											
Bromomethane					17.9						
Carbon tetrachloride											
Chloroethane											
Chloroform									230		
Chloromethane											
cis-1,2-Dichloroethene		865	1930	2250	112	3000	1600	610	2700	2200	1000
Cyclohexane											
Ethylbenzene											
Isopropylbenzene											
Naphthalene											
n-Propylbenzene											
sec-Butylbenzene											
Tetrachloroethene	59										
Toluene											
trans-1,2-Dichloroethene											
trans-1,3-dichloropropene											
Trichloroethene		46.4	119				380	54			
Vinyl chloride				91.4	17.4				510	150	290
m,p-Xylene											
m-Xylene											
o-Xylene											
Total Xylenes											
Total VOCs, µg/l	**379**	**2152.4**	**3943**	**5081.4**	**375.3**	**8900**	**4280**	**1624**	**9940**	**5060**	**4860**
					w/ J values						

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-2	<= post IRM =>									post extraction well rebuild =>			
Volatile Organic Compound	6/9/06	9/29/06	12/17/06	3/27/07	3/18/08	10/7/08	4/10/09	9/4/09	2/25/10	4/13/10	10/29/10	2/3/11	4/16/11
Detection limit												500	100
1,1,1-Trichloroethane	1000	1000	1800	770	1800	1700	3800	1600	5600	7600	610	5900	190
1,1,2,2-Tetrachloroethane													
1,1,2-Trichloro-1,2,2-trifluoroethane													
1,1,2-Trichloroethane													
1,1-Dichloroethane	990	1100	1400	710	1200	1700	2200	1300	4100	5300	680	7400	260
1,1-Dichloroethene													
1,2,3-Trichloropropane													
1,2,4-Trimethylbenzene				60		420					68		
1,2-Dichloroethane										560			
1,3,5-Trimethylbenzene													
1,3-Dichloro-2-propanol													
1,4-Dichlorobenzene													
2-Butanone													
Acetone													
Allyl chloride													
Benzene													
Bromomethane													
Carbon tetrachloride													
Chloroethane				71									20
Chloroform													20
Chloromethane													
cis-1,2-Dichloroethene	760	1100	1500	1100	1500	1500	2600	1500	3900	2000	570	5600	410
Cyclohexane													
Ethylbenzene													
Isopropylbenzene													
Naphthalene													
n-Propylbenzene													
sec-Butylbenzene													
Tetrachloroethene													
Toluene													
trans-1,2-Dichloroethene													
trans-1,3-dichloropropene													
Trichloroethene		81		52									
Vinyl chloride	86	400	220	150	130	700				730	180	660	20
m,p-Xylene													
m-Xylene													
o-Xylene													
Total Xylenes								380	370				
Total VOCs, µg/l	**2836**	**3681**	**4920**	**2913**	**4630**	**6020**	**8940**	**4780**	**13970**	**16790**	**2108**	**19560**	**920**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-2	<= post extraction well rebuild =>										
Volatile Organic Compound	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14	12/4/14	12/4/14	12/17/15
Detection limit	25-499		25 - 200	25 - 500	25 - 500	10 - 40	25 - 50	2.50 - 50	1 - 20	1 - 20	10 - 200
1,1,1-Trichloroethane	1010	698	1730	1080	128	162	784	49.9	67.2	67.2	111
1,1,2,2-Tetrachloroethane									0.64	0.64	2.9
1,1,2-Trichloro-1,2,2-trifluoroethane	26.5	13	36	21.5	7		9	8.2			
1,1,2-Trichloroethane											1.76
1,1-Dichloroethane	1490	1130	1570	1400	1180	363	1170	26.2	127	127	1110
1,1-Dichloroethene	35.5	14.5	68.5	27.5		3.6	18	1	0.9	0.9	
1,2,3-Trichloropropane											
1,2,4-Trimethylbenzene	109	25.5	89	92	40	5.8	33.5	4.65	36.8	36.8	21.7
1,2-Dichloroethane	20.5			8.5		4.4			3.54	3.54	5.58
1,3,5-Trimethylbenzene	18.5	5.5	27	16.5	7		6.5		5.52	5.52	
1,3-Dichloro-2-propanol											
1,4-Dichlorobenzene											
2-Butanone				59	129			24.4	3.42	3.42	13.8
Acetone				154				28	4.46	4.46	
Allyl chloride											
Benzene											0.28
Bromomethane											
Carbon tetrachloride											15.7
Chloroethane	53.5	36.5	69	122	17.5		32	3.65	3.36	3.36	
Chloroform											
Chloromethane											92.1
cis-1,2-Dichloroethene	1390	508	1130	332	26.5	294	783	7.2	73.4	73.4	1.56
Cyclohexane											0.92
Ethylbenzene	5.5		5						1.44	1.44	1.06
Isopropylbenzene									1.02	1.02	
Naphthalene									2.04	2.04	3.66
n-Propylbenzene	9.5							0.7	3.7	3.7	2.04
sec-Butylbenzene								0.85	2.2	2.2	
Tetrachloroethene	5.5								0.46	0.46	0.3
Toluene	11	6	19.5	12.5			9.5	0.5	1.18	1.18	2.2
trans-1,2-Dichloroethene	11		6	6	5				0.6	0.6	4.36
trans-1,3-dichloropropene											
Trichloroethene	39	14	62	9.5		8	14	1.9	5.74	5.74	0.24
Vinyl chloride	366	435	202	366	218	24.4	167	27.1	21.3	21.3	5.22
m,p-Xylene			23.5	24					3.94	3.94	1.28
m-Xylene											
o-Xylene	14		36	10.5			5.5	0.55	5.96	5.96	5.26
Total Xylenes											6.54
Total VOCs, µg/l	**4615** w/ Js	**2886** w/ Js	**5095.5** w/ Js	**3741.5** w/ Js	**1758** w/ Js	**865.2** w/ Js	**3032** w/ Js	**186.2** w/ Js	**376.12** w/ Js	**376.12** w/ Js	**1414.98** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-2	<= post extraction well rebuild =>					
Volatile Organic Compound	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	10 - 200	20 - 100	2 - 10	10 - 50	10 - 100	20 - 100
1,1,1-Trichloroethane	64.8	32.4				
1,1,2,2-Tetrachloroethane						
1,1,2-Trichloro-1,2,2-trifluoroethane	3.8					
1,1,2-Trichloroethane						
1,1-Dichloroethane	774	709		605	557	477
1,1-Dichloroethene						
1,2,3-Trichloropropane						
1,2,4-Trimethylbenzene	10.8			12.4		
1,2-Dichloroethane	3.4					
1,3,5-Trimethylbenzene	2.6					
1,3-Dichloro-2-propanol						
1,4-Dichlorobenzene						
2-Butanone						
Acetone	46.8L					
Allyl chloride						
Benzene				8.73	4.45	
Bromomethane						
Carbon tetrachloride						
Chloroethane	162	122		148	160	41.1
Chloroform						
Chloromethane						
cis-1,2-Dichloroethene						
Cyclohexane						
Ethylbenzene						
Isopropylbenzene						
Naphthalene						
n-Propylbenzene						
sec-Butylbenzene						
Tetrachloroethene						
Toluene	2.4			18.1		
trans-1,2-Dichloroethene	4					
trans-1,3-dichloropropene						
Trichloroethene						
Vinyl chloride						
m,p-Xylene						
m-Xylene						
o-Xylene	3.4					
Total Xylenes			nd			
Total VOCs, µg/l	**1031.2** w/ Js	**863.4** w/ Js	**nd** w/ Js	**792.23** w/ Js	**721.45** w/ Js	**518.1** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-3	pre IRM <=				=> post IRM		system down 12/12/99 - 4/6/00					
Volatile Organic Compound	5/16/96	6/15/96	10/9/96	3/20/97	10/12/98	2/10/99	2/11/99	10/22/99	6/13/00	11/1/01	9/25/02	6/30/03
Detection limit												
1,1,1-Trichloroethane	7,300	22000	23000	16000	4200	8000		11000	16000	1720	1710	7470
1,1,2-Trichloro-1,2,2-trifluoroethane												
1,1-Dichloroethane	8200	22000	26000	10000	2800	2700	5400	6200	5200	1700	1190	3110
1,1-Dichloroethene	310											
1,2,4-Trimethylbenzene												
1,2-Dichloroethane	120											
1,2-Dichloropropane												
1,3,5-Trimethylbenzene												
1,4-Dichlorobenzene	100											
1,4-dioxane												
2-Butanone												
(p-) 4-Isopropyltoluene												
Acetone												
Carbon disulfide												
Chloroethane												
Chloroform		570										
cis-1,2-Dichloroethene	1000	3000	6700	1900		1300		10000	3500	3370	2550	6570
Cyclohexane												
Ethylbenzene		17		16								
Isopropylbenzene												
Methylene chloride												
n-Propylbenzene												
sec-Butylbenzene												
Tetrachloroethene	1700	1600										
Toluene		70		46								35.6
trans-1,2-Dichloroethene												
Trichloroethene	400			1100	3600	2300	5200	1200	4700	324	171	732
Vinyl chloride												
m,p-Xylene												
o-Xylene												
Total Xylenes		130		72								
Total VOCs, µg/l	**19,130**	**49387**	**55700**	**29134**	**10600**	**14300**	**10600**	**28400**	**29400**	**7114**	**5621**	**17917.6** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-3	<= post IRM =>										
Volatile Organic Compound	8/9/03	11/7/03	4/1/04	5/28/04	9/26/04	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06	3/27/07
Detection limit											
1,1,1-Trichloroethane	2250	5800	6700	4000	15000	6300	4400	3500	1300	1500	3800
1,1,2-Trichloro-1,2,2-trifluoroethane											
1,1-Dichloroethane	1010	5800	1800	1200	6500	2100	1600	3600	1200	1700	1900
1,1-Dichloroethene											
1,2,4-Trimethylbenzene											
1,2-Dichloroethane											
1,2-Dichloropropane											
1,3,5-Trimethylbenzene											
1,4-Dichlorobenzene											
1,4-dioxane											
2-Butanone											
(p-) 4-Isopropyltoluene											
Acetone											
Carbon disulfide											
Chloroethane											
Chloroform					1500						
cis-1,2-Dichloroethene	2630	5700	4700	2900	8400	4200	2600	3500	1800	730	2400
Cyclohexane											
Ethylbenzene											
Isopropylbenzene											
Methylene chloride		1200			2700		410				
n-Propylbenzene											
sec-Butylbenzene											
Tetrachloroethene											
Toluene											
trans-1,2-Dichloroethene											
Trichloroethene			1400	530		650	510				220
Vinyl chloride							280		510	310	260
m,p-Xylene											
o-Xylene											
Total Xylenes											
Total VOCs, µg/l	**5890**	**18500**	**14600**	**8630**	**34100**	**13250**	**9800**	**10600**	**4810**	**4240**	**8580**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-3	<= post IRM =>					=> post extraction well rebuild					
Volatile Organic Compound	3/18/08	10/8/08	4/10/09	9/4/09	2/25/10	4/13/10	10/29/10	2/3/11	4/16/11	10/18/11	12/12/11
Detection limit								200	100	25 - 500	0.5 - 25
1,1,1-Trichloroethane	2400	1400	1700	870	760	660	490	3700	2000	14.6	24.7
1,1,2-Trichloro-1,2,2-trifluoroethane										0.9	2.16
1,1-Dichloroethane	1400	1400	600	840	190	500	530	1500	1000	20.1	82.2
1,1-Dichloroethene									30	0.24	0.85
1,2,4-Trimethylbenzene		380			98	66	130	250	80		10.4
1,2-Dichloroethane											0.24
1,2-Dichloropropane											0.3
1,3,5-Trimethylbenzene									50		0.29
1,4-Dichlorobenzene											
1,4-dioxane											
2-Butanone											2.22
(p-) 4-Isopropyltoluene											0.16
Acetone										1.5L	2.08L
Carbon disulfide											0.62
Chloroethane		240							60		0.82
Chloroform											
cis-1,2-Dichloroethene	2700	3400	1700	1600	220	880	420	2700	1700	6.6	30
Cyclohexane											0.3
Ethylbenzene											0.53
Isopropylbenzene											0.57
Methylene chloride			410			64					
n-Propylbenzene											1.36
sec-Butylbenzene											0.98
Tetrachloroethene										0.2	0.37
Toluene											0.61
trans-1,2-Dichloroethene										0.25	0.38
Trichloroethene									70	0.86	1.78
Vinyl chloride	200	1200	190	650			400	260	140	2.57	29.9
m,p-Xylene		340						200			
o-Xylene		320									1.05
Total Xylenes											
Total VOCs, µg/l	**6700**	**8680**	**4600**	**3960**	**1268**	**2170**	**1970**	**8610**	**5130**	**46.32**	**192.79**
										w/ Js	w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-3	<= post extraction well rebuild =>								
Volatile Organic Compound	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14	12/4/14	6/7/15
Detection limit	5 - 100	5 - 100	5 - 100	0.5 - 10	1.0	5 - 10	5.0	5 - 10	2 - 50
1,1,1-Trichloroethane	798	1730	1090	28.1	41.4	160	164	49.7	284
1,1,2-Trichloro-1,2,2-trifluoroethane	13	36	25	1.85	3.52	7.8	4		
1,1-Dichloroethane	380	1570	454	54.6	86.4	312	196	99.6	248
1,1-Dichloroethene	16.5	68.5	31.2	0.41	0.64	9.7			3.6
1,2,4-Trimethylbenzene	13.1	89	112	2.7	19.6	29	13.5		23.8
1,2-Dichloroethane						8.1			1.05
1,2-Dichloropropane									
1,3,5-Trimethylbenzene	1.3	27	20.2	2.54	1.78	2.7	2.1		2.1
1,4-Dichlorobenzene									
1,4-dioxane									
2-Butanone			31	1.37					
(p-) 4-Isopropyltoluene		14.5							
Acetone			94.8L	3	4.62				15.0L
Carbon disulfide					5.86			1.5	
Chloroethane	8.4	69	34			21.2			14.3
Chloroform									
cis-1,2-Dichloroethene	435	1130	494	19.4	24.1	236	46.5	50.3	124
Cyclohexane				0.15	0.4				2.65
Ethylbenzene	1.3	5	6.75	0.15	0.68	2	1.1		1
Isopropylbenzene					0.32				
Methylene chloride		22L	29.5L	0.24L	0.48L	2.9L	9.7L	3.5L	8.65L
n-Propylbenzene	1		4		0.96	2.1			1.45
sec-Butylbenzene					0.8	1.6			1.2
Tetrachloroethene	1.4		3	0.29	0.92	3.9			0.55
Toluene		19.5	23	0.45	0.92	3.8	1.6		2.65
trans-1,2-Dichloroethene	2.1	6	4.5	0.22	0.46	1.4	1		1.2
Trichloroethene	17.9	62	29.2	1.47	3.64	10.4	3.2	1.7	6.3
Vinyl chloride	59.8	202	179	14.1	12.4	103	10.3	16.8	29.6
m,p-Xylene	2	23.5	16.5	0.54	0.78	3.2			1.4
o-Xylene	2.2	36	20	1.81	3.44	4.4	1.5		2.6
Total Xylenes									4
Total VOCs, µg/l	**1753** w/ Js	**5088** w/ Js	**2577.35** w/ Js	**133.15** w/ Js	**213.64** w/ Js	**922.3** w/ Js	**444.8** w/ Js	**219.6** w/ Js	**755.45** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-3	<= post extraction well rebuild =>						
Volatile Organic Compound	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	5 - 100	12.5 - 250	20 - 100	2 - 10	2 - 10	10-100	2 - 10
1,1,1-Trichloroethane	67.1	1150	299	8.13	87.1	245	75.9
1,1,2-Trichloro-1,2,2-trifluoroethane		32.8			6.62		
1,1-Dichloroethane	114	846	1010	103	41	290	480
1,1-Dichloroethene							
1,2,4-Trimethylbenzene			26		6.29		
1,2-Dichloroethane							
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,4-Dichlorobenzene					1.17		
1,4-dioxane				26.9			
2-Butanone							
(p-) 4-Isopropyltoluene		.2.0					
Acetone							
Carbon disulfide	1.4				1.34		
Chloroethane	38.5			2.26			37.4
Chloroform							
cis-1,2-Dichloroethene	20.5	474	22.4	39.4	16.9	89.9	
Cyclohexane							
Ethylbenzene		3.6					
Isopropylbenzene		1.8					
Methylene chloride	1.7	11.5L					
n-Propylbenzene		4.4					
sec-Butylbenzene		2.75					
Tetrachloroethene		4					
Toluene		8.15					
trans-1,2-Dichloroethene		4.6					
Trichloroethene	1.3	28.4		20	3.44		
Vinyl chloride	30.3	145	50.1	3.97	5.5	56.7	50.5
m,p-Xylene							
o-Xylene	4.2	9.35					
Total Xylenes		17.4					
Total VOCs, µg/l	**289.2** w/ Js	**2737.5** w/ Js	**1407.5** w/ Js	**203.66** w/ Js	**169.36** w/ Js	**681.6** w/ Js	**643.8**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-4	pre IRM <==					system down 12/12/99 - 4/6/00	post IRM =>				
Volatile Organic Compound	5/29/96	6/5/96	6/15/96	10/9/96	3/20/97	6/25/99	11/1/01	8/9/03	11/7/03	3/31/04	5/28/04
Detection limit											
1,1,1-Trichloroethane	20,000					3					
1,1-Dichloroethane	400	15	3.5			6	5.84				
1,1-Dichloroethene	570										
1,2,4-Trimethylbenzene									4		
1,2-Dichlorobenzene								3.32			
1,3,5-Trimethylbenzene											
1,4-Dichlorobenzene								0.625			
2-Butanone											
4-Isopropyltoluene											
Acetone											
Benzene		14	39	110	120		117	1.29	4	11	28
Carbon disulfide											
Chloroform											
cis-1,2-Dichloroethene		1									
Cyclohexane											
Ethylbenzene		6	20	23	21		21.7	9.13	3		
Isopropylbenzene											
Methyl tert-butyl ether								5.38			
Naphthalene											
n-Propylbenzene											
Styrene										2	
Tetrachloroethene						2					
Toluene		37	160	240	230					5	6.3
Trichlorofluoromethane						5					
m,p-Xylene		48		180					3	4	2.2
o-Xylene		17		67							
Total Xylenes			220		229		81.2	11.8			
Total VOCs, µg/l	**20,970**	**138** w/o B	**443**	**620**	**600**	**16**	**226**	**32** w/ Js	**14**	**22**	**37**

italic = found in tank contents
underlined = found in soil

(method blank contaminated)

CMS REMEDIATION SITE MW-4	<= post IRM =>										
Volatile Organic Compound	9/28/04	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06	3/27/07	3/17/08	4/10/09	9/4/09	2/25/10
Detection limit											
1,1,1-Trichloroethane											
1,1-Dichloroethane		1.2									
1,1-Dichloroethene											
1,2,4-Trimethylbenzene				23			1.1	6.5		6.2	18
1,2-Dichlorobenzene											
1,3,5-Trimethylbenzene											
1,4-Dichlorobenzene											
2-Butanone											
4-Isopropyltoluene											
Acetone											
Benzene	19	4.8		30		0.67	0.59	26		28	
Carbon disulfide											
Chloroform											
cis-1,2-Dichloroethene											
Cyclohexane											
Ethylbenzene				7.9				3.3	4.4		10
Isopropylbenzene							1.2				
Methyl tert-butyl ether											
Naphthalene							1.4				
n-Propylbenzene											
Styrene											
Tetrachloroethene											
Toluene	3.5			11				16		6.8	
Trichlorofluoromethane											
m,p-Xylene		1.8		14						11	16
o-Xylene				3.3				4.7			
Total Xylenes											
Total VOCs, µg/l	**23**	**8**	**nd**	**89**	**nd**	**1**	**4**	**57**	**4**	**52**	**44**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-4	==> post extraction well rebuild										
Volatile Organic Compound	4/13/10	10/29/10	2/3/11	4/15/11	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13
Detection limit			10	1	0.5 - 2	0.5 - 10	0.5 - 10	0.5 - 10	0.5 - 2	0.5 - 10	0.5 - 1
1,1,1-Trichloroethane											
1,1-Dichloroethane					0.41	0.3	0.24	0.11			
1,1-Dichloroethene											
1,2,4-Trimethylbenzene	15	11		0.5	0.92		2.43				1.07
1,2-Dichlorobenzene											
1,3,5-Trimethylbenzene					0.26		0.58		0.28	0.18	0.19
1,4-Dichlorobenzene											
2-Butanone								1.31		4.85	
4-Isopropyltoluene				0.6							
Acetone					4.75B	18.3B	18.7B	8.99L		11.9	23.1
Benzene		15			13.5	3.81	13.1	0.87	0.41		
Carbon disulfide					0.19						
Chloroform							0.2		0.22		
cis-1,2-Dichloroethene											
Cyclohexane					1.68	0.26	3.49	0.56	5.15	1.6	1.46
Ethylbenzene	11			2	0.97	0.72	1.49		2.17	1.36	0.19
Isopropylbenzene				1					0.35	0.2	0.14
Methyl tert-butyl ether				1.3	2.18	1.49	0.98	0.18	0.16		
Naphthalene				1.1							
n-Propylbenzene				0.6					0.21	0.3	
Styrene											
Tetrachloroethene											
Toluene					4.96	1.01	4.9				
Trichlorofluoromethane											
m,p-Xylene	23	17	14		1.83		3.63		1.04		0.46
o-Xylene					1.23	0.82	1.79		0.65		
Total Xylenes											
Total VOCs, µg/l	**49**	**43**	**14**	**7**	**28** w/ Js	**8** w/ Js	**33** w/ Js	**3.03** w/ Js	**12.2** w/ Js	**20.39** w/ Js	**26.61** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-4 Volatile Organic Compound	<= post extraction well rebuild =>									
	7/24/14	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	25	0.5 - 1	0.5 - 10	0.5 - 10	0.5 - 10	2 - 10	2 - 10	2 - 20	2 - 10	2 - 10
1,1,1-Trichloroethane										
1,1-Dichloroethane										
1,1-Dichloroethene										
1,2,4-Trimethylbenzene	1.57		0.79		0.84					
1,2-Dichlorobenzene										
1,3,5-Trimethylbenzene	0.32	0.11	0.14		0.11					
1,4-Dichlorobenzene										
2-Butanone	2.99		1.17						10.4	
4-Isopropyltoluene										
Acetone	24.7			2.50L	18.1L				49.2	
Benzene	16.4	14.7	17.7	6.78	17.1	23.8	21.2	6.95	9.81	
Carbon disulfide										
Chloroform										
cis-1,2-Dichloroethene		0.12								
Cyclohexane	3.41	1.99	1.81	0.54	2.27					
Ethylbenzene	1.27	0.53	0.49	0.26	0.99					
Isopropylbenzene	0.18	0.12	0.17		0.23					
Methyl tert-butyl ether				0.96						
Naphthalene		0.79	0.19	1.77B	1.06					
n-Propylbenzene	0.19	0.13	0.13		0.22					
Styrene					0.16					
Tetrachloroethene										
Toluene	1.34	1.23	0.76	0.29	1.8					
Trichlorofluoromethane										
m,p-Xylene	1.21	0.93	0.4	0.24	0.62					
o-Xylene	0.46	0.64	0.66	0.54	1.21					
Total Xylenes			1.06	0.78	1.83					
Total VOCs, µg/l	**54.04** w/ Js	**21.29** w/ Js	**25.47** w/ Js	**13.15** w/ Js	**28.44** w/ Js	**23.8** w/ Js	**21.2** w/ Js	**6.95** w/ Js	**69.41** w/ Js	**nd**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-5					<= pre IRM		system down 12/12/99 to 4/6/00				post IRM =>	
Volatile Organic Compound	5/29/96	6/5/96	6/15/96	10/9/96	3/20/97	2/11/98	8/12/98	6/25/99	11/1/01	9/25/02	6/29/03	8/9/03
Detection limit					200							
1,1,1-Trichloroethane	8900	120	120				110	320				
1,1,2-Trichloroethane		2										
1,1-Dichloroethane	3300	2500	2000	3000	3500	4400	2700	3800	2380	1870	2020	1460
1,1-Dichloroethene		89	59									
1,2-Dichloroethane		31										
Benzene		2	1.2									
Chloroethane												
Chloroform												
cis-1,2-Dichloroethene	790	740	960	1200	1300	1100	820	920	110	206	552	122
Cyclohexane												
Ethylbenzene		2										
Tetrachloroethene		200	260	240								
Toluene		5	4									
trans-1,2-Dichloroethene												
Trichloroethene					270	270						
Vinyl chloride		320	320	790	730	930	450		141	386	605	158
o-Xylene		6										
Total Xylenes			2.4									
Total VOCs, µg/l	**12990**	**4028**	**3726.6**	**5230**	**5800**	**6700**	**4080**	**5040**	**2631**	**2462**	**3177**	**1740**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-5	<= post IRM =>										
Volatile Organic Compound	11/7/03	3/31/04	5/28/04	9/28/04	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06	3/27/07	3/17/08
Detection limit											
1,1,1-Trichloroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane	2100	850	1800	2200	1800	2200	1400	1500	1800	950	1400
1,1-Dichloroethene											
1,2-Dichloroethane											
Benzene	54										
Chloroethane	100									93	
Chloroform								170			
cis-1,2-Dichloroethene	430	240	530	380	390	160	100		430		430
Cyclohexane											
Ethylbenzene											
Tetrachloroethene											
Toluene											
trans-1,2-Dichloroethene											
Trichloroethene	110	210	170		120					110	
Vinyl chloride	640	190	720	820	500	430	200	100	780	290	700
o-Xylene											
Total Xylenes											
Total VOCs, µg/l	**3434**	**1490**	**3220**	**3400**	**2810**	**2790**	**1700**	**1770**	**3010**	**1443**	**2530**

originally mislabeled mw-6 in field/lab report

italic = found in tank contents

underlined = found in soil

CMS REMEDIATION SITE MW-5					post extraction well rebuild =>							
Volatile Organic Compound	10/2/08	4/10/09	9/4/09	2/25/10	4/13/10	10/29/10	4/15/11	6/8/11	7/21/11	10/18/11	1/31/12	3/22/12
Detection limit							10	50	50	6 - 125	5 - 100	12 - 125
1,1,1-Trichloroethane											7.2	
1,1,2-Trichloroethane												
1,1-Dichloroethane	1900	780	880	590	1200	1000	81	310	560	268	265	716
1,1-Dichloroethene											6.2	25.5
1,2-Dichloroethane										4.25	4.8	9.5
Benzene												
Chloroethane										8.38	59.4	41.2
Chloroform												
cis-1,2-Dichloroethene	500	300	620	200	400	260	26	86	150	44.1	57.8	125
Cyclohexane											1.6	6.5
Ethylbenzene												
Tetrachloroethene				130								
Toluene												
trans-1,2-Dichloroethene										1.38	2.1	2.5
Trichloroethene							3	20	20	4	12.7	25.5
Vinyl chloride	890	290	710	330	360	520	26	140	220	24.6	120	244
o-Xylene												
Total Xylenes												
Total VOCs, µg/l	**3290**	**1370**	**2210**	**1250**	**1960**	**1780**	**136**	**556**	**950**	**354.71**	**536.8**	**1195.7**
							w/ J values	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-5	<= post extraction well rebuild =>						
Volatile Organic Compound	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14	12/4/14	6/7/15
Detection limit	12 - 250	12.5 - 50	25 - 100	25 - 50	25 - 50	25 - 50	.5 - 10
1,1,1-Trichloroethane							10.1
1,1,2-Trichloroethane							
1,1-Dichloroethane	870	902	1410	1170	758	919	22.1
1,1-Dichloroethene	11	6.75	10	22			0.65
1,2-Dichloroethane	12.5	12.8	17.5	13	9		0.2
Benzene	4.25						
Chloroethane	104	32.5	91.5	24	37		
Chloroform							
cis-1,2-Dichloroethene	149			281		81.5	30.2
Cyclohexane	6	6		7.5	5		
Ethylbenzene							
Tetrachloroethene							0.21
Toluene							
trans-1,2-Dichloroethene	4.25	3.25		6			0.29
Trichloroethene	4.25	495	9	28			3.13
Vinyl chloride	408		664	590	374	524	5.56
o-Xylene							
Total Xylenes							
Total VOCs, µg/l	**1573.25**	**1458.3**	**2202**	**2154**	**1264.5**	**1537**	**72.62**
	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-6	pre IRM <==					system down 12/12/99 - 4/6/00	post IRM =>					
Volatile Organic Compound	5/31/96	6/15/96	10/9/96	3/20/97	2/11/98	6/25/99	11/1/01	9/25/02	6/29/03	8/9/03	5/28/04	9/28/04
Detection limit												
1,1,1-Trichloroethane												
1,1,2-Trichloro-1,2,2-trifluoroethane												
1,1-Dichloroethane	10	27	31	28	66	32	10.3	1.63	8.55	19.2	7.9	17
1,2,4-Trimethylbenzene												
1,2-Dichloroethane												
Acetone												
Benzene			10	8					5.26	2.02		
Bromomethane						15			2.05			
Chloroethane								8.72		0.626	11	21
Chloroform		2.5										
Chloromethane										1.79		
cis-1,2-Dichloroethene		76	60	24	40	55	10.8	3.36	4.06	6.93	22	17
Cyclohexane												
Ethylbenzene		1.3	11	2								
Isopropylbenzene												
Methylcyclohexane												
Methylene chloride												
Styrene												
Tetrachloroethene		5.2										
Toluene	21	4.3	34	1					0.408	0.908		
Trichloroethene		9.9	6	3	5							
Vinyl chloride		9.7					1.69	9.39			28	14
m,p-Xylene												
m-Xylene	17		32									
o-Xylene												
p-Xylene	38		93									
Total Xylenes		11		34								
Total VOCs, µg/l	**86**	**147**	**277**	**100**	**111**	**102**	**23**	**23**	**20**	**31**	**69**	**69**
									w/ J values			mislabeled mw-5 in field/lab report

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-6	<= post IRM =>										
Volatile Organic Compound	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06	3/27/07	3/17/08	10/2/08	4/10/09	9/4/09	2/25/10
Detection limit											
1,1,1-Trichloroethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
1,1-Dichloroethane	35	23	16	23	16	21	17	19	17	22	15
1,2,4-Trimethylbenzene											
1,2-Dichloroethane											
Acetone											
Benzene		1.8	2.5		0.66	0.81	3.9		21		
Bromomethane											
Chloroethane											
Chloroform											
Chloromethane											
cis-1,2-Dichloroethene	15	6	7	7.4	4.6	6.6	3.8	6.6	2.7	4	4.4
Cyclohexane											
Ethylbenzene									1.7		
Isopropylbenzene											
Methylcyclohexane											
Methylene chloride											1.5
Styrene											
Tetrachloroethene											
Toluene											
Trichloroethene											
Vinyl chloride		2.2	1.6								
m,p-Xylene											
m-Xylene											
o-Xylene											
p-Xylene											
Total Xylenes											
Total VOCs, µg/l	**50**	**33**	**27**	**30**	**21**	**28**	**25**	**26**	**42**	**26**	**21**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-6	==> post extraction well rebuild										
Volatile Organic Compound	4/13/10	10/29/10	2/3/11	4/15/11	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13
Detection limit				5	0.5 - 10	0.5-10	0.5 - 10	0.5 - 10	0.5 - 2	0.5 - 1	0.5 - 1
1,1,1-Trichloroethane											79.7
1,1,2-Trichloro-1,2,2-trifluoroethane											16
1,1-Dichloroethane	25	48	23	26	21.9	30.2	24.6	20.4	18.1	8.99	77.9
1,2,4-Trimethylbenzene								0.93	0.19		
1,2-Dichloroethane					0.47	0.22	0.16				0.4
Acetone						4.56LC					1.59LC
Benzene		2.6	3.1		4.85		8.67	16.1	18.7	1.17	0.46
Bromomethane											
Chloroethane					1.88	1.18	0.53				
Chloroform								0.14	0.17		
Chloromethane								2.12	3.08		
cis-1,2-Dichloroethene	12	19	8.2	13	14.6	13.6	9.29	7.46	5.26	3.12	14.1
Cyclohexane					0.58	0.63	0.75	2.18	3.41		0.15
Ethylbenzene					0.22		0.54	1.39			
Isopropylbenzene								0.1			
Methylcyclohexane											
Methylene chloride	1.5							0.26LC	0.18LC		
Styrene					0.72						
Tetrachloroethene											1.28
Toluene								0.14			
Trichloroethene					0.34	0.5	0.37	0.39	0.31		0.46
Vinyl chloride					1.28						0.61
m,p-Xylene								1.3	0.24		
m-Xylene											
o-Xylene								2.19	2.27		
p-Xylene											
Total Xylenes											
Total VOCs, µg/l	**39**	**70**	**34**	**39**	**47** w/ J s	**46.33** w/ J s	**44.91** w/ J s	**54.84** w/ J s	**51.73** w/ J s	**13.57**	**191.06** w/ J s

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-6	<= post extraction well rebuild =>									
Volatile Organic Compound	7/24/14	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	1	0.5	.5 - 10	.5 - 10	.50 - 10	2 - 10	2 - 20	2 - 20	2 - 20	2 - 20
1,1,1-Trichloroethane	18.7	3.85	3.9	2.99	1.2					
1,1,2-Trichloro-1,2,2-trifluoroethane	0.9									
1,1-Dichloroethane	38.2	25	58.3	56.1	50	43	42.4	37.4	1.11	59.3
1,2,4-Trimethylbenzene					0.22					
1,2-Dichloroethane		0.71	1.56	1.13	1.81					
Acetone			2.07LC		2.66LC				5.24	
Benzene	1.16	4.37	1.24	2.34	7.9	7.58	5.51	11.1	0.604	1.6
Bromomethane										
Chloroethane		0.37		2.46	0.75		1.31			
Chloroform				0.12						
Chloromethane										
cis-1,2-Dichloroethene	11.8	15.8	46	33.2	52.9	34.9	31.3	30	44.1	39.5
Cyclohexane	0.94	0.68	0.48	1.56	2.19					
Ethylbenzene		0.31		0.21	0.55			1.15		
Isopropylbenzene										
Methylcyclohexane							1.26			
Methylene chloride	3.34	1.15								
Styrene										
Tetrachloroethene	0.48	0.16	0.22	0.48	0.15					
Toluene										
Trichloroethene	0.42	0.19	0.39	0.21	0.38					
Vinyl chloride		2.54	2.49	2.44	8.03		1.61	1.16	1.29	2.95
m,p-Xylene					0.36					
m-Xylene										
o-Xylene		0.17		0.45	0.8					
p-Xylene										
Total Xylenes					1.16					
Total VOCs, µg/l	**75.94** w/ J s	**55.41** w/ J s	**114.76** w/ J s	**104.14** w/ J s	**128.88** w/ J s	**85.48**	**83.39** w/ J s	**80.81** w/ J s	**52.344** w/ J s	**103.35**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-7	pre IRM <=			=> post IRM	system down 12/12/99 to 4/6/00		post IRM =>			
Volatile Organic Compound	10/9/96	3/20/97	2/11/98	8/12/98	6/25/99	11/1/01	9/25/02	6/29/03	8/9/03	11/7/03
Detection limit										
1,1,2-Trichloro-1,2,2-trifluoroethane										
1,1-Dichloroethane	1500	1900	2000	690	1100	1890	210	743	676	1300
1,1-Dichloroethene										
1,2-Dichloroethane		100		61		52.5		45.6		100
Acetone										
Benzene										
Chloroethane							31.3			
Chloroform										
cis-1,2-Dichloroethene										
Cyclohexane										
Methylene chloride						149				
Trichloroethene								34.1		
Trichlorofluoromethane								31.5		
Vinyl chloride								16		
Total VOCs, µg/l	**1500**	**2000**	**2000**	**751**	**1100**	**2091.5**	**241.3**	**870.2**	**676**	**1400**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-7	<= post IRM =>								
Volatile Organic Compound	3/31/04	5/28/04	9/28/04	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06	3/27/07
Detection limit									
1,1,2-Trichloro-1,2,2-trifluoroethane									
1,1-Dichloroethane	700	610	720	850	910	680	800	1300	530
1,1-Dichloroethene									
1,2-Dichloroethane	51						64		34
Acetone									
Benzene									
Chloroethane									
Chloroform	53						54		
cis-1,2-Dichloroethene									
Cyclohexane									
Methylene chloride					74		60	120	
Trichloroethene									
Trichlorofluoromethane									
Vinyl chloride			62				100		32
Total VOCs, µg/l	**804**	**610**	**782**	**850**	**984**	**680**	**1078**	**1420**	**596**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-7	<= post IRM =>					==> post extraction well rebuild						
Volatile Organic Compound	3/17/08	10/2/08	4/10/09	9/4/09	2/25/10	4/13/10	10/29/10	2/3/11	4/15/11	12/12/11	1/31/12	3/22/12
Detection limit									100	12 - 250	12.5	12.5
1,1,2-Trichloro-1,2,2-trifluoroethane											8.00	2.75
1,1-Dichloroethane	1300	810	1500	540	1200	1000	580	740	1500	684		1080
1,1-Dichloroethene												20
1,2-Dichloroethane		100							80	49	41.8	67.2
Acetone												
Benzene										12.8	6.25	
Chloroethane										8.75		
Chloroform												
cis-1,2-Dichloroethene									30	25.5	23.2	
Cyclohexane												34.8
Methylene chloride						300						24.2LC
Trichloroethene									40	4.25	10.2	39.2
Trichlorofluoromethane												
Vinyl chloride									50	35.5	35.8	47.2
Total VOCs, µg/l	**1300**	**910**	**1500**	**540**	**1200**	**1300**	**580**	**740**	**1700**	**819.8** w/J s	**125.25** w/J s	**1291.15** w/J s

italic = found in tank contents

underlined = found in soil

CMS REMEDIATION SITE MW-7	<= post extraction well rebuild =>							
Volatile Organic Compound	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14	12/4/14	6/7/15	12/17/15
Detection limit	10 - 200	10 - 40	25 - 50	10 - 20	10 - 20	5 - 10	5 - 100	2.50 - 100
1,1,2-Trichloro-1,2,2-trifluoroethane	2.6					1.9		
1,1-Dichloroethane	449	260	761	1100	472	165	145	122
1,1-Dichloroethene				5.2				
1,2-Dichloroethane	21	6.8	34.5		24	8.1	8.9	2.4
Acetone	46						10.4LC	
Benzene	3.4							
Chloroethane	13.8			8.6	15	6.4		2.2
Chloroform								
cis-1,2-Dichloroethene	11.8	6.4	16	27.4	23	5.3	7.3	5.3
Cyclohexane	2.6							
Methylene chloride	11LC	9.6LC	22.5LC	4.6			6.50LC	.85LC
Trichloroethene	16.6		12	32	14.8	1.7	3.9	1.5
Trichlorofluoromethane								
Vinyl chloride	20.6	16	22.5	48.4	22.2	7.1	7.7	
Total VOCs, µg/l	**587.4** w/J s	**292.4** w/J s	**846** w/J s	**1226.2** w/J s	**571** w/J s	**195.5** w/J s	**172.8** w/J s	**133.4** w/J s

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-7	<= post extraction well rebuild =>					
Volatile Organic Compound	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	2.50 - 50	5 - 12	2 - 20	2 - 20	2 - 20	2 - 20
1,1,2-Trichloro-1,2,2-trifluoroethane						
1,1-Dichloroethane	49.4	405	12.9	68.3	129	88.1
1,1-Dichloroethene						
1,2-Dichloroethane	2.5			2.92	8.12	2.5
Acetone					7.22	
Benzene						
Chloroethane				4.78		7.33
Chloroform						
cis-1,2-Dichloroethene	1.9	5.03		1.24	7.18	5.8
Cyclohexane						
Methylene chloride						
Trichloroethene	1.15					
Trichlorofluoromethane						
Vinyl chloride	1.85			2.01	5.53	3.55
Total VOCs, µg/l	**56.8**	**410.03**	**12.9**	**79.25**	**157.05**	**107.28**
	w/J s	w/J s	w/J s	w/J s	w/J s	w/J s

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-8	pre IRM <=		system down 12/12/99 to 4/6/00			post IRM =>						
Volatile Organic Compound	10/9/96	3/20/97	6/25/99	11/1/01	9/25/02	8/9/03	11/7/03	3/31/04	5/28/04	5/22/05	1/31/06	6/9/06
Detection limit		2										
1,1,1-Trichloroethane												
1,1,2-Trichloro-1,2,2-trifluoroethane												
1,1-Dichloroethane	120	34	76	34.4	72.3	67.3	61	28	45	38	16	39
1,1-Dichloroethene												
1,2-Dichloroethane					1.13							
Benzene				4.55								
Bromomethane			76									
Chlorobenzene												
Chloromethane												
cis-1,2-Dichloroethene	110	30	130	33	60.2	72.4	54	35	57	42	4.3	45
cis-1,3-dichloropropene												
Cyclohexane												
Methyl tert-butyl ether					1.61							
Methylene chloride												
Styrene												
trans-1,2-Dichloroethene												
Trichloroethene	9	8			2.75	1.88			5.1	3.7	1.4	2.9
Vinyl chloride	10			2.31					4.4	2.3		7.6
Total VOCs, µg/l	**249**	**72**	**282**	**74.26**	**137.99**	**141.58** w/ Js	**115**	**63**	**111.5**	**86**	**21.7**	**94.5**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-8	<= post IRM =>							
Volatile Organic Compound	9/29/06	12/17/06	3/27/07	3/17/08	10/2/08	4/10/09	9/4/09	3/24/10
Detection limit								
1,1,1-Trichloroethane								
1,1,2-Trichloro-1,2,2-trifluoroethane								
1,1-Dichloroethane	36	31	25	17	28	27	30	30
1,1-Dichloroethene								
1,2-Dichloroethane								
Benzene		1.6				0.86		
Bromomethane								
Chlorobenzene								
Chloromethane								
cis-1,2-Dichloroethene	21	33	25	26	34	31	38	34
cis-1,3-dichloropropene								
Cyclohexane								
Methyl tert-butyl ether								
Methylene chloride								
Styrene								
trans-1,2-Dichloroethene								
Trichloroethene				1.6		1		
Vinyl chloride		2.4		2.5				
Total VOCs, µg/l	**57**	**68**	**50**	**47.1**	**62**	**59.86**	**68**	**64**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-8	==> post extraction well rebuild									
Volatile Organic Compound	4/13/10	10/29/10	4/15/11	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13
Detection limit		5	5	0.5 - 5	0.5 - 5	0.5 - 1	0.5 - 2	0.5 - 2	25 - 50	1 - 2
1,1,1-Trichloroethane										7.92
1,1,2-Trichloro-1,2,2-trifluoroethane										2.92
1,1-Dichloroethane	18	82	11	61.9	43.8	29.2	58.4	80.2	198	32.9
1,1-Dichloroethene				1.24	0.54		1.71	1.69		0.4
1,2-Dichloroethane				1.43	0.48	0.49	1.19	1.72		
Benzene				4.41	0.78	0.17	0.85	2.62		0.58
Bromomethane										
Chlorobenzene				0.1						
Chloromethane										0.82
cis-1,2-Dichloroethene	19	75	12	65.7	32.2	30.2	52.6	63.8	120	15.8
cis-1,3-dichloropropene				0.96						
Cyclohexane					1.2	0.42	0.65	1.91		1.74
Methyl tert-butyl ether				0.37	0.19	0.52		0.26		
Methylene chloride	12						0.26LC	0.18LC	21LC	
Styrene				0.29						
trans-1,2-Dichloroethene				0.47		0.24	0.47	0.43		
Trichloroethene				0.69	0.52	0.68	0.62	0.52		0.32
Vinyl chloride		12	12	8.45	1.18	5.19	17.3	21.1	41	2.8
Total VOCs, µg/l	**49**	**169**	**35**	**146.01** w/ Js	**80.89** w/ Js	**67.11** w/ Js	**134.41** w/ Js	**174.64** w/ Js	**359** w/ Js	**66.2** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-8	<= post extraction well rebuild =>								
Volatile Organic Compound	7/24/14	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	4/21/17	6/16/17	11/2/17
Detection limit	1 - 2	1 - 2	1 - 20	1 - 20	1 - 20	2 - 10	2 - 20	2 - 20	2 - 20
1,1,1-Trichloroethane									
1,1,2-Trichloro-1,2,2-trifluoroethane									
1,1-Dichloroethane	50.9	44.4	48.9	77.4	22.7	47.8	31.4	33.5	21.7
1,1-Dichloroethene	1.28	0.6	1.74	1.26			1.08		
1,2-Dichloroethane	1.02	0.78	0.98	1.52					
Benzene	0.96	1.9	0.3	0.32	0.5				2
Bromomethane									
Chlorobenzene									
Chloromethane		1.34							
cis-1,2-Dichloroethene		34	41.8	45.9	3.06	33.4	28.3	21.8	14.4
cis-1,3-dichloropropene	51.5								
Cyclohexane	2.54	2.02	0.38	1.04					
Methyl tert-butyl ether									
Methylene chloride	2.88LC	0.94LC	.76LC						
Styrene									
trans-1,2-Dichloroethene	0.38		0.38						
Trichloroethene	0.56	0.28	0.64	0.56					
Vinyl chloride	17.5	6.96	14	17.9		12.5	13.9	5.23	4.1
Total VOCs, µg/l	**126.64** w/ Js	**92.28** w/ Js	**109.12** w/ Js	**145.9** w/ Js	**26.26** w/ Js	**93.7** w/ Js	**74.68** w/ Js	**60.53** w/ Js	**42.2** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-9	<= pre IRM			system down 12/12/99 to 4/6/00				post IRM =>				
Volatile Organic Compound	10/12/98	5/28/99	10/22/99	6/13/00	11/1/01	9/25/02	6/30/03	8/9/03	11/7/03	3/31/04	5/28/04	9/26/04
Detection limit												
1,1,1-Trichloroethane	11000	1200	2500	1400	3200	1730	4330	1070	1300	470	410	1200
1,1,2-Trichloro-1,2,2-trifluoroethane												
1,1,2-Trichloroethane												
1,1-Dichloroethane	8900	1100	4300	1600	2480	3840	3060	1280	3300	590	440	1900
1,1-Dichloroethene				110		183						
1,2,4-Trimethylbenzene												
1,2-Dichloroethane				180		27.1						
1,4-dioxane												
Acetone												
Bromomethane							412					
Chloroethane												
Chloroform												
cis-1,2-Dichloroethene	4300	580	2200	930	1500	3190	4310	1410	2400	410	640	2200
Cyclohexane												
Methylene chloride									520			
n-Propylbenzene												
Tetrachloroethene		330										
Toluene												
trans-1,2-Dichloroethene												
Trichloroethene	5600		1100	1000	835	312	563	105	670	100	170	490
Vinyl chloride			390			531	226	60.5	510	56	55	790
o-Xylene												
p-Xylene							83.1					
Total VOCs, µg/l	**29800**	**3210**	**10490**	**5220**	**8015**	**9813.1**	**12984.1** w/ Js	**3925.5** w/ Js	**8700**	**1626**	**1715**	**6580**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-9	<= post IRM =>											==> post
Volatile Organic Compound	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06	3/27/07	3/18/08	10/7/08	4/10/09	9/4/09	2/25/10	4/13/10
Detection limit												
1,1,1-Trichloroethane		210	950	620	400	490	470	1400	1000	810	210	360
1,1,2-Trichloro-1,2,2-trifluoroethane												
1,1,2-Trichloroethane												
1,1-Dichloroethane	2500	460	2000	1800	690	1100	870	2700	3100	2700	190	390
1,1-Dichloroethene				150								
1,2,4-Trimethylbenzene												57
1,2-Dichloroethane												510
1,4-dioxane												
Acetone												
Bromomethane												
Chloroethane												
Chloroform				130								
cis-1,2-Dichloroethene	1100	250	1400	1800	860	350	540	1900	820	1100	270	
Cyclohexane												
Methylene chloride		32							160	230		
n-Propylbenzene												
Tetrachloroethene							200					
Toluene												
trans-1,2-Dichloroethene												
Trichloroethene	120	52	230	680	110	56	78					
Vinyl chloride	260	88	460	880	140	160	120	1600	500	750		120
o-Xylene												
p-Xylene												
Total VOCs, µg/l	**3980**	**1092**	**5040**	**6060**	**2200**	**2156**	**2278**	**7600**	**5580**	**5590**	**670**	**1437**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-9	extraction well rebuild											
Volatile Organic Compound	10/29/10	2/3/11	4/16/11	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14	12/4/14
Detection limit		100	10	250-5000	12 - 250	13 - 250	25 - 500	2.5 - 10	25 - 50	10 - 20		5 - 10
1,1,1-Trichloroethane	210	620	33	830	229	138	189	15.4	106	258	170	77.7
1,1,2-Trichloro-1,2,2-trifluoroethane					3.75		10.2			7	8.1	3.9
1,1,2-Trichloroethane											1.8	
1,1-Dichloroethane	690	850	76	5860	581	516	690	139	943	365	833	228
1,1-Dichloroethene					16.2	24.5	13.2	2.85	22	8.6	41.8	17.9
1,2,4-Trimethylbenzene			7			13	6.25			9.4	2	
1,2-Dichloroethane						4	5	2.6		4.8	6.6	3.3
1,4-dioxane												
Acetone							73					
Bromomethane												
Chloroethane			5								20.1	7.2
Chloroform												
cis-1,2-Dichloroethene	260	1200	88	960	324	242	211	75.8	398	323	606	157
Cyclohexane							6					
Methylene chloride							28LC	2.47LC	24	5.4		3LC
n-Propylbenzene											1	
Tetrachloroethene					5.25	5		0.75	8			3.9
Toluene						6.5	5.25			6	1.8	
trans-1,2-Dichloroethene							9	0.6		2.8	9.1	3
Trichloroethene	90		8	70	92.8	114	56.8	28	241	39.4	223	189
Vinyl chloride	230	240	21	615	143	72.8	192	18.3	118	153	270	165
o-Xylene							4.25			4	1.2	
p-Xylene												
Total VOCs, µg/l	**1480**	**2910**	**238**	**8335** w/ Js	**1395** w/ Js	**1135.8** w/ Js	**1495.2** w/ Js	**283.85** w/ Js	**1860** w/ Js	**1213.2** w/ Js	**2202.8** w/ Js	**857.7** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-9	<= post extraction well rebuild =>							
Volatile Organic Compound	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	5 - 100	2.50 - 50	2.50 - 50	10 - 100	2 - 20	2 - 20	4 - 20	10 - 100
1,1,1-Trichloroethane	47.8	17	30.6	58	6.98	20.3	76	55.3
1,1,2-Trichloro-1,2,2-trifluoroethane			1.95				4.61	5.33
1,1,2-Trichloroethane								
1,1-Dichloroethane		84.6	272	520	92.3	231	398	495
1,1-Dichloroethene	15.3	3.05	14.1	12.7		9.8	21.6	25
1,2,4-Trimethylbenzene								
1,2-Dichloroethane	3.9		2.7			2.13	3.24	
1,4-dioxane					20.4			
Acetone			6.15LC				15.4	
Bromomethane								
Chloroethane	10.6		6.2		1.96	9.82	17.1	15.5
Chloroform								
cis-1,2-Dichloroethene	120	26.9	135	200	34.1	97	210	177
Cyclohexane								
Methylene chloride	6.20LC							
n-Propylbenzene								
Tetrachloroethene	1.7	0.5	2.25					
Toluene								
trans-1,2-Dichloroethene	3.2	0.65	2.3			2.08	5.09	6.08
Trichloroethene	89.8	37	192	73.7	16.9	125	161	158
Vinyl chloride	138	25.4	60.6	128	3.45	57.2	156	190
o-Xylene								
p-Xylene								
Total VOCs, µg/l	**431.7** w/ Js	**195.1** w/ Js	**719.7** w/ Js	**992.4**	**176.09** w/ Js	**554.33** w/ Js	**1068.04** w/ Js	**1127.21** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-10	<= Post IRM =>												
Volatile Organic Compound	1/13/99	6/25/99	11/1/01	9/25/02	6/29/03	8/9/03	5/28/04	5/22/05	1/31/06	6/9/06	9/29/06	10/2/08	4/10/09
Detection limit													
1,1,1,2-Tetrachloroethane													
1,1,1-Trichloroethane													
1,1,2,2-Tetrachloroethane													
1,1,2-Trichloro-1,2,2-trifluoroethane													
1,1-Dichloroethane													
1,1-Dichloroethene													
1,2,3-Trichloropropane													
1,2,4-Trichlorobenzene													
1,2,4-Trimethylbenzene													
1,2-Dibromo-3-chloropropane													
1,2-Dibromoethane													
1,2-Dichlorobenzene													
1,2-Dichloroethane													
1,2-Dichloropropane													
1,3,5-Trimethylbenzene													
1,3-Dichloro-2-propanol													
1,3-Dichlorobenzene													
1,4-Dichlorobenzene													
1,4-dioxane													
2-Chloroethanol													
2-Chloroethyl vinyl ether													
4-Chlorotoluene													
2-Butanone													
4-Isopropyltoluene													
Acetone													
Allyl chloride													
Benzene													
Benzyl chloride													
Bis(2-chloroisopropyl) ether													
Bromoacetone													
Bromobenzene													
Bromochloromethane													
Bromodichloromethane													
Bromoform													
Bromomethane													
Carbon disulfide													
Carbon tetrachloride													
Chlorobenzene													
Chlorodibromomethane													

CMS REMEDIATION SITE MW-10	<= Post IRM =>												
Volatile Organic Compound	1/13/99	6/25/99	11/1/01	9/25/02	6/29/03	8/9/03	5/28/04	5/22/05	1/31/06	6/9/06	9/29/06	10/2/08	4/10/09
Detection limit													
Chloroethane													
Chloroform													
Chloromethane													
Chloromethyl methyl ether													
Chloroprene													
cis-1,2-Dichloroethene													
cis-1,3-dichloropropene													
Cyclohexane													
Dibromochloromethane													
Dibromomethane													
Dichlorodifluoromethane													
Epichlorhydrin													
Ethylbenzene													
Hexachlorobutadiene													
Isopropylbenzene													
Methyl tert-butyl ether													
Methylcyclohexane													
Methylene chloride		5.0LC											
Naphthalene													
n-Propylbenzene													
sec-Butylbenzene													
Styrene													
Tetrachloroethene													
Toluene													
trans-1,2-Dichloroethene													
trans-1,3-dichloropropene													
Trichloroethene													
Trichlorofluoromethane													
Vinyl chloride													
m,p-Xylene													
m-Xylene													
o-Xylene													
p-Xylene													
Total Xylenes													
Total VOCs, µg/l	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**

italic = found in tank contents
underlined = found in soil
bold = found in wells

CMS REMEDIATION SITE MW-10	=> post extraction well rebuild								
Volatile Organic Compound	4/13/10	4/15/11	10/18/11	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14
Detection limit			0.5 - 10	0.5 - 10	25 - 500	0.5 - 10	0.5 - 10	0.5 - 10	0.5 - 2
1,1,1,2-Tetrachloroethane									
1,1,1-Trichloroethane									
1,1,2,2-Tetrachloroethane									
1,1,2-Trichloro-1,2,2-trifluoroethane							0.14	0.18	
1,1-Dichloroethane						0.12			0.16
1,1-Dichloroethene									
1,2,3-Trichloropropane									
1,2,4-Trichlorobenzene									
1,2,4-Trimethylbenzene									
1,2-Dibromo-3-chloropropane									
1,2-Dibromoethane									
1,2-Dichlorobenzene									
1,2-Dichloroethane									
1,2-Dichloropropane									
1,3,5-Trimethylbenzene									
1,3-Dichloro-2-propanol									
1,3-Dichlorobenzene									
1,4-Dichlorobenzene									
1,4-dioxane									
2-Chloroethanol									
2-Chloroethyl vinyl ether									
4-Chlorotoluene									
2-Butanone									
4-Isopropyltoluene									
Acetone			1.04LC		3.99LC	5.12LC	2.69LC	2.84LC	5.05LC
Allyl chloride									
Benzene						0.17	0.24		
Benzyl chloride									
Bis(2-chloroisopropyl) ether									
Bromoacetone									
Bromobenzene									
Bromochloromethane									
Bromodichloromethane									
Bromoform									
Bromomethane									
Carbon disulfide									
Carbon tetrachloride									
Chlorobenzene									
Chlorodibromomethane									

CMS REMEDIATION SITE MW-10	=> post extraction well rebuild								
Volatile Organic Compound	4/13/10	4/15/11	10/18/11	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14
Detection limit			0.5 - 10	0.5 - 10	25 - 500	0.5 - 10	0.5 - 10	0.5 - 10	0.5 - 2
Chloroethane									
Chloroform									
Chloromethane									
Chloromethyl methyl ether									
Chloroprene									
cis-1,2-Dichloroethene									
cis-1,3-dichloropropene									
Cyclohexane									
Dibromochloromethane									
Dibromomethane									
Dichlorodifluoromethane									
Epichlorhydrin									
Ethylbenzene									
Hexachlorobutadiene									
Isopropylbenzene									
Methyl tert-butyl ether									
Methylcyclohexane									
Methylene chloride	1.4LC				0.21LC	0.22LC			
Naphthalene									
n-Propylbenzene									
sec-Butylbenzene									
Styrene									
Tetrachloroethene									
Toluene									
trans-1,2-Dichloroethene									
trans-1,3-dichloropropene									
Trichloroethene									
Trichlorofluoromethane									
Vinyl chloride									
m,p-Xylene									
m-Xylene									
o-Xylene									
p-Xylene									
Total Xylenes									
Total VOCs, µg/l	**nd**	**nd**	**nd** w/ Js	**nd**	**nd** w/ Js	**0.29** w/ Js	**0.38** w/ Js	**0.18** w/ Js	**0.16** w/ Js

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underlined = found in soil
bold = found in wells

CMS REMEDIATION SITE MW-10	<== post extraction well rebuild ==>								
Volatile Organic Compound	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	0.5 - 2	.50 - 10	2.5 - 50	.50 - 10	2 - 5	2 - 20	2 - 20	2 - 20	2 - 20
1,1,1,2-Tetrachloroethane									
1,1,1-Trichloroethane									
1,1,2,2-Tetrachloroethane									
1,1,2-Trichloro-1,2,2-trifluoroethane									
1,1-Dichloroethane									
1,1-Dichloroethene									
1,2,3-Trichloropropane									
1,2,4-Trichlorobenzene									
1,2,4-Trimethylbenzene									
1,2-Dibromo-3-chloropropane									
1,2-Dibromoethane									
1,2-Dichlorobenzene									
1,2-Dichloroethane									
1,2-Dichloropropane									
1,3,5-Trimethylbenzene									
1,3-Dichloro-2-propanol									
1,3-Dichlorobenzene									
1,4-Dichlorobenzene									
1,4-dioxane									
2-Chloroethanol									
2-Chloroethyl vinyl ether									
4-Chlorotoluene									
2-Butanone									
4-Isopropyltoluene									
Acetone	5.21LC	23.4LC	1.97LC	1.54LC				13.4 LC	
Allyl chloride									
Benzene									
Benzyl chloride									
Bis(2-chloroisopropyl) ether									
Bromoacetone									
Bromobenzene									
Bromochloromethane									
Bromodichloromethane									
Bromoform									
Bromomethane									
Carbon disulfide									
Carbon tetrachloride									
Chlorobenzene									
Chlorodibromomethane									

CMS REMEDIATION SITE MW-10	<== post extraction well rebuild ==>								
Volatile Organic Compound	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	0.5 - 2	.50 - 10	2.5 - 50	.50 - 10	2 - 5	2 - 20	2 - 20	2 - 20	2 - 20
Chloroethane									
Chloroform	0.58								
Chloromethane									
Chloromethyl methyl ether									
Chloroprene									
cis-1,2-Dichloroethene									
cis-1,3-dichloropropene									
Cyclohexane									
Dibromochloromethane									
Dibromomethane									
Dichlorodifluoromethane									
Epichlorhydrin									
Ethylbenzene									
Hexachlorobutadiene									
Isopropylbenzene									
Methyl tert-butyl ether									
Methylcyclohexane									
Methylene chloride									
Naphthalene									
n-Propylbenzene									
sec-Butylbenzene									
Styrene									
Tetrachloroethene									
Toluene					10.3				
trans-1,2-Dichloroethene									
trans-1,3-dichloropropene									
Trichloroethene									
Trichlorofluoromethane									
Vinyl chloride									
m,p-Xylene									
m-Xylene									
o-Xylene									
p-Xylene									
Total Xylenes									
Total VOCs, µg/l	**0.58**	**nd**	**nd**	**nd**	**10.3**	**nd**	**nd**	**nd**	**nd**
	w/ Js	w/ Js	w/ Js	w/ Js					

italic = found in tank contents
underlined = found in soil
bold = found in wells

CMS REMEDIATION SITE MW-11 Volatile Organic Compounds	<= post IRM =>										
	1/13/99	6/25/99	11/1/01	9/25/02	6/29/03	8/9/03	5/28/04	5/22/05	1/31/06	6/9/06	9/29/06
Detection limit											
1,1,1,2-Tetrachloroethane											
1,1,1-Trichloroethane											
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane											
1,1-Dichloroethene											
1,2,3-Trichloropropane											
1,2,4-Trichlorobenzene											
1,2,4-Trimethylbenzene											
1,2-Dibromo-3-chloropropane											
1,2-Dibromoethane											
1,2-Dichlorobenzene											
1,2-Dichloroethane											
1,2-Dichloropropane											
1,3,5-Trimethylbenzene											
1,3-Dichloro-2-propanol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
2-Chloroethanol											
2-Chloroethyl vinyl ether											
4-Chlorotoluene											
4-Isopropyltoluene											
Acetone											
Allyl chloride											
Benzene											
Benzyl chloride											
Bis(2-chloroisopropyl) ether											
Bromoacetone											
Bromobenzene											
Bromochloromethane											
Bromodichloromethane											
Bromoform											
Bromomethane											
Carbon disulfide											
Carbon tetrachloride											
Chlorobenzene											
Chlorodibromomethane											
Chloroethane											

CMS REMEDIATION SITE MW-11	<= post IRM =>										
Volatile Organic Compounds	1/13/99	6/25/99	11/1/01	9/25/02	6/29/03	8/9/03	5/28/04	5/22/05	1/31/06	6/9/06	9/29/06
Detection limit											
Chloroform											
Chloromethane											
Chloromethyl methyl ether											
Chloroprene											
cis-1,2-Dichloroethene											
cis-1,3-dichloropropene											
Cyclohexane											
Dibromochloromethane											
Dibromomethane											
Dichlorodifluoromethane											
Epichlorhydrin											
Ethylbenzene											
Hexachlorobutadiene											
Isopropylbenzene											
Methyl tert-butyl ether											
Methylene chloride											
Naphthalene											
n-Propylbenzene											
sec-Butylbenzene											
Styrene											
Tetrachloroethene											
Toluene											
trans-1,2-Dichloroethene											
trans-1,3-dichloropropene											
Trichloroethene											
Trichlorofluoromethane											
Vinyl chloride											
m,p-Xylene											
m-Xylene											
o-Xylene											
p-Xylene											
Total Xylenes											
Total VOCs	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**

italic = found in tank contents
underlined = found in soil
bold = found in wells

CMS REMEDIATION SITE MW-11			=> post extraction well rebuild								
Volatile Organic Compounds	10/2/08	4/10/09	4/13/10	4/15/11	10/18/11	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14
Detection limit				*1*	*0.5 - 10*	*0.5 - 11*	*10*	*0.5 - 10*	*0.5 - 2.5*	*0.5*	*0.5*
1,1,1,2-Tetrachloroethane											
1,1,1-Trichloroethane										17.7	
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloro-1,2,2-trifluoroethane										14.3	
1,1,2-Trichloroethane											
1,1-Dichloroethane										19.3	0.54
1,1-Dichloroethene										0.41	
1,2,3-Trichloropropane											
1,2,4-Trichlorobenzene											
1,2,4-Trimethylbenzene						0.47					
1,2-Dibromo-3-chloropropane											
1,2-Dibromoethane											
1,2-Dichlorobenzene											
1,2-Dichloroethane											
1,2-Dichloropropane											
1,3,5-Trimethylbenzene						0.36					
1,3-Dichloro-2-propanol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
2-Chloroethanol											
2-Chloroethyl vinyl ether											
4-Chlorotoluene											
4-Isopropyltoluene											
Acetone					1.13LC		2.74LC	2.57LC	2.02LC	2.25LC	
Allyl chloride											
Benzene											
Benzyl chloride											
Bis(2-chloroisopropyl) ether											
Bromoacetone											
Bromobenzene											
Bromochloromethane											
Bromodichloromethane											
Bromoform											
Bromomethane											
Carbon disulfide									0.13		
Carbon tetrachloride											
Chlorobenzene											
Chlorodibromomethane											
Chloroethane											

CMS REMEDIATION SITE MW-11			=> post extraction well rebuild								
Volatile Organic Compounds	10/2/08	4/10/09	4/13/10	4/15/11	10/18/11	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14
Detection limit				*1*	*0.5 - 10*	*0.5 - 11*	*10*	*0.5 - 10*	*0.5 - 2.5*	*0.5*	*0.5*
Chloroform											
Chloromethane											
Chloromethyl methyl ether											
Chloroprene											
cis-1,2-Dichloroethene										0.41	
cis-1,3-dichloropropene											
Cyclohexane						0.46	0.26	0.35	0.2		0.25
Dibromochloromethane											
Dibromomethane											
Dichlorodifluoromethane											
Epichlorhydrin											
Ethylbenzene											
Hexachlorobutadiene											
Isopropylbenzene											
Methyl tert-butyl ether											
Methylene chloride							.29LC	.18LC			
Naphthalene											
n-Propylbenzene			1.4LC								
sec-Butylbenzene											
Styrene											
Tetrachloroethene										0.41	
Toluene											
trans-1,2-Dichloroethene											
trans-1,3-dichloropropene											
Trichloroethene										0.1	
Trichlorofluoromethane											
Vinyl chloride											
m,p-Xylene											
m-Xylene											
o-Xylene											
p-Xylene											
Total Xylenes											
Total VOCs	**nd**	**nd**	**nd**	**nd**	**nd**	**1.29** w/ Js	**0.26** w/ Js	**0.35** w/ Js	**0.33** w/ Js	** w/ Js	**0.79** w/ Js

italic = found in tank contents
underlined = found in soil
bold = found in wells

** field mis-ID or contaminated

CMS REMEDIATION SITE MW-11	<= post extraction well rebuild =>								
Volatile Organic Compounds	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	*0.5*	*.50 - 10*	*.50 - 10*	*.50 - 10*	*2 - 20*	*2 - 20*	2 - 20	2 - 20	2 - 20
1,1,1,2-Tetrachloroethane									
1,1,1-Trichloroethane									
1,1,2,2-Tetrachloroethane									
1,1,2-Trichloro-1,2,2-trifluoroethane									
1,1,2-Trichloroethane									
1,1-Dichloroethane	0.48		0.35						
1,1-Dichloroethene									
1,2,3-Trichloropropane									
1,2,4-Trichlorobenzene									
1,2,4-Trimethylbenzene									
1,2-Dibromo-3-chloropropane									
1,2-Dibromoethane									
1,2-Dichlorobenzene									
1,2-Dichloroethane									
1,2-Dichloropropane									
1,3,5-Trimethylbenzene									
1,3-Dichloro-2-propanol									
1,3-Dichlorobenzene									
1,4-Dichlorobenzene									
2-Chloroethanol									
2-Chloroethyl vinyl ether									
4-Chlorotoluene									
4-Isopropyltoluene									
Acetone			2.37LC	1.53LC					
Allyl chloride									
Benzene									
Benzyl chloride									
Bis(2-chloroisopropyl) ether									
Bromoacetone									
Bromobenzene									
Bromochloromethane									
Bromodichloromethane									
Bromoform									
Bromomethane									
Carbon disulfide									
Carbon tetrachloride									
Chlorobenzene									
Chlorodibromomethane									
Chloroethane	0.11								

CMS REMEDIATION SITE MW-11	<= post extraction well rebuild =>								
Volatile Organic Compounds	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	*0.5*	*.50 - 10*	*.50 - 10*	*.50 - 10*	*2 - 20*	*2 - 20*	2 - 20	2 - 20	2 - 20
Chloroform									
Chloromethane									
Chloromethyl methyl ether									
Chloroprene									
cis-1,2-Dichloroethene									
cis-1,3-dichloropropene									
Cyclohexane			0.46						
Dibromochloromethane									
Dibromomethane									
Dichlorodifluoromethane									
Epichlorhydrin									
Ethylbenzene									
Hexachlorobutadiene									
Isopropylbenzene									
Methyl tert-butyl ether									
Methylene chloride									
Naphthalene									
n-Propylbenzene									
sec-Butylbenzene									
Styrene									
Tetrachloroethene									
Toluene									
trans-1,2-Dichloroethene									
trans-1,3-dichloropropene									
Trichloroethene									
Trichlorofluoromethane									
Vinyl chloride									
m,p-Xylene									
m-Xylene									
o-Xylene									
p-Xylene									
Total Xylenes									
Total VOCs	**0.59** w/ Js	**nd**	**0.81** w/ Js	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**

italic = found in tank contents
underlined = found in soil
bold = found in wells

CMS REMEDIATION SITE MW-12	post IRM		=> post extraction well rebuild								
Volatile Organic Compound	11/20/10	2/3/11	4/15/11	6/10/11	7/21/11	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12
Detection limit	100	5	10	50	20	6 - 125	5 - 100	5 - 100	1 - 10	2.5 - 10	2.5 - 5
1,1-Dichloroethane	120	90	190	270	140	178	175	168	66	134	160
1,2-Dichloroethane			4			5	4.1	4.2	3.35	4.1	4.65
1,4-dioxane											
Acetone									14		
Benzene						1.5					
Chloroethane	16		4			37.6	19.4	32	90.8	21.6	29.2
Chloromethane											
cis-1,2-Dichloroethene		9.4	26	30	10	9.38	20.3	23.5	9.05	15.9	20.6
Cyclohexane						2.38		2.2	1.7		
Methylene chloride								11.8LC	4.5LC	2.25LC	2.65LC
Trichloroethene											0.75
Vinyl chloride		27	88	260	47	43.2	119	128	53.6	71.4	107
Total VOCs, µg/l	**136** w/ Js	**126**	**312.00** w/ Js	**560.00**	**197.00** w/ Js	**277.06** w/ Js	**337.8** w/ Js	**357.9** w/ Js	**238.5** w/ Js	**247** w/ Js	**322.2** w/ Js

italic = found in tank contents

underlined = found in soil

CMS REMEDIATION SITE MW-12	<= post extraction well rebuild =>										
Volatile Organic Compound	4/5/13	7/24/14	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	2.5 - 5	2.5	1 - 2	1 - 20	1 - 20	.50 - 10	2 - 10	2 - 10	2 - 20	2 - 20	2 - 20
1,1-Dichloroethane	74.4	24.5	81.8	74.4	99.3	31.4	79.9	15.7	72.3	87	29.2
1,2-Dichloroethane	3.4	1.7	4	2.08	2.78	2.09	2.2		1.37	2.02	
1,4-dioxane								10.5			12.2
Acetone				3.54LC						11.8	
Benzene											
Chloroethane	48.8	8.5	9.48	3.4		6.06	4.32		2.43	5.93	
Chloromethane					6.06						
cis-1,2-Dichloroethene	9.35	2.05	18.9	12.1	9.6	8.41	6.83	1.87	8.78	5.21	2.57
Cyclohexane	1.4	0.75	0.36	0.22	0.76						
Methylene chloride	0.95LC		1.34LC	.80LC	.38LC						
Trichloroethene											
Vinyl chloride	77	26.4	109	58.3	64.6	70.8	64.6	11.7	80	76.8	10.8
Total VOCs, µg/l	**214.35** w/ Js	**63.9** w/ Js	**224.14** w/ Js	**150.5** w/ Js	**183.1** w/ Js	**118.76** w/ Js	**157.85** w/ Js	**39.77** w/ Js	**164.88** w/ Js	**188.76** w/ Js	**54.77** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-13	<= post extraction well rebuild =>										
Volatile Organic Compound	11/20/10	2/3/11	4/15/11	6/8/11	7/21/11	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12
Detection limit	100	1	1	1	1	0.5 - 10	0.5 - 10	0.5 - 10	25 - 500	0.5 - 2	0.5 - 2
1,1,2-Trichloroethane										1.94	
1,1-Dichloroethane			4	0.2			0.19		0.22	0.29	0.23
1,2,4-Trimethylbenzene			0.4	0.6	4.5	16.2		1.4	0.48	0.18	
1,3,5-Trimethylbenzene	5.3	1.7	0.5	0.6	5.6	13.2		1.56	0.33	0.61	0.22
(p) 4-Isopropyltoluene					0.4	0.59		0.58			
Acetone							1.85LC		4.57LC		
Benzene		1.1		0.3		0.3				0.22	
Carbon disulfide						0.89			1.58		
Chloromethane		2.6									
cis-1,2-Dichloroethene											
Cyclohexane						34.50	0.13	2.6	0.89	2.31	0.37
Ethylbenzene					0.6	2.61					
Isopropylbenzene				0.6	0.6	1.70					
Methylcyclohexane											
Methylene chloride								1.5	0.27LC	.2LC	
Naphthalene					1.2	1.64					
n-Propylbenzene				0.5	0.7	2.39					
sec-Butylbenzene				0.5	0.3	0.66					
Styrene					0.4	0.57					
Tetrachloroethene					0.2						
Toluene					0.3	0.48					
m,p-Xylene					1.0	7.6		1.34	0.58		
o-Xylene					0.5	2.6		1.42	0.11	0.22	0.1
Total VOCs, µg/l	**5.3** w/ Js	**5.4**	**4.9** w/ Js	**3.3** w/ Js	**16.3** w/ Js	**85.92** w/ Js	**0.32** w/ Js	**10.4** w/ Js	**4.19** w/ Js	**5.77** w/ Js	**0.92** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-13	<= post extraction well rebuild =>										
Volatile Organic Compound	4/5/13	7/24/14	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	0.5 - 1	0.5	0.5	.50 - 5	.50 - 10	.50 - 10	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20
1,1,2-Trichloroethane											
1,1-Dichloroethane	0.19	0.2	0.16	0.16	0.23	0.1					
1,2,4-Trimethylbenzene	1.18	0.13									
1,3,5-Trimethylbenzene	0.17										
(p) 4-Isopropyltoluene											
Acetone						1.27LC				5.42	
Benzene											
Carbon disulfide											
Chloromethane											
cis-1,2-Dichloroethene					0.6						
Cyclohexane	0.27	0.15	0.35								
Ethylbenzene	0.17										
Isopropylbenzene	0.48										
Methylcyclohexane										1.61	
Methylene chloride											
Naphthalene											
n-Propylbenzene	0.64										
sec-Butylbenzene	0.3										
Styrene											
Tetrachloroethene											
Toluene											
m,p-Xylene	0.37										
o-Xylene											
Total VOCs, µg/l	**3.77** w/ Js	**0.48** w/ Js	**0.51** w/ Js	**0.16** w/ Js	**0.83** w/ Js	**0.1** w/ Js	**nd**	**nd**	**nd**	**7.03** w/ Js	**nd**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-14	<= post extraction well modifications =>									
Volatile Organic Compound	4/15/11	6/8/11	7/21/11	10/18/11	1/31/12	3/22/12	6/24/12	10/2/12	12/18/12	4/5/13
Detection limit	*100*	*1000*	*500*	*100-2000*	*50-1000*	*100-2000*	*100-2000*	*50 - 200*		*25 - 50*
1,1,1-Trichloroethane	1700	2100	540	1970	3390	4190	3380	5660	1920	1860
1,1,2-Trichloro-1,2,2-trifluoroethane				644	2580		618	2030	725	1330
1,1-Dichloroethane	3400	1400	1300	2390	1970	3100	2610	3900	2010	1650
1,1-Dichloroethene	50			62	74	170	66	119	46	55.5
1,2,4-Trimethylbenzene				32				17		33.5
1,3,5-Trimethylbenzene	50									11.5
Acetone				1040			530			
Benzene	30			38	16		20	19	10	15
Carbon disulfide							234			
Chloroform		500								
cis-1,2-Dichloroethene	40			60	114	206	134	236	75	81
Cyclohexane				90	71	56	56	105	29	91.5
Ethylbenzene	40									7.5
Methylcyclohexane										
Methylene chloride		500	1800			146	176LC	53LC	43LC	11
Tetrachloroethene				30			114	375	82	61.5
Toluene	40			68	31	54	32	29	20	21
Vinyl chloride					33					
m,p-Xylene				52	29			25		35.5
m-Xylene	30									
o-Xylene				22				11		13
Total VOCs, µg/l	**5380** w/ J	**4500** w/ Js	**3640** w/ Js	**6498** w/ Js	**8308** w/ Js	**7922** w/ Js	**7794** w/ Js	**12548** w/ Js	**4955** w/ Js	**5308** w/ Js

italic = found in tank contents

underlined = found in soil

CMS REMEDIATION SITE MW-14	<= post extraction well modifications =>									
Volatile Organic Compound	7/24/14	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17
Detection limit	*0.5 - 5.0*	*25 - 50*	*50-1000*	*50-1000*	*50-1000*	*100-1000*	*100 - 250*	*20 - 200*	*20 - 200*	*20 - 200*
1,1,1-Trichloroethane	15.7	3500	3840	1790	4400	1830	1010	1040	1690	1600
1,1,2-Trichloro-1,2,2-trifluoroethane	12.5	1220			1540			470	439	512
1,1-Dichloroethane	23.8	2670	3570	2340	2640	1880	2530	1120	2610	2680
1,1-Dichloroethene	0.72	59	89	34	62			19.7	42.4	42.2
1,2,4-Trimethylbenzene	0.85									
1,3,5-Trimethylbenzene	0.26	5.5								
Acetone			110LC		275LC					
Benzene	0.64	26.5	12				38.3	8.74	14	19.9
Carbon disulfide										
Chloroform										
cis-1,2-Dichloroethene	0.89	134		99	113			51	57	91.3
Cyclohexane	2.54	118	31	44						
Ethylbenzene	0.28	8.5								
Methylcyclohexane							88.5	25		47.6
Methylene chloride			68.0LC	26.0LC						
Tetrachloroethene	0.95	132	82	17	60			13.4		
Toluene	0.36	21	10	13						
Vinyl chloride		35.5			33		50			44
m,p-Xylene	0.53	11								
m-Xylene										
o-Xylene	0.5	11.5		41						
Total VOCs, µg/l	**60.7** w/ Js	**8005.5** w/ Js	**7710** w/ Js	**4704** w/ Js	**8969** w/ Js	**3710** w/ Js	**3800.9** w/ Js	**2797.84** w/ Js	**4902.4** w/ Js	**5142.4** w/ Js

italic = found in tank contents

underlined = found in soil

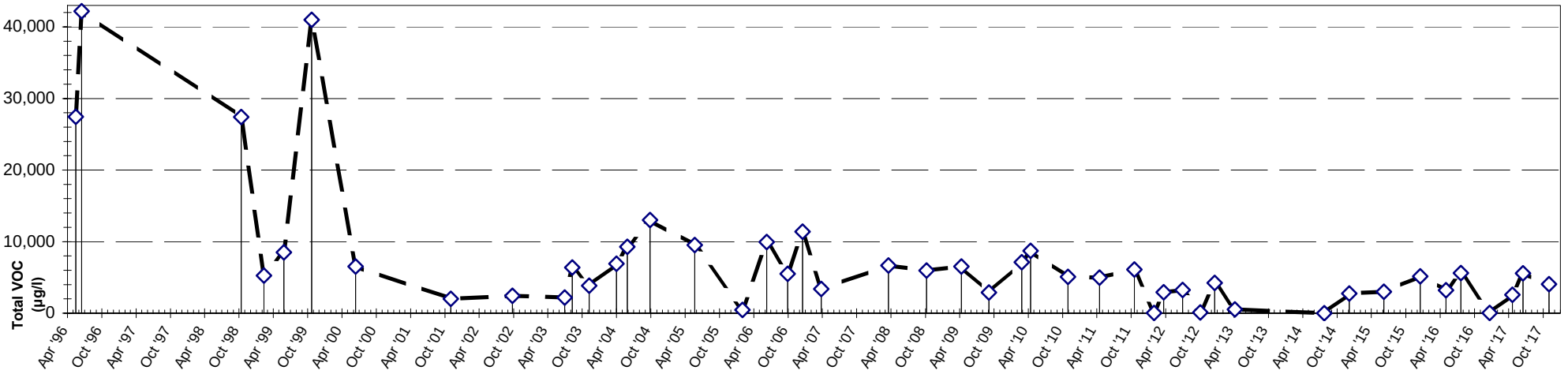
CMS REMEDIATION SITE MW-15	<= post extraction well rebuild =>					
Volatile Organic Compound	5/2/2016	7/21/2016	12/21/2016	4/21/2017	6/16/2017	11/2/2017
Detection limit	*25 - 500*	*10 - 100*	*10 - 100*	*10 - 100*	*10 - 100*	*10 - 100*
1,1,1-Trichloroethane		103	84.3	88.1	46.3	40.1
1,1,2-Trichloro-1,2,2-trifluoroethane	27.5	10.6	15.3	39.4	21.6	8.09
1,1-Dichloroethane	798	535	707	612	445	484
1,1-Dichloroethene						
1,2,4-Trimethylbenzene			21.7		6.04	
Benzene		6.06	12.8	2.84	4.8	
cis-1,2-Dichloroethene	12.5	6.66	7.1	6.31		5.83
Cyclohexane			58.9		63.9	
Methylcyclohexane		9.15	64.6	5.89	104	
Toluene			9.5			
m,p-Xylene			5.94			
o-Xylene			12.2			
Total VOCs	**838** w/ Js	**670.47**	**999.34** w/ Js	**763.32** w/ Js	**769.84** w/ Js	**538.02** w/ Js

italic = found in tank contents
underlined = found in soil

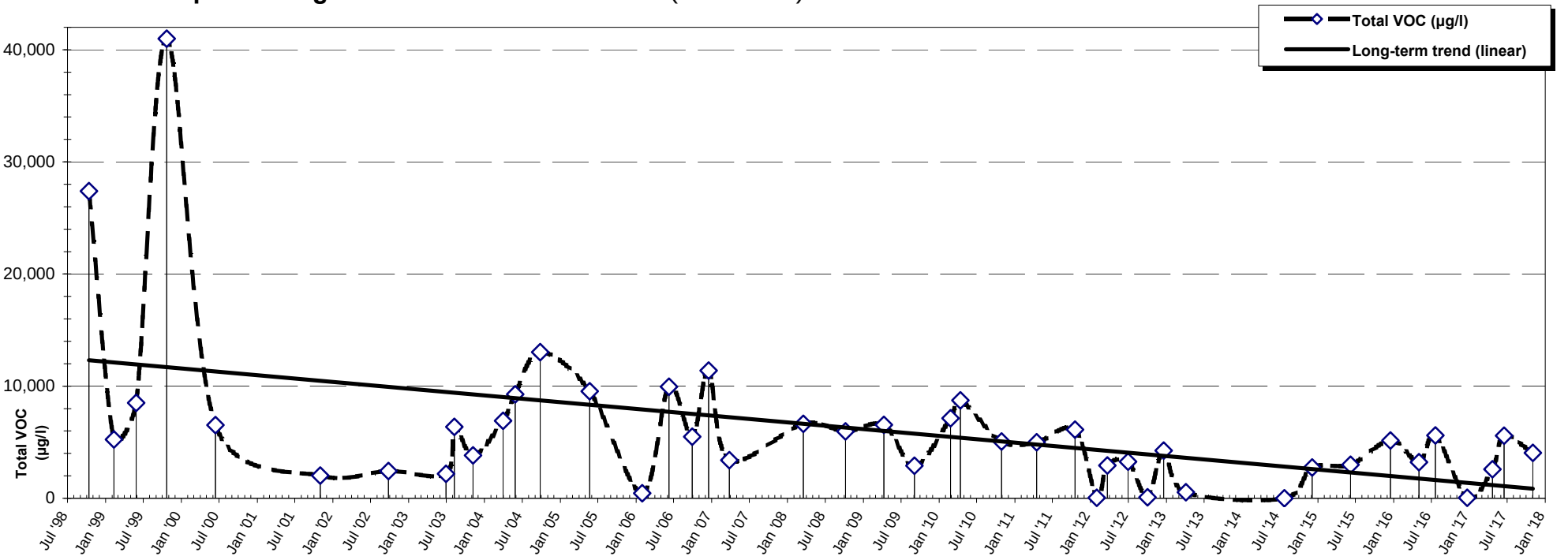
APPENDIX B

Graphical Presentation of Groundwater Quality Monitoring through December 2017

CMS Property Associates Remediation Site West Extraction Well MW-1



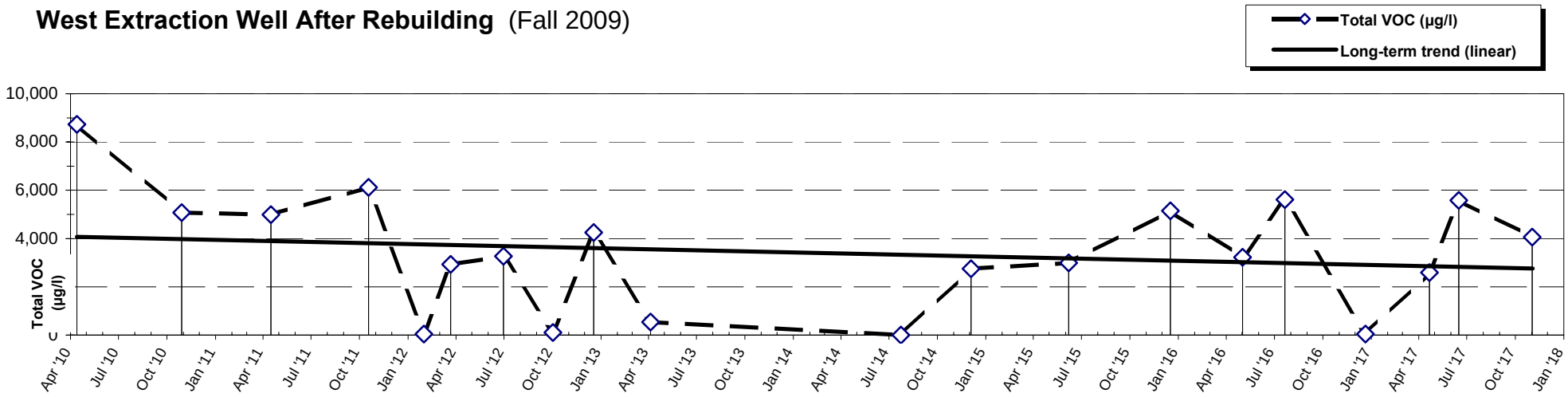
MW-1 After Implementing Interim Remedial Measures (June 1998)



Date	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
VOCs	11,380	3,390	6,650	5,970	6,540	2,910	7,140	8,730	5,070	4,990	6,118	43	2,927	3,262	101	4,245	543	nd	2,746	2,988	nd	3,226	5,615	45	2,587	5,577	4,055

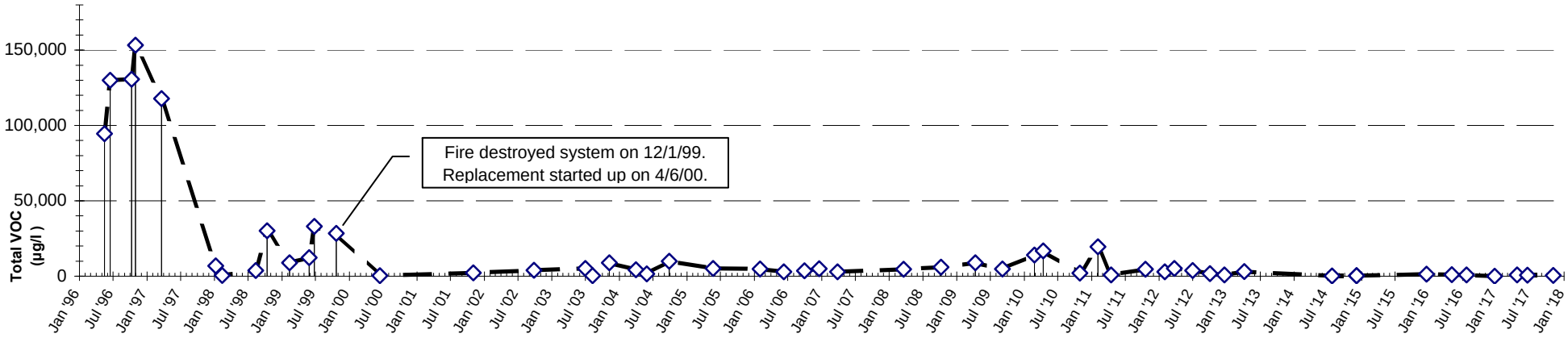
MW-1

West Extraction Well After Rebuilding (Fall 2009)

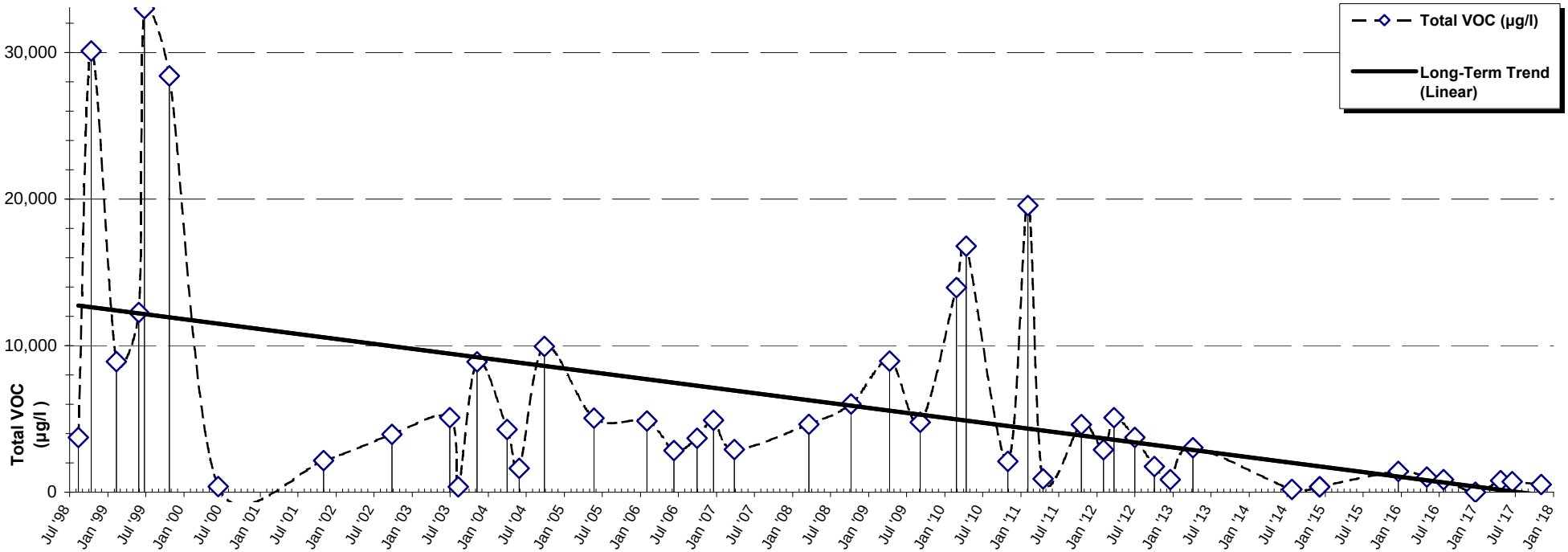


Date	Apr '10	Oct '10	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
VOCs	8,730	5,070	4,990	6,118	43	2,927	3,262	101	4,245	543	nd	2,746	2,988	5,146	3,226	5,615	45	2,587	5,577	4,055

CMS Associates Remediation Site **South Extraction Well MW-2**



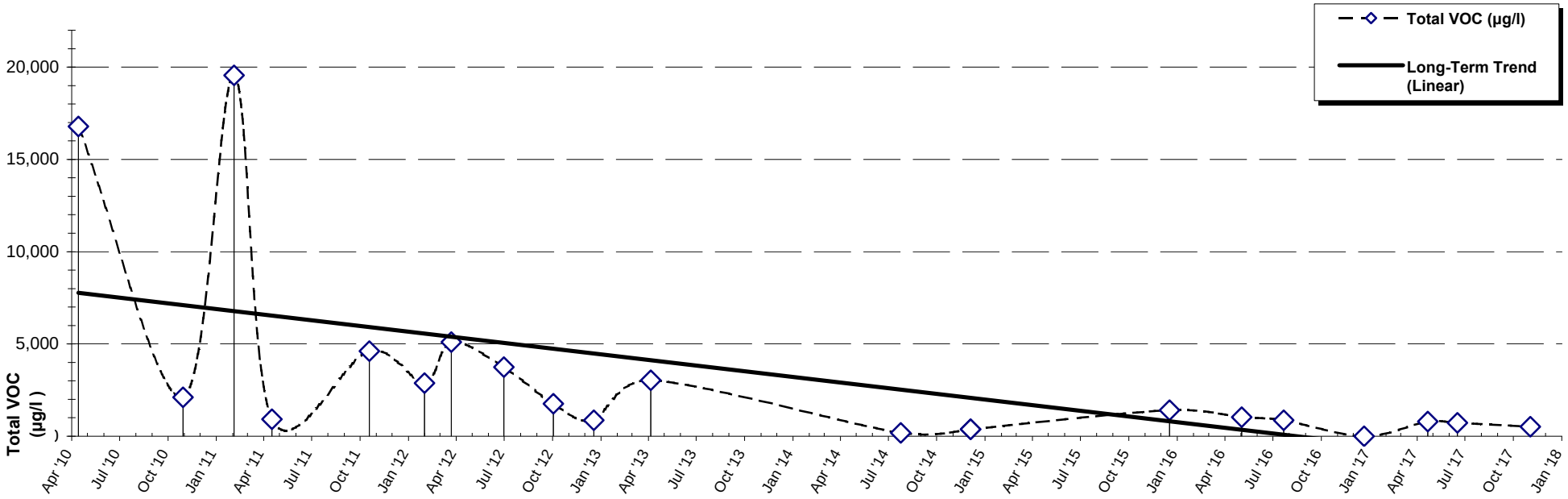
MW-2 After Implementing Interim Remedial Measures (June 1998)



Date	Aug '98	Oct '98	Feb '99	May '99	Jun '99	Oct '99	Jun '00	Nov '01	Sep '02	Jun '03	Aug '03	Nov '03	Mar '04	May '04	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10
TVOCs	3,740	30,100	8,920	12,270	33,000	28,400	379	2,152	3,943	5,081	375	8,900	4,280	1,624	9,940	5,060	4,860	2,836	3,681	4,920	2,913	4,630	6,020	8,940	4,780	13,970	16,790

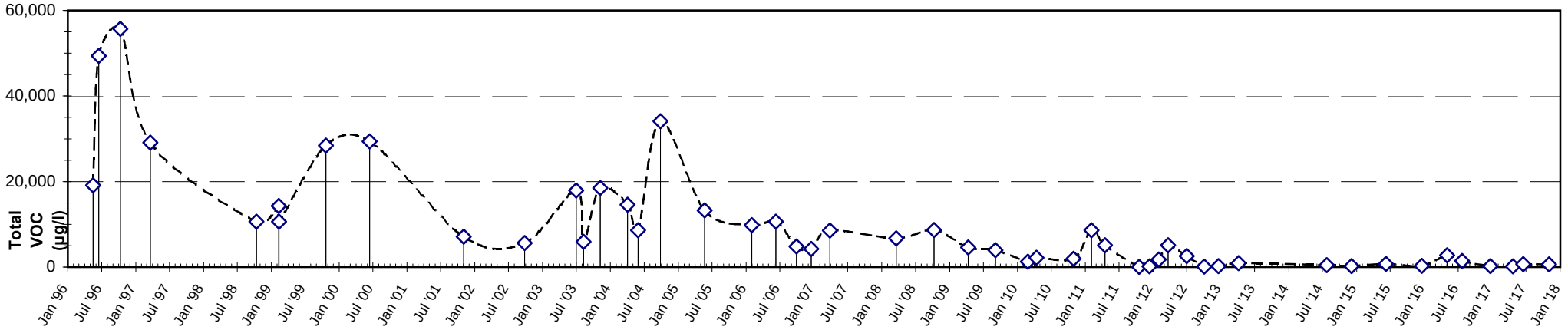
MW-2

South Extraction Well After Rebuilding (Fall 2009)

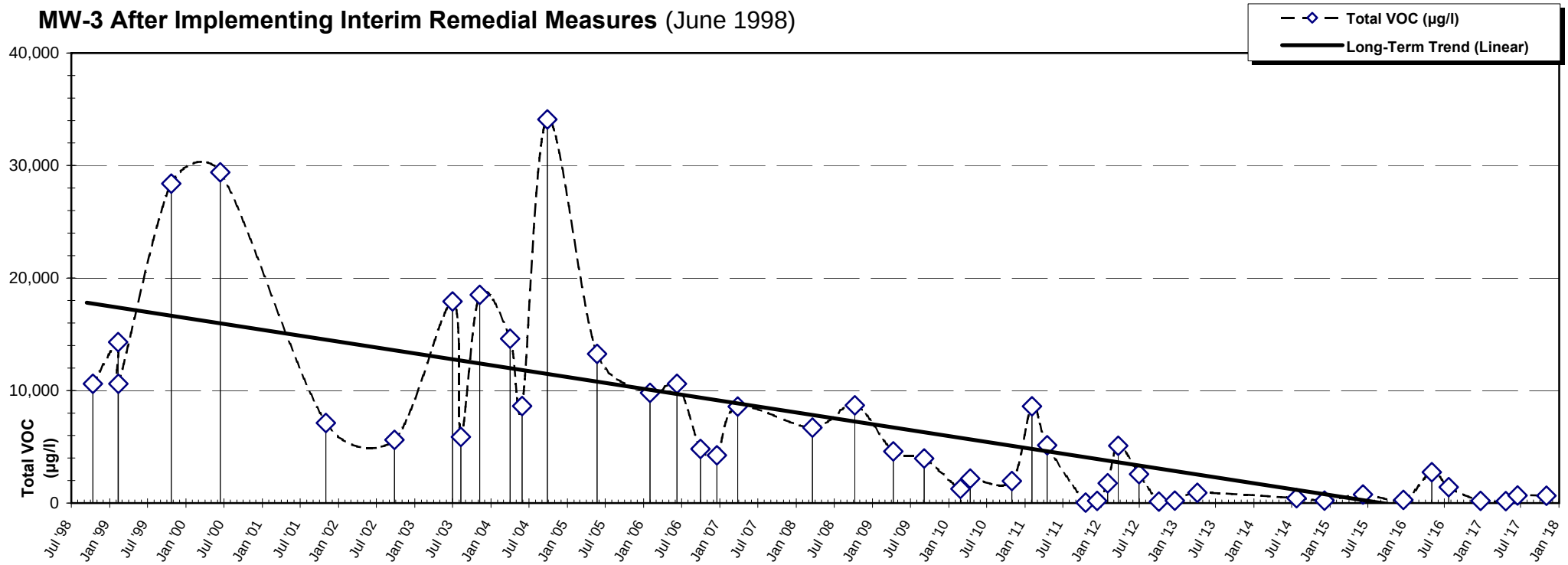


Date	Apr '10	Oct '10	Feb '11	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Dec '14	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	16790	2108	19560	920	4615	2886	5096	3742	1758	865	3032	186	376	376	1415	1031	863	nd	792	721	518

CMS Property Associates Remediation Site Center Extraction Well MW-3



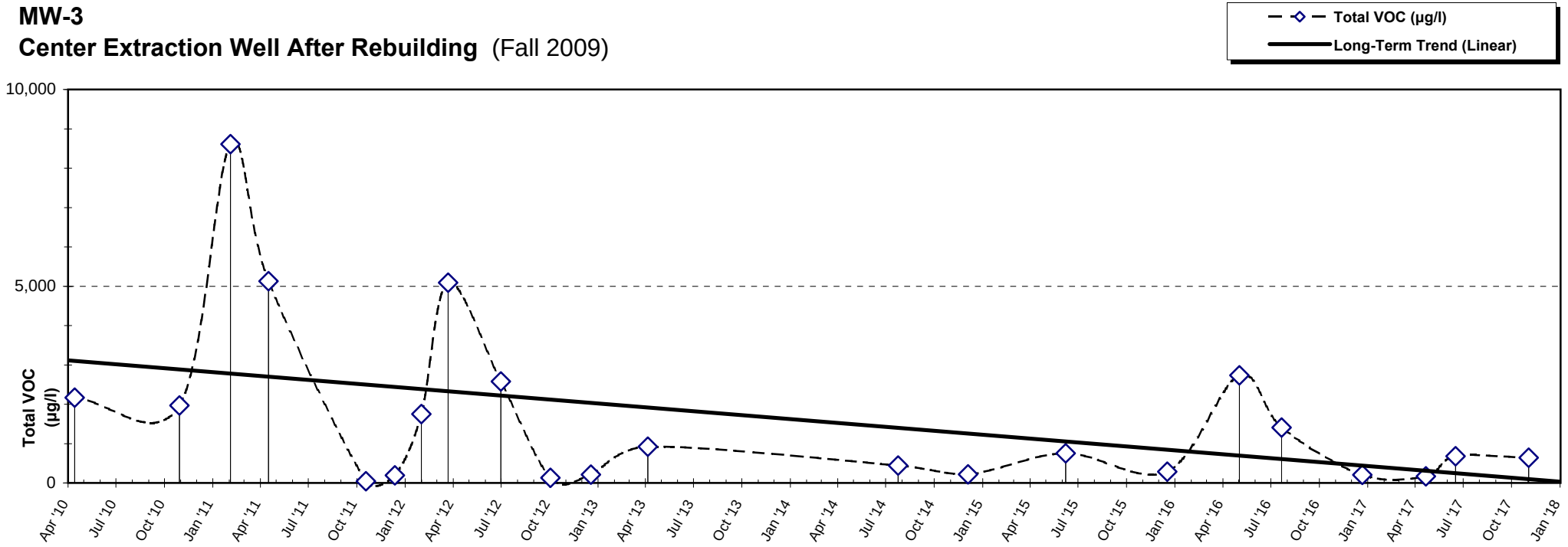
MW-3 After Implementing Interim Remedial Measures (June 1998)



Date	Oct '98	Feb '99	Feb '99	Oct '99	Jun '00	Nov '01	Sep '02	Jun '03	Aug '03	Nov '03	Apr '04	May '04	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Feb '11
TVOCs	10,600	14,300	10,600	28,400	29,400	7,114	5,621	17,918	5,890	18,500	14,600	8,630	34,100	13,250	9,800	10,600	4,810	4,240	8,580	6,700	8,680	4,600	3,960	1,268	2,170	1,970	8,610

MW-3

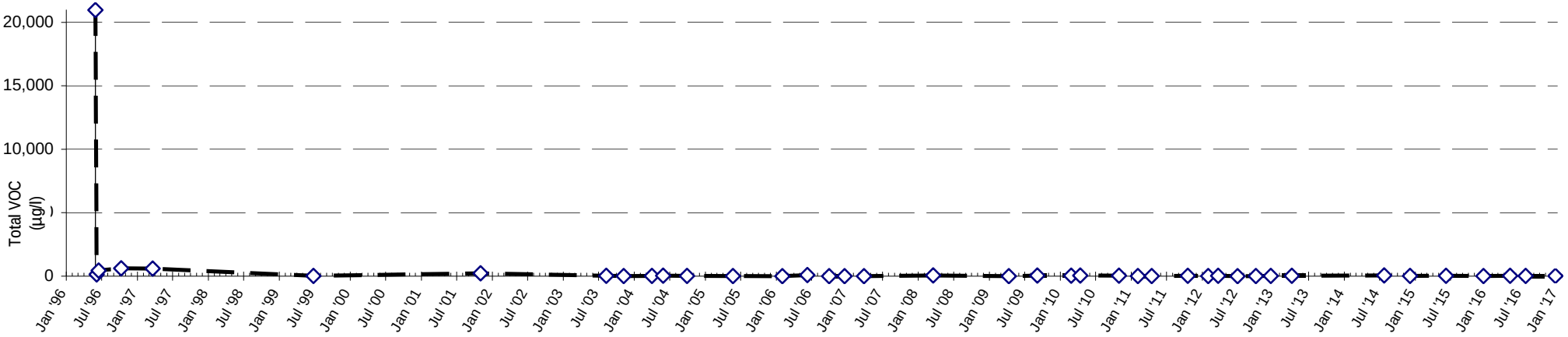
Center Extraction Well After Rebuilding (Fall 2009)



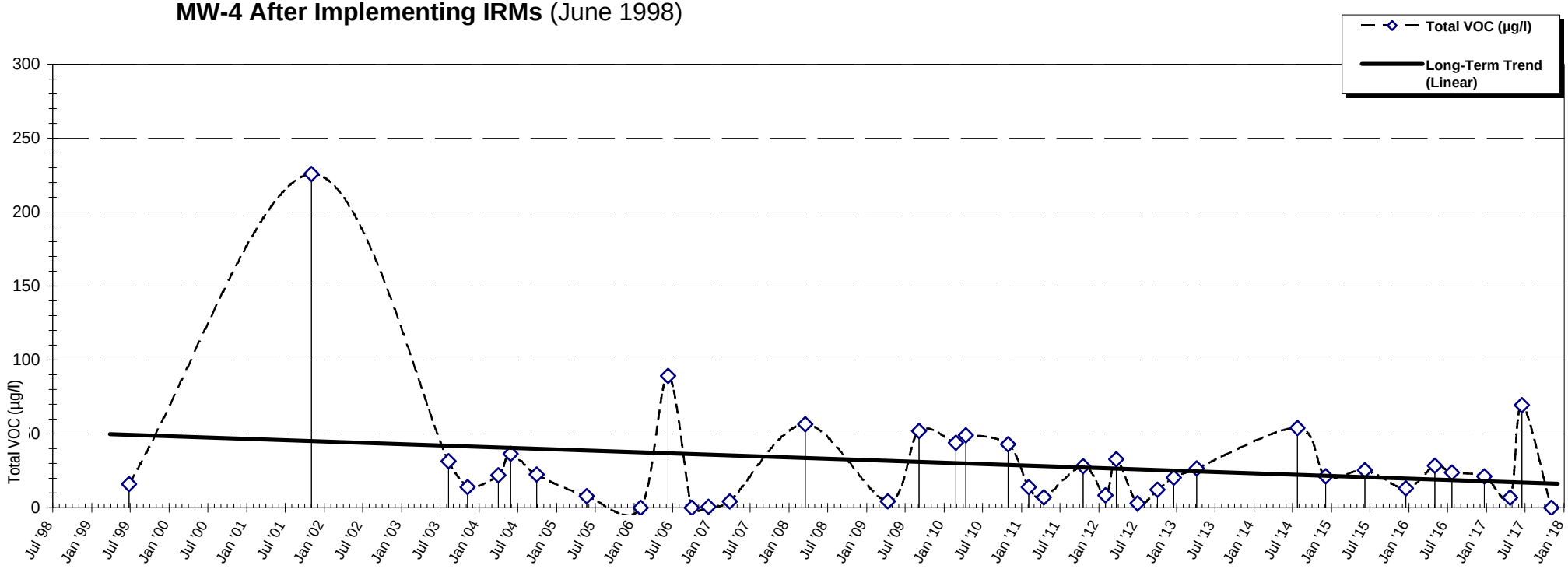
Date	Apr '10	Oct '10	Feb '11	Apr '11	Oct '11	Dec '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	2,170	1,970	8,610	5,130	46	193	1,753	5,088	2,577	133	214	922	445	220	755	289	2,738	1,408	204	169	682	644

CMS Associates Remediation Site

West Perimeter Monitoring Well MW-4

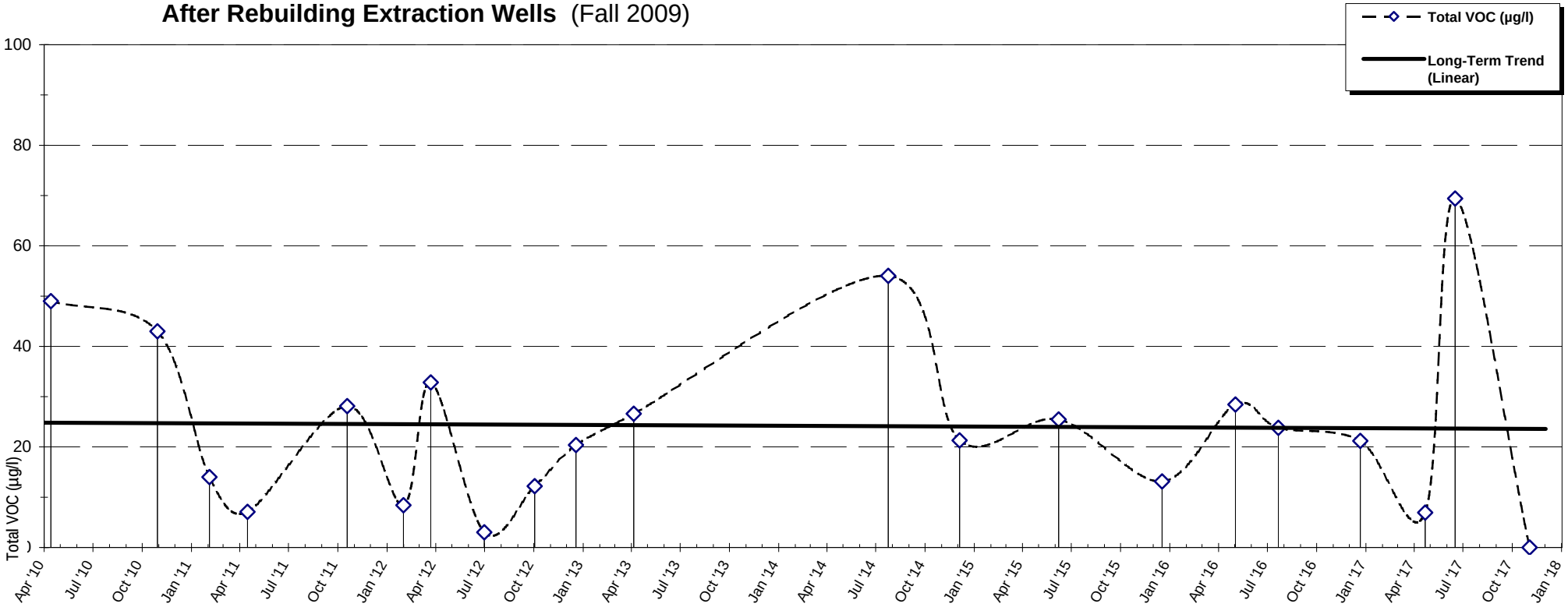


MW-4 After Implementing IRMs (June 1998)



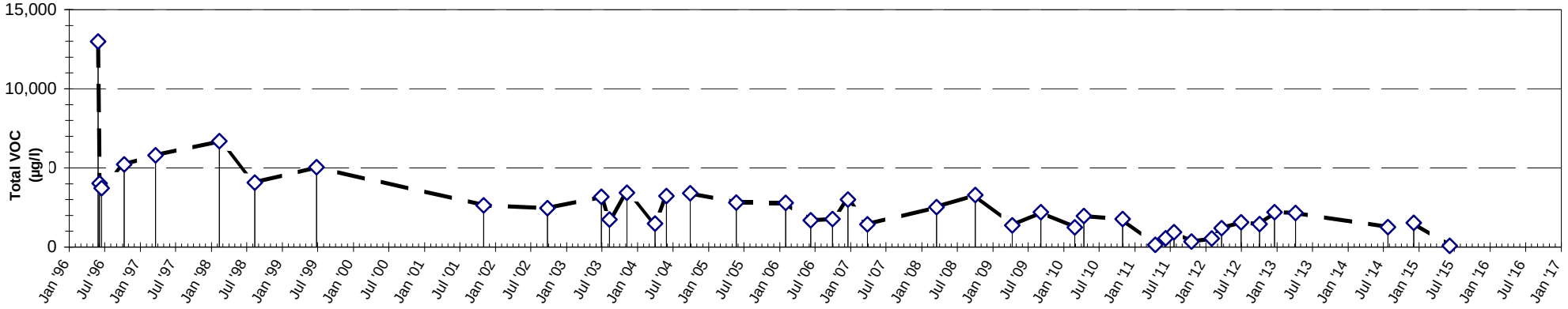
Date	Jun '99	Nov '01	Aug '03	Nov '03	Mar '04	May '04	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Feb '11	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12
TVOCs	16	226	32	14	22	37	23	8	nd	89	nd	1	4	57	4	52	44	49	43	14	7	28	8	33	3	12	20

West Perimeter Monitoring Well MW-4
After Rebuilding Extraction Wells (Fall 2009)

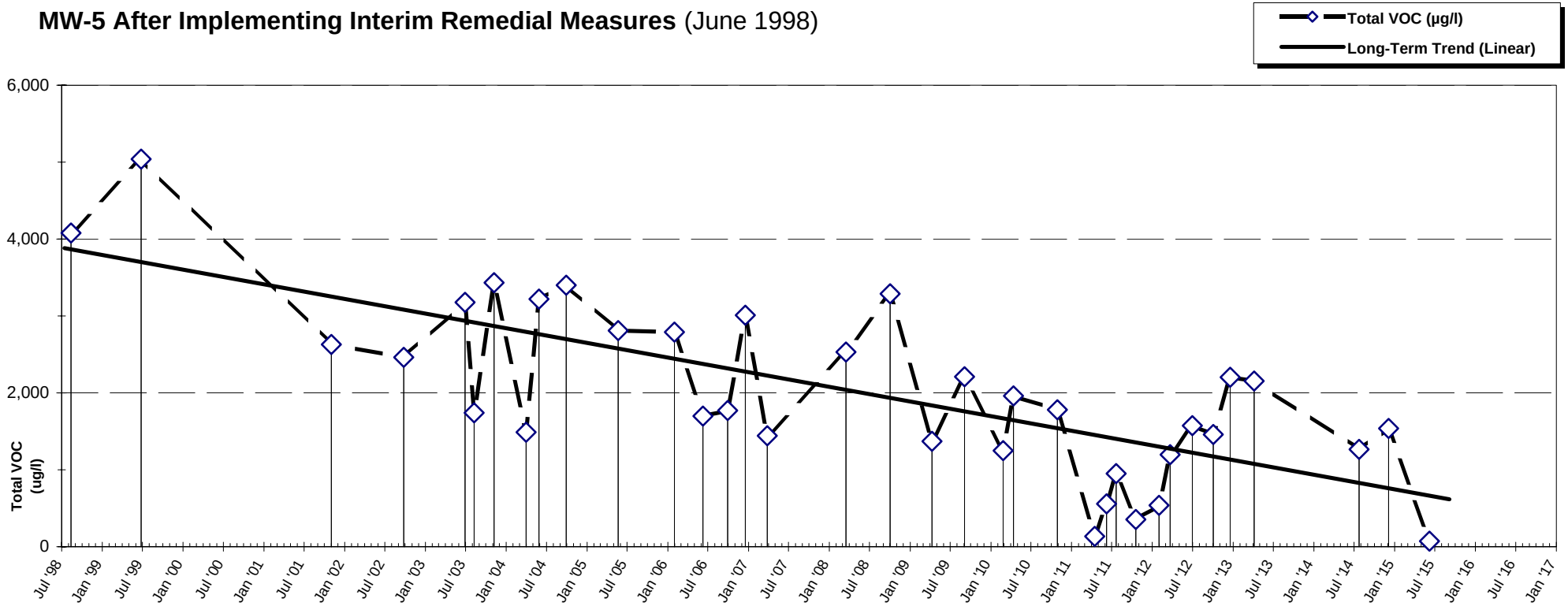


Date	Apr '10	Oct '10	Feb '11	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	49	43	14	7	28	8	33	3	12	20	27	54	21	25	13	28	24	21	7	69	nd

CMS Associates Remediation Site **Northwest Perimeter Monitoring Well MW-5**

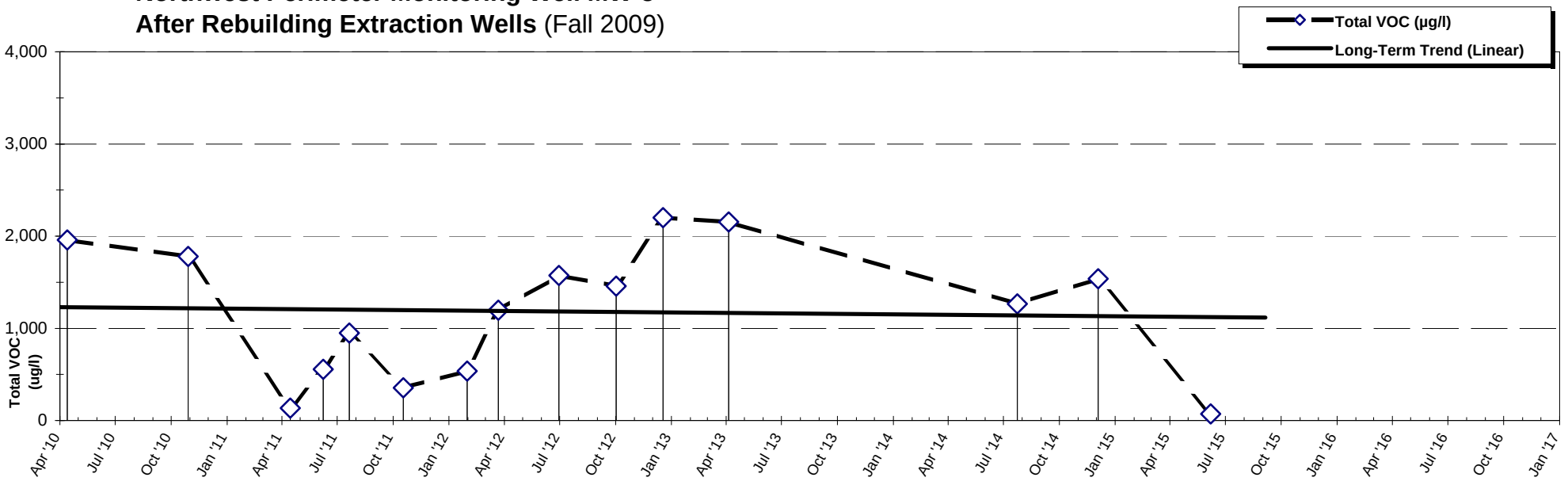


MW-5 After Implementing Interim Remedial Measures (June 1998)



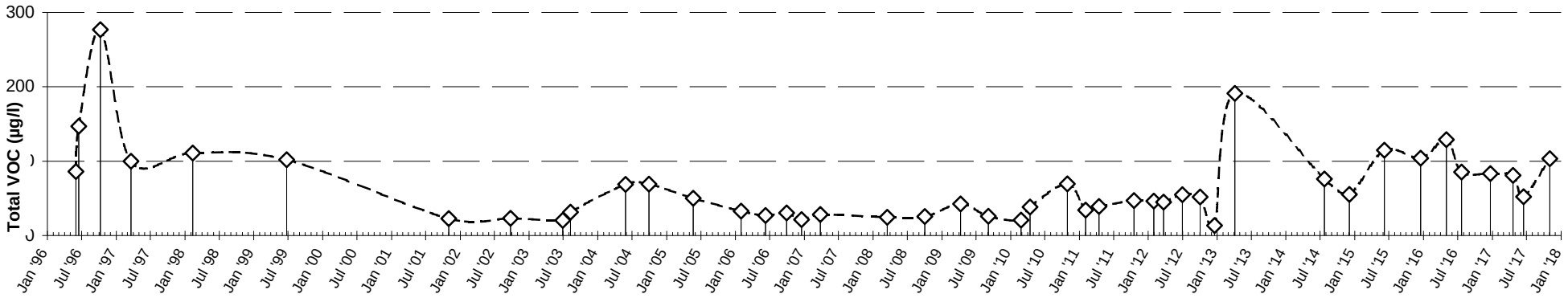
Date	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Apr '11	Jun '11	Jul '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15
VOCs	3,400	2,810	2,790	1,700	1,770	3,010	1,443	2,530	3,290	1,370	2,210	1,250	1,960	1,780	136	556	950	355	537	1,196	1,573	1,458	2,202	2,154	1,265	1,537	73

Northwest Perimeter Monitoring Well MW-5
After Rebuilding Extraction Wells (Fall 2009)

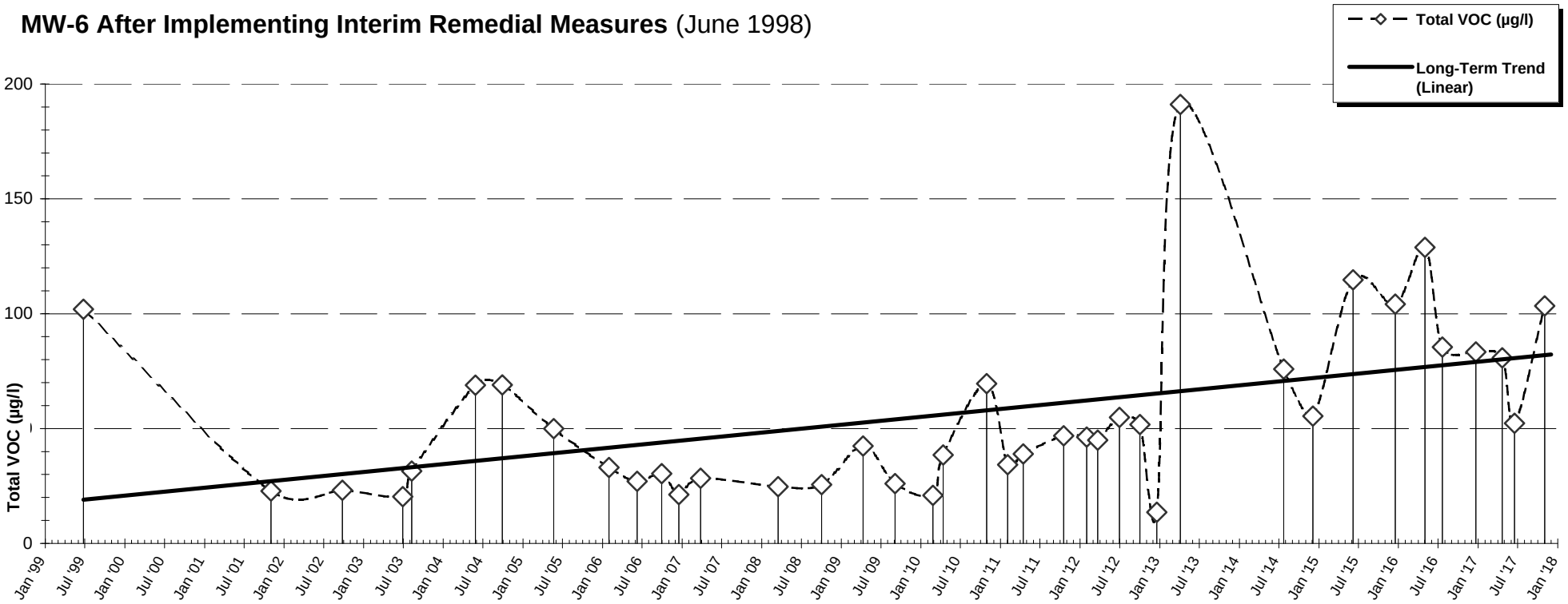


Date	Apr '10	Oct '10	Apr '11	Jun '11	Jul '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15
VOCs	1,960	1,780	136	556	950	355	537	1,196	1,573	1,458	2,202	2,154	1,265	1,537	73

CMS Property Associates Remediation Site **North Perimeter Monitoring Well MW-6**

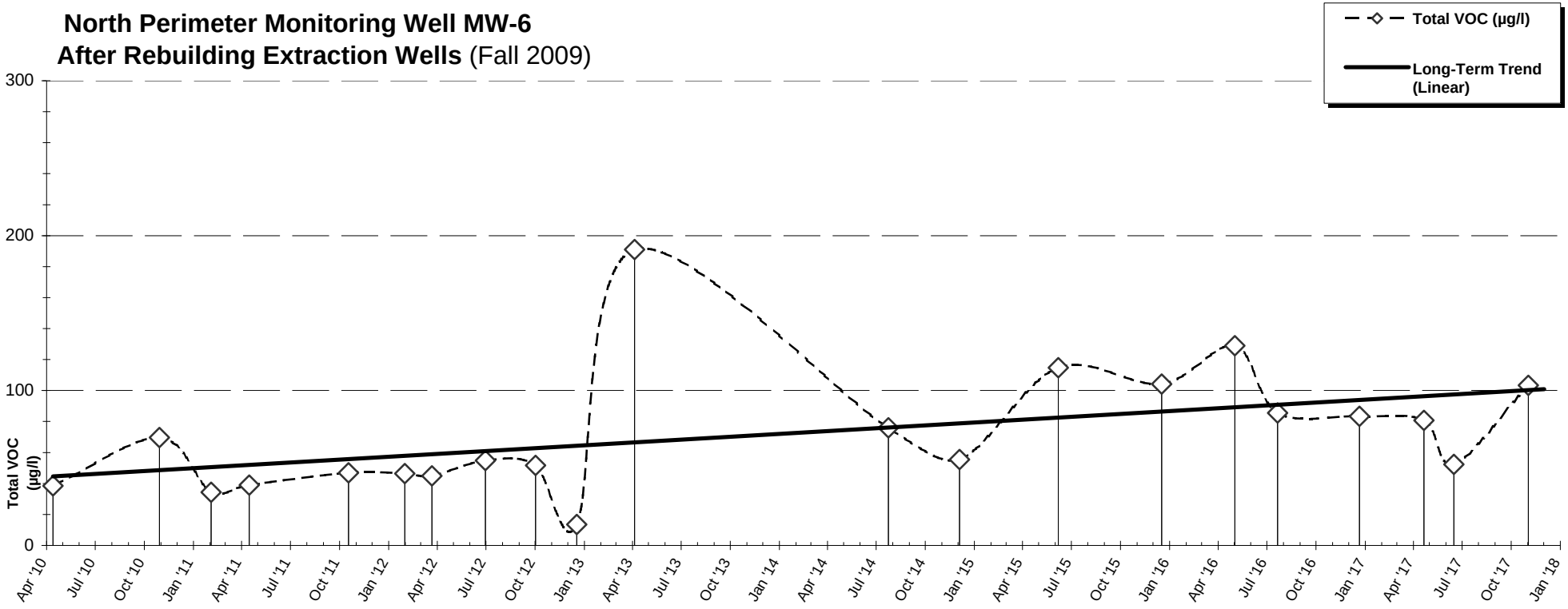


MW-6 After Implementing Interim Remedial Measures (June 1998)



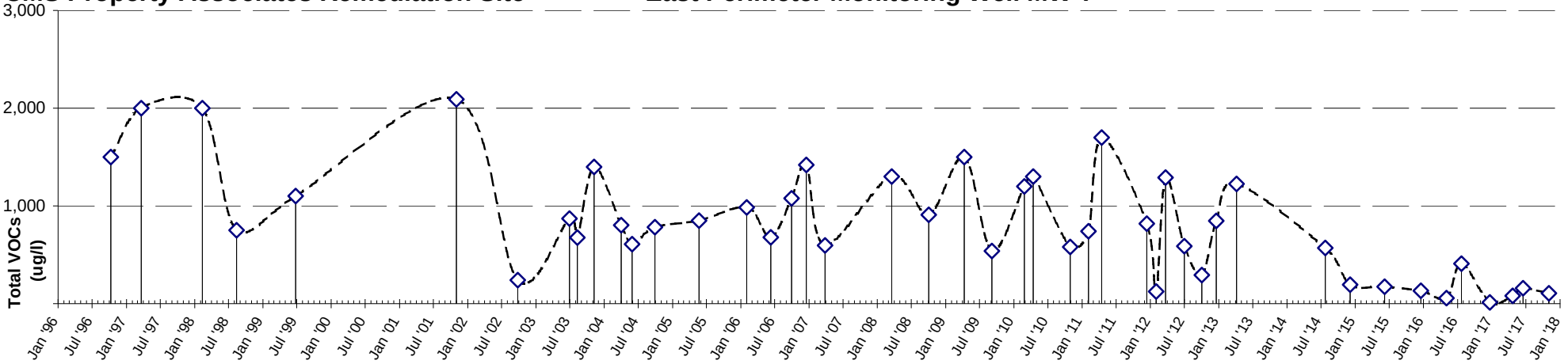
Date	Jun '99	Feb '98	Jun '99	Nov '01	Sep '02	Jun '03	Aug '03	May '04	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Feb '11	Apr '11	Oct '11	Jan '12	Mar '12
TVOCs	102	111	102	23	23	20	31	69	69	50	33	27	30	21	28	25	26	42	26	21	39	70	34	39	47	46	45

North Perimeter Monitoring Well MW-6
After Rebuilding Extraction Wells (Fall 2009)

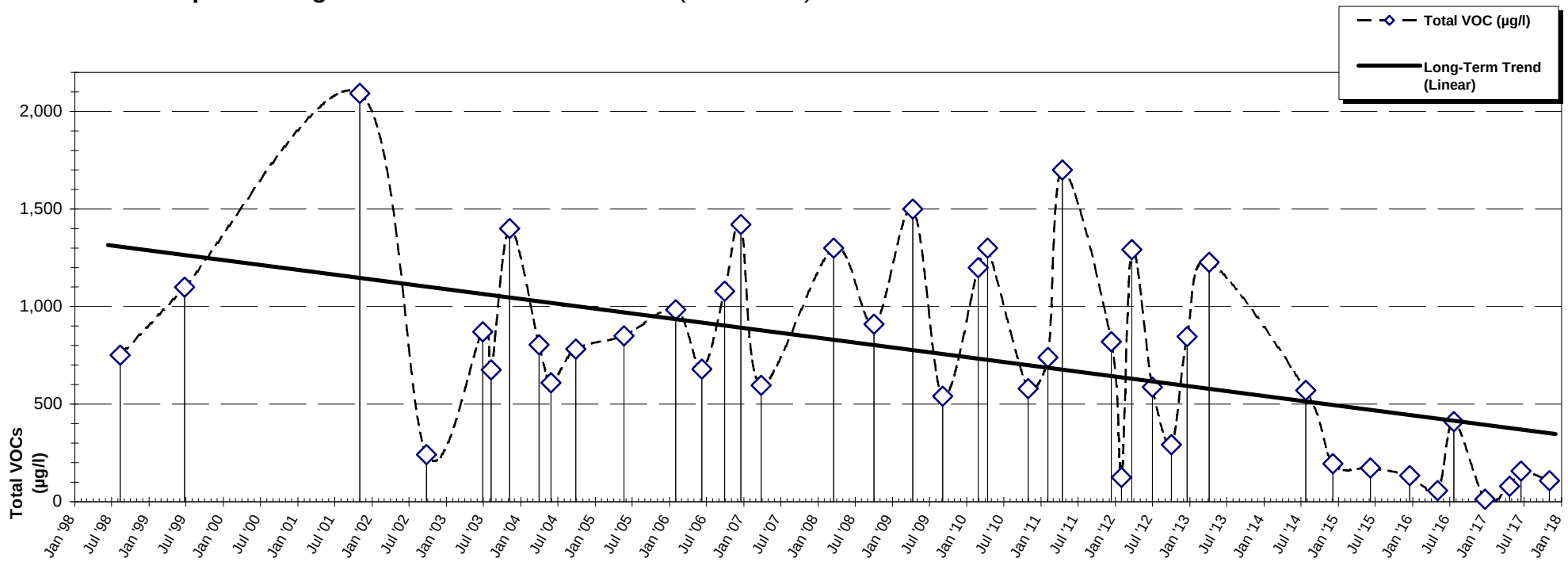


Date	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Feb '11	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	25	26	42	26	21	39	70	34	39	47	46	45	55	52	14	191	76	55	115	104	129	85	83	81	52	103

CMS Property Associates Remediation Site — East Perimeter Monitoring Well MW-7

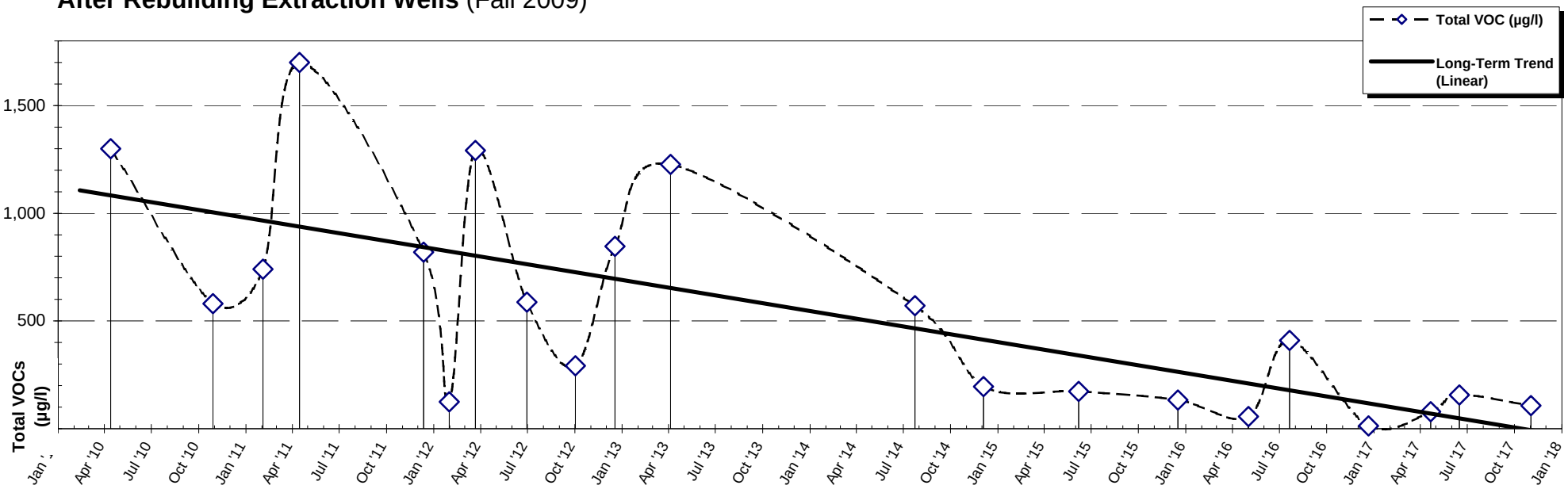


MW-7 After Implementing Interim Remedial Measures (June 1998)



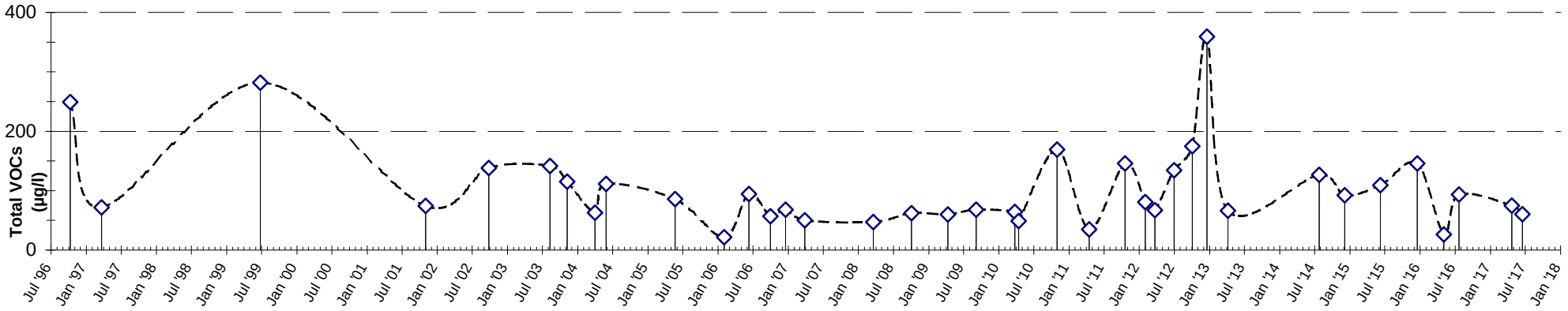
Date	Aug '98	Jun '99	Nov '01	Sep '02	Jun '03	Aug '03	Nov '03	Mar '04	May '04	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Feb '11	Apr '11	Dec '11	Jan '12
TVOCs	751	1,100	2,092	241	870	676	1,400	804	610	782	850	984	680	1,078	1,420	596	1,300	910	1,500	540	1,200	1,300	580	740	1,700	820	125

East Perimeter Monitoring Well MW-7
After Rebuilding Extraction Wells (Fall 2009)

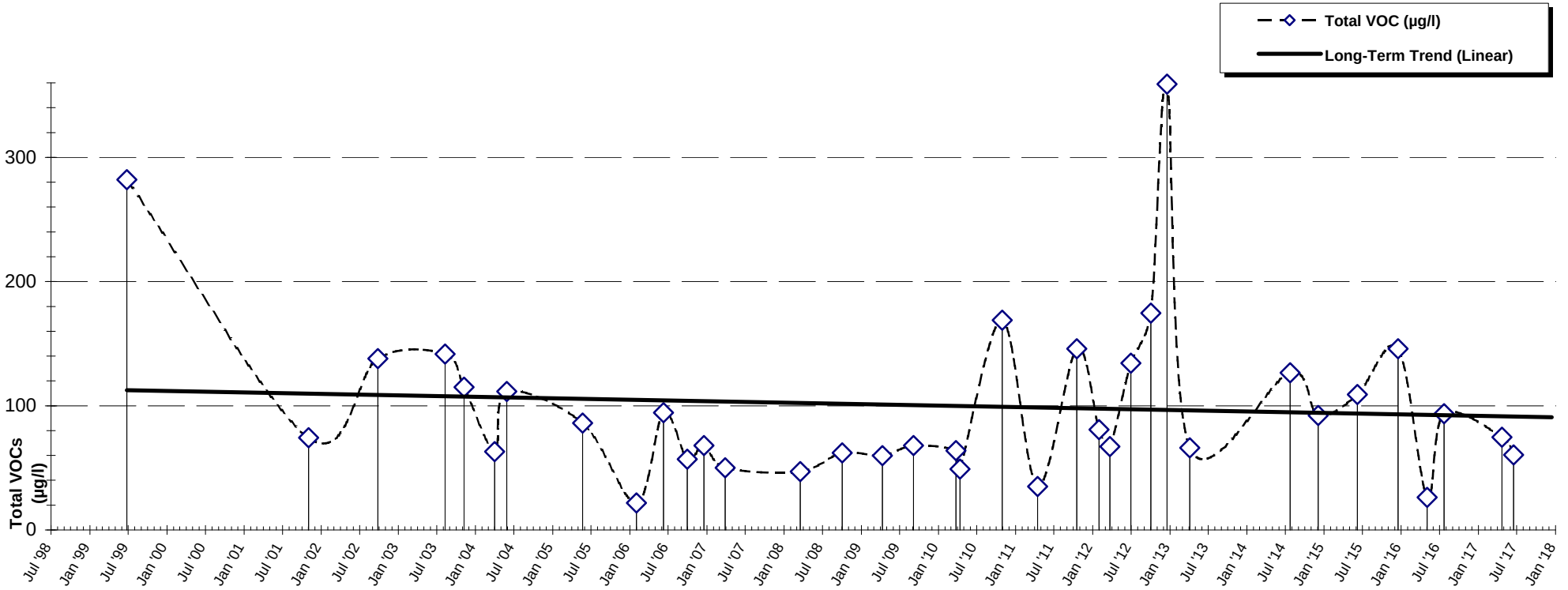


Date	Apr '10	Oct '10	Feb '11	Apr '11	Dec '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	1,300	580	740	1,700	820	125	1,291	587	292	846	1,226	571	196	173	133	57	410	13	79	157	107

CMS Associates Remediation Site South-Center Perimeter Monitoring Well MW-8

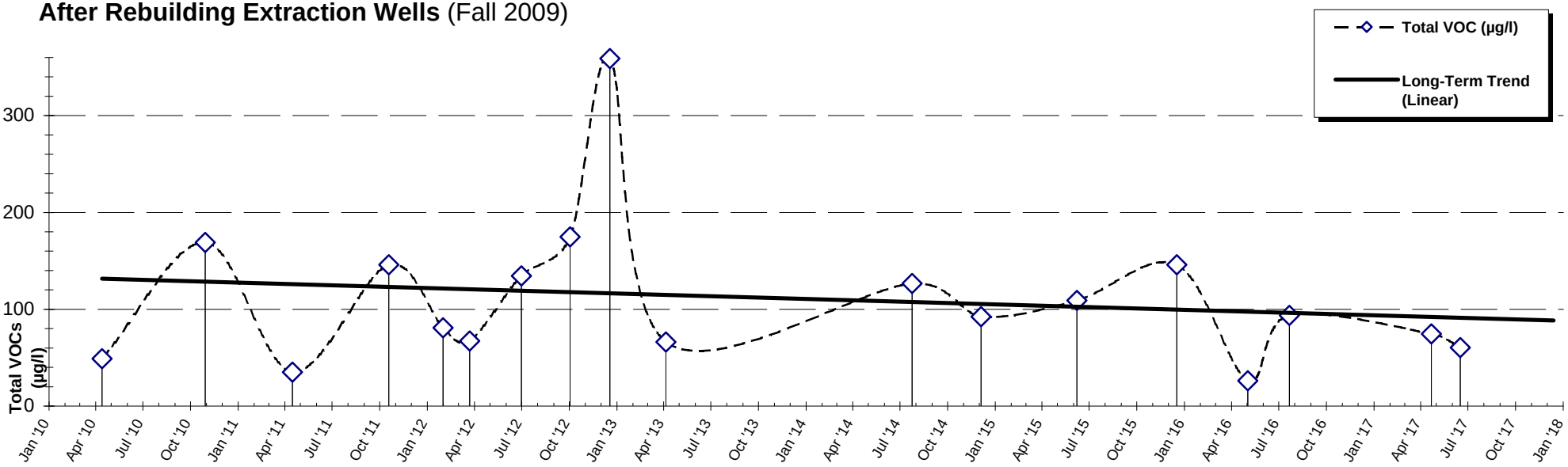


MW-8 After Installing Groundwater Recovery & Treatment System (June 1998)



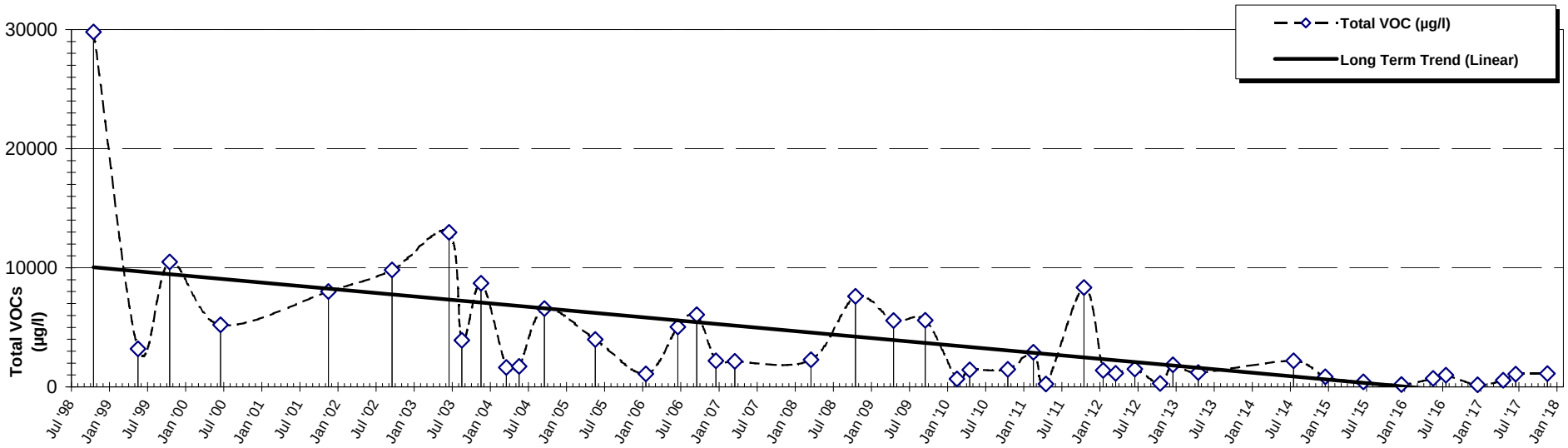
Date	Jun '99	Nov '01	Sep '02	Aug '03	Nov '03	Mar '04	May '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Mar '10	Apr '10	Oct '10	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12
VOCs	282	74	138	142	115	63	112	86	22	95	57	68	50	47	62	60	68	64	49	169	35	146	81	67	134	175

South-Center Perimeter Monitoring Well MW-8
After Rebuilding Extraction Wells (Fall 2009)



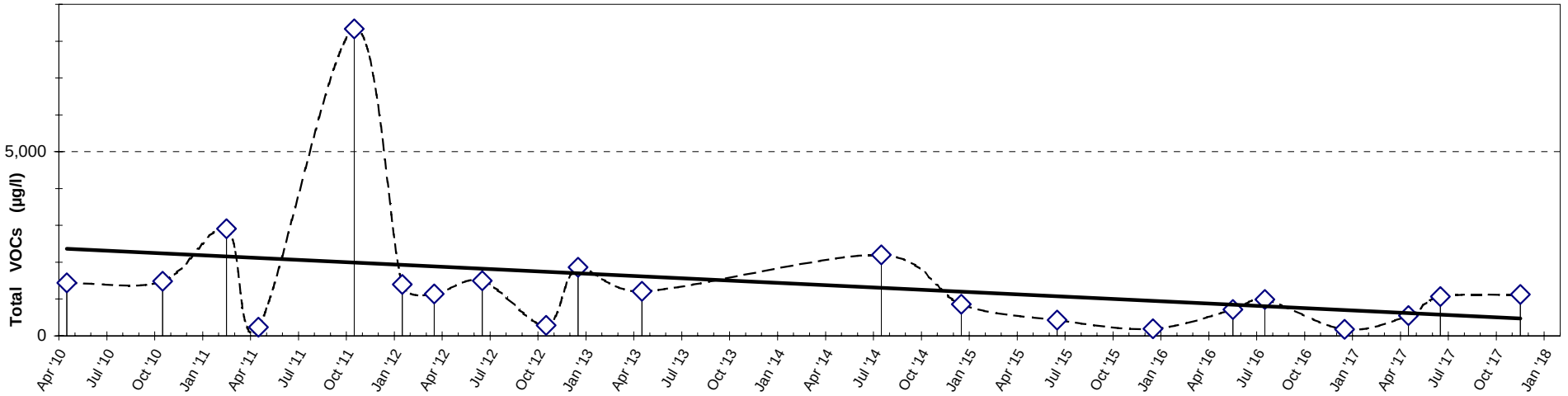
Date	Apr '10	Oct '10	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Apr '17	Jun '17	Nov '17
VOCs	49	169	35	146	81	67	134	175	359	66	127	92	109	146	26	94	75	61	42

CMS Property Associates Remediation Site **North Extraction Well MW-9**
After Implementing Interim Remedial Measures (June 1998)



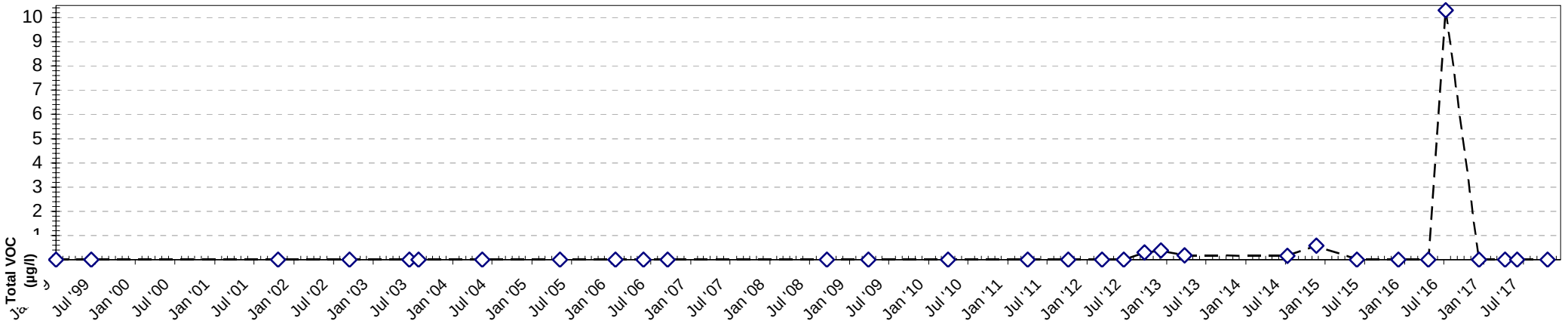
Date	Oct '98	May '99	Oct '99	Jun '00	Nov '01	Sep '02	Jun '03	Aug '03	Nov '03	Mar '04	May '04	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Feb '11	Apr '11
TVOCs	29,800	3,210	10,490	5,220	8,015	9,813	12,984	3,926	8,700	1,626	1,715	6,580	3,980	1,092	5,040	6,060	2,200	2,156	2,278	7,600	5,580	5,590	670	1,437	1,480	2,910	238

MW-9 North Extraction Well After Rebuilding (Fall 2009)



Date	Apr '10	Oct '10	Feb '11	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	1,437	1,480	2,910	238	8,335	1,395	1,136	1,495	284	1,860	1,213	2,203	858	432	195	720	992	176	554	1,068	1,127

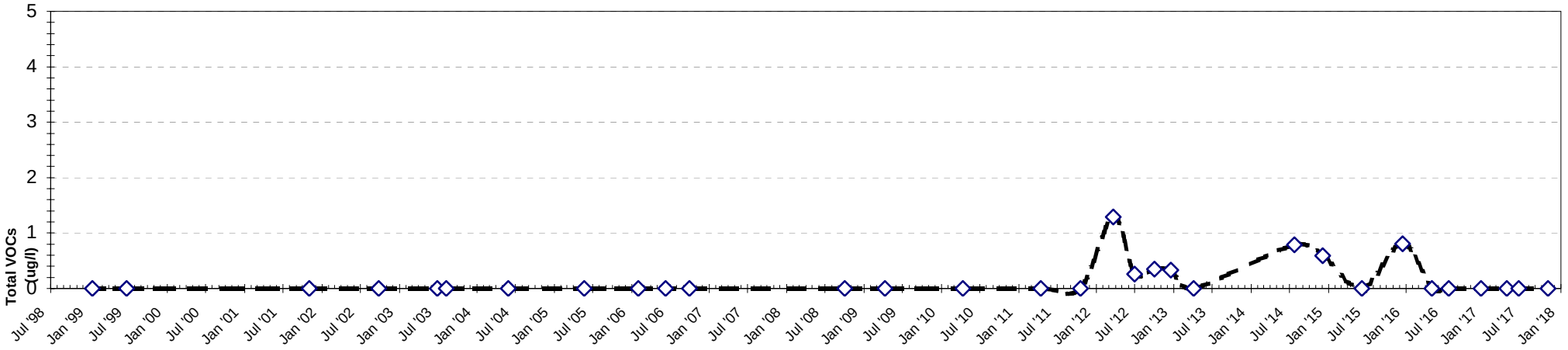
CMS Property Associates Remediation Site **Northeast Off-site Monitoring Well MW-10**
After Implementing Interim Remedial Measures (June 1998)



Date	Aug '03	May '04	May '05	Jan '06	Jun '06	Sep '06	Oct '08	Apr '09	Apr '10	Apr '11	Oct '11	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.29	0.38	0.18	0.16	0.58	nd	nd	nd	10.3	nd	nd	nd	nd

CMS Property Associates Remediation Site **North Off-site Monitoring Well MW-11**

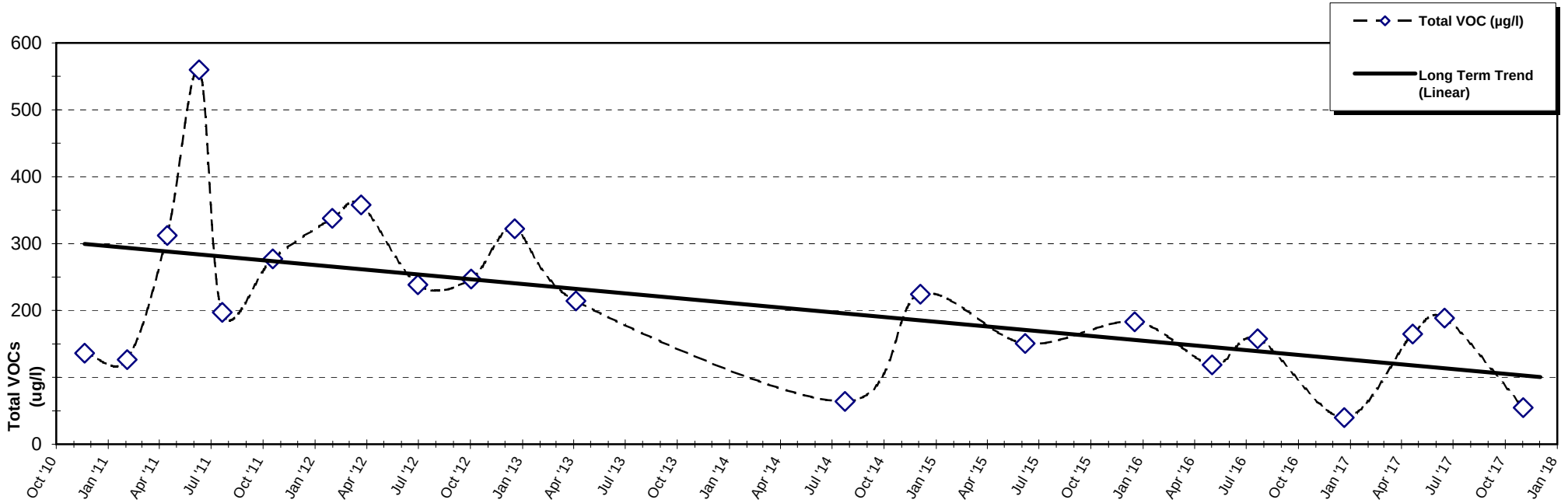
After Implementing Interim Remedial Measures (June 1998)



Date	Jun '03	Aug '03	May '04	May '05	Jan '06	Jun '06	Sep '06	Oct '08	Apr '09	Apr '10	Apr '11	Oct '11	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.29	0.26	0.35	0.33	**	0.79	0.59	nd	0.81	nd	nd	nd	nd	nd	nd

CMS Property Associates Remediation Site **Northwest Off-site Monitoring Well MW-12**

After Implementing Interim Remedial Measures (June 1998)
Well Installed October 2010

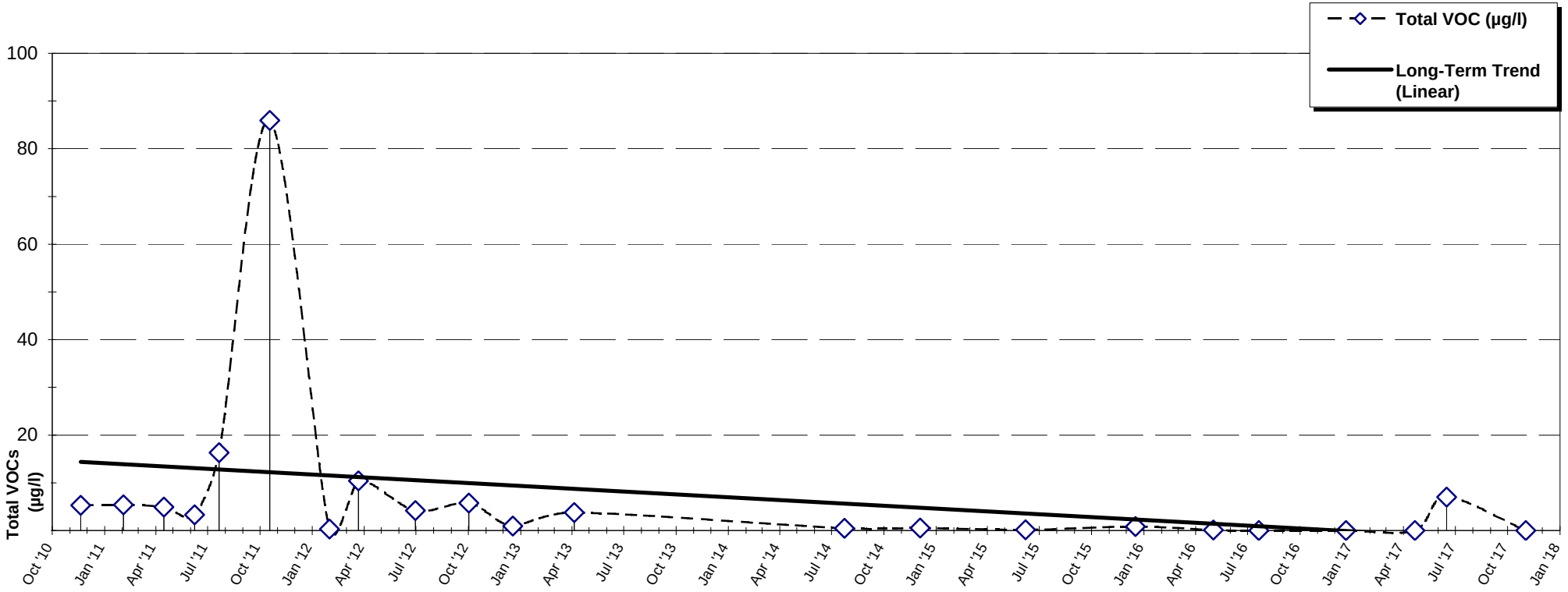


Date	Nov '10	Feb '11	Apr '11	Jun '11	Jul '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	136	126	312	560	197	277	338	358	239	247	322	214	64	224	151	183	119	158	40	165	189	55

CMS Property Associates Remediation Site **Northeast Off-site Monitoring Well MW-13**

After Extraction Well Modifications (Fall 2009)

Well Installed October 2010

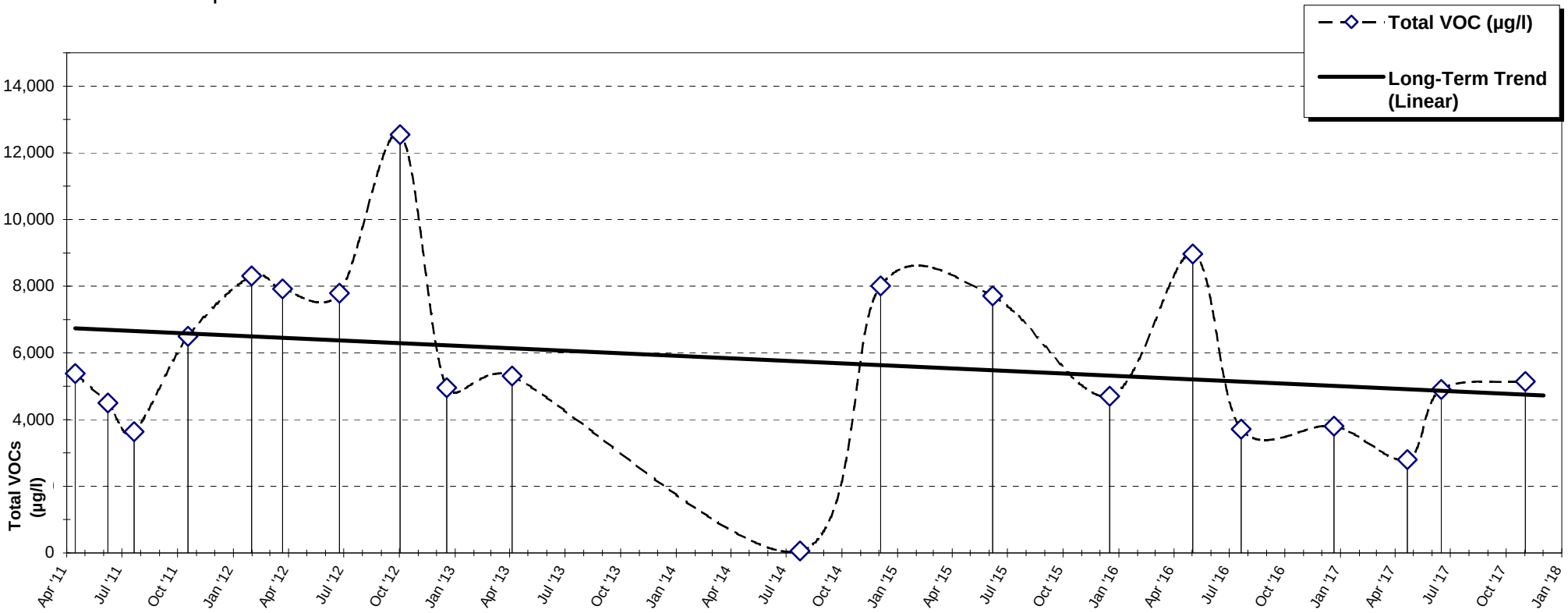


Date	Nov '10	Feb '11	Apr '11	Jun '11	Jul '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	5.3	5.4	4.9	3.3	16.3	85.92	0.32	10.4	4.19	5.77	0.92	3.77	0.48	0.51	0.16	0.83	0.1	nd	nd	nd	7.03	nd

CMS Associates Remediation Site **East-South Perimeter Monitoring Well MW-14**

After Extraction Well Modifications (Fall 2009)

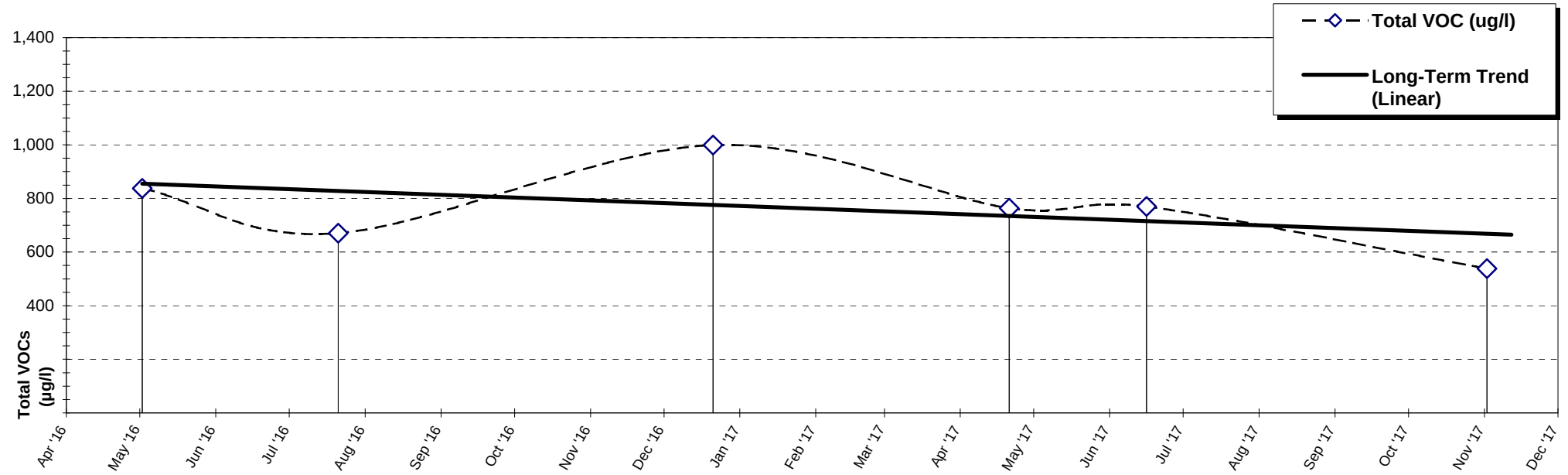
Well Installed April 2011



Date	Apr '11	Jun '11	Jul '11	Oct '11	Jan '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	5,380	4,500	3,640	6,498	8,308	7,794	12,548	4,955	5,308	61	8,006	7,710	4,704	8,969	3,710	3,801	2,798	4,902	5,142

CMS Associates Remediation Site **Southeast Perimeter Monitoring Well MW-15**

After Extraction Well Modifications (Fall 2009)



Date	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17
TVOCs	838	670	999	763	770	538

APPENDIX C

List of COCs and 8260 Analyte list with Groundwater SGCs

CMS REMEDIATION SITE

Volatile Organic Compounds Tested For - EPA Method 8260

CAS No.	Compound		Groundwater SCG (µg/l)	Observed in MW-	And
630-20-6	1,1,1,2-Tetrachloroethane		5	--	
71-55-6	1,1,1-Trichloroethane		6	1,2,3,4,5,9,14	UST, soil
79-34-5	1,1,2,2-Tetrachloroethane		5	1,2	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5	1,2,3,7,14	
79-00-5	1,1,2-Trichloroethane		1	1,2,5	
75-34-3	1,1-Dichloroethane		5	1,2,3,4,5,6,7,8,9,12,13,14	UST, soil
75-35-4	1,1-Dichloroethene		5	1,2,3,4,5,7,8,9,14	
96-18-4	1,2,3-Trichloropropane		0.04	2	
120-82-1	1,2,4-Trichlorobenzene		5	--	
95-63-6	1,2,4-Trimethylbenzene		5	1,2,3,4,6,9,13,14	UST
96-12-8	1,2-Dibromo-3-chloropropane		0.04	--	
106-93-4	1,2-Dibromoethane	Ethylene dibromide	0.0006	--	
95-50-1	1,2-Dichlorobenzene		3	4	
107-06-2	1,2-Dichloroethane		0.6	1,2,3,5,6,7,8,9,12	
78-87-5	1,2-Dichloropropane		1	3	
108-67-8	1,3,5-Trimethylbenzene		5	1,2,3,4,13,14	
96-23-1	1,3-Dichloro-2-propanol		--	1,2	
541-73-1	1,3-Dichlorobenzene		3	--	
106-46-7	1,4-Dichlorobenzene		3	1,2,3,4	soil
107-07-3	2-Chloroethanol	Ethylene chlorohydrin	50	--	
110-75-8	2-Chloroethyl vinyl ether		--	--	
78-93-3	2-Butanone	Methyl ethyl ketone	50	2,3,4	
106-43-4	4-Chlorotoluene		5	--	
99-87-6	4-Isopropyltoluene		5	1,3,4,13	
67-64-1	Acetone		50	14	
107-05-1	Allyl chloride		5	1	
71-43-2	Benzene		1	1,4,5,6,7,8,12,13,14	soil
100-44-7	Benzyl chloride		--	--	
39638-32-9	Bis(2-chloroisopropyl) ether		--	--	
598-31-2	Bromoacetone		--	--	
108-86-1	Bromobenzene		5	--	
74-97-5	Bromochloromethane		5	--	
75-27-4	Bromodichloromethane		50	--	
75-25-2	Bromoform		50	--	
74-83-9	Bromomethane		5	1,2,6,8,9	
75-15-0	Carbon disulfide		60	1,3,4,13	

CMS REMEDIATION SITE

Volatile Organic Compounds Tested For - EPA Method 8260

CAS No.	Compound		Groundwater SCG (µg/l)	Observed in MW-	And
56-23-5	Carbon tetrachloride		5	2	
108-90-7	Chlorobenzene		5	8	
124-48-1	Chlorodibromomethane		50	--	
75-00-3	Chloroethane		5	1,2,3,5,6,7,9,12	
67-66-3	Chloroform		7	1,2,3,4,5,6,7,9,14	
74-87-3	Chloromethane	Methyl chloride	5	2,6,13,14	
107-30-2	Chloromethyl methyl ether		5	--	
126-99-8	Chloroprene		5	--	
156-59-2	cis-1,2-Dichloroethene		5	1,2,3,4,5,6,7,8,9,12,14	soil
10061-01-5	cis-1,3-dichloropropene		0.4	8	
110-82-7	Cyclohexane		--	1,2,3,4,5,6,7,12,13,14	
124-48-1	Dibromochloromethane		50	--	
74-95-3	Dibromomethane		5	--	
75-71-8	Dichlorodifluoromethane		5	--	
106-89-8	Epichlorhydrin	Epichlorohydrin	--	--	
100-41-4	Ethylbenzene		5	1,2,3,4,5,6,13,14	soil
87-68-3	Hexachlorobutadiene		0.5	--	
98-82-8	Isopropylbenzene		5	2,3,4,6,13	
1634-04-4	Methyl tert-butyl ether		10	4,8	
75-09-2	Methylene chloride		5	2,3,6,7,8,9,13,14	UST, soil
91-20-3	Naphthalene		10	1,4,13	
103-65-1	n-Propylbenzene		5	2,3,4,13	
135-98-8	sec-Butylbenzene		5	3,13	
100-42-5	Styrene		5	4,6,8,13	
127-18-4	Tetrachloroethene		5	1,2,3,4,5,6,9,13,14	UST, soil
108-88-3	Toluene		5	1,2,3,4,5,6,13,14	soil
156-60-5	trans-1,2-Dichloroethene		5	1,2,3,5,8	
10061-02-6	trans-1,3-dichloropropene		0.4	2	
79-01-6	Trichloroethene		5	1,2,3,5,6,7,8,9	soil
75-69-4	Trichlorofluoromethane		5	7	soil
75-01-4	Vinyl chloride		2	1,2,3,5,6,7,8,9,12,14	
179601-23-1	m,p-Xylene		5	1,2,3,4,6,13,14	soil
1330-20-7	m-Xylene	1,3-Xylene	5	2,6,14	
95-47-6	o-Xylene	1,2-Xylene	5	1,2,3,4,5,6,13,14	soil
106-42-3	p-Xylene	1,4-Xylene	5	6,9	
1330-20-7	Total Xylenes		5	1,2,3,4,5,6	

APPENDIX D

Groundwater Elevations – May 1996 to December 2017

CMS Associates Remediation Site NYSDEC # 9-15-168

210 French Road; Cheektowaga NY Groundwater Well Observations

	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	
ORIGINAL WELLS												
Rim	626.34	627.47	626.82	625.61	623.95	627.12	628.95	627.46	626.00	627.04	624.27	
Ground	626.3	627.5	626.8	625.6	624.0	624.2	627.0	627.5	626.0	627.0	624.7	
Bedrock	622.0	622.2	622.0	?	622.5	?	622.1	621.1	621.2	623.0	621.8	
Top of PVC	626.10	627.24	627.24	625.36	623.75	626.92	628.68	627.16	625.50	626.50	623.99	
Oct 9, 1996	623.2	624.8	624.5	623.0	618.4	618.6	615.9	621.0				
Oct 21, 1996	622.8	625.3	624.3	606.3	618.7	615.5	618.0	619.0				
Oct 31, 1996	623.0	625.2	624.3	607.7	618.7	617.1	617.1	620.0				
Mar 18, 1997	622.8	623.6	625.6	619.0	619.1	618.0	620.1	621.0				
Mar 20, 1997	624.3	623.0	625.6	619.1	619.0	618.2	620.2	621.4				
Aug 22, 1997	623.6	625.1	624.5	611.0	618.2	613.4	618.3	618.6	623.6			
Nov 5, 1998				618.7	617.0	616.4	614.8	620.0		617.4	619.0	
Dec 3, 1998				619.4	617.0	617.3	615.1	620.2		614.4	617.7	
Jan 12, 1999										615.0	618.2	
Feb 10, 1999				619.6	615.6	617.2				619.1	620.8	Snow piles
Mar 1, 1999				624.8	618.2	617.8	617.8	621.0		617.4	619.0	Snow piles
Apr 7, 1999				624.2	617.8	618.8	618.8	621.0		617.8	618.1	
May 11, 1999					617.6	618.5	618.2	621.3		617.4	617.7	
Jun 14, 1999				624.5	618.0	618.0	616.1	621.4		614.8	617.3	
Jul 12, 1999				607.9	617.2	611.3	614.8	620.5		613.9	617.3	

	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	
Aug 11, 1999				607.5	617.4	616.3	615.1	620.2		613.8	617.7	
Jun 13, 2000	624.1	624.8	624.9	624.8	618.2	618.5	618.5	622.0	623.6	617.9	619.4	
Oct 31, 2001	624.6											
Sep 25, 2002				620.6	618.2	618.2	614.2	620.0		614.6		MW-4,8 tampered/w, tubing
Jun 26, 2003					618.2	612.3	617.6	621.8		616.7	618.2	
Aug 8, 2003				607.1	618.0	611.3	618.5	621.3		618.4	618.6	MW-8 under pressure
Nov 6, 2003					618.1	611.7	617.4	619.2		617.9	619.3	
Mar 30, 2004	624.5	623.7		617.3	619.7	613.1		620.6	624.6	620.1	617.0	MW-5 under pressure
May 27, 2004	626.1	625.8	625.8	611.2	619.7	614.5	619.5	622.2	625.0	619.1	619.3	MW-4,6,8 pressure, 7 vacu
Jun 25, 2004				609.1	618.1	612.2	618.1	622.4		617.1	618.9	
Sep 26, 2004	624.8	624.2	624.7	614.8	617.3	614.8	613.7	621.5	622.4	615.8	619.0	MW-4 pressure, 7 dry
May 21, 2005				614.1	617.3	615.5	615.4	621.9		617.3	618.3	MW-4 high pressure
Jan 31, 2006	624.3	626.0	625.8	617.5	617.8	611.4	617.1	621.6	619.0	619.4	620.2	
Dec 14, 2006				613.5	623.8	611.4	615.9	622.4		617.7	619.7	MW-4 pressure, 7 vacuum

	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	
Mar 26, 2007	625.3	625.8	625.8	610.6	619.3	613.9	620.6	624.1	624.4	620.4	620.6	Pump had been running
Mar 17, 2008	625.8	626.4	626.3	606.4	619.3	618.3	619.4	622.5	625.4			
Apr 15, 2008				613.3	617.9	609.3	618.9	621.8		619.5	618.9	
May 17, 2008				612.8	617.5	608.8	618.6	621.2		619.2	618.5	
Jun 12, 2008				612.7	617.5	608.8	618.4	621.2		619.1	618.4	
Jul 26, 2008				613.3	617.7	609.0	618.6	621.3		619.2	618.7	
Oct 2, 2008				610.9	618.0	616.3	615.3	621.8		616.5	618.9	System down for tie-in

POST MW-5 TIE-IN (0ct 3, 2008)

	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	
Rim	626.34	627.47	626.82	625.61	624.10	627.12	628.95	627.46	626.00	627.04	624.27	
Ground	626.3	627.5	626.8	625.6	624.1	624.2	627.0	627.5	626.0	627.0	624.3	
Top of PVC	626.10	627.24	627.24	625.36	623.88	626.92	628.68	627.16	625.50	626.50	623.99	
	Groundwater Surface Elevations											
Nov 15, 2008	626.1	627.2	616.3	613.1	623.9	609.0	613.8	620.2	625.5	618.7	619.8	
Dec 14, 2008	626.1	627.2	616.2	613.2	623.9	609.0	613.9	617.2	625.5	618.7	619.8	
Feb 26, 2009			616.2	613.1	623.9	609.0	613.8	620.3		618.7	620.2	
Apr 19, 2009				611.0	623.9	612.9	614.7	622.7		620.3	620.8	MW-4,6,7 under pressure
May 25, 2009			623.7	613.1	623.9	609.1	617.0	619.6		616.2	617.0	
Jun 26, 2009			621.3	613.5	623.9	611.6	617.1	620.0		617.4	617.3	
Jul 25, 2009			622.2	613.3	623.9	610.0	617.2	620.3		619.8	618.0	
Aug 30, 2009			622.5	607.9	623.9	609.7	618.4	619.8		613.6	617.5	
Sep 29, 2009			622.0	605.4	623.9	609.4	615.4	619.5		612.7	616.1	System down - well repairs started, then manifold found broken

	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	
POST EXTRACTION WELL REPAIRS (Nov 8, 2009)												
Rim	626.29	627.42	626.84	625.61	624.10	627.12	628.95	627.46	625.93	627.04	624.27	
Ground	626.3	627.4	626.8	625.6	624.1	624.2	627.0	627.5	625.9	627.0	624.3	
Top of PVC	626.10	627.24	626.62	625.36	623.88	626.92	628.68	627.16	625.50	626.50	623.99	
	Groundwater Surface Elevations											
Jan 26, 2010	623.8	625.4	625.3	613.0	619.6	611.9	617.2	621.3	623.3	617.9	616.5	
Feb 24, 2010	624.2	625.1	624.7	617.7	618.3	613.4	618.4	622.9	625.3	618.9	620.4	
Apr 8, 2010	625.0	625.3		609.8		611.6	620.7	622.5	624.9	620.8	620.6	All elevs before retrofits
Apr 13, 2010					619.9							MW-3 closed off

POST EXTRACTION WELL RETROFITS (Apr 14, 2010)

	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	
Rim	626.29	627.42	626.84	625.61	624.10	627.12	628.95	627.46	625.93	627.04	624.27	628.49	629.01	631.38		
Ground	626.3	627.4	626.8	625.6	624.1	624.2	627.0	627.5	625.9	627.0	624.3	625.5	626.2	629.2		
Bedrock	622.0	622.2	622.0	?	622.5	620.5	622.1	621.1	621.2	623.0	621.8	620.0	621.4	622.2		
Top of PVC	625.8	627.0	626.5	625.4	623.9	626.9	628.7	627.2	625.5	626.5	624.0	628.2	628.7	631.1		
	Groundwater Surface Elevations															
Aug 18, 2011	621.6	622.4	622.5	611.9	617.4	617.3	dry	621.2	622.7	615.3	617.9	616.9	622.5	621.6		Reading after system running several days
Oct 17, 2011	614.9	620.8	626.0	615.7	616.1	618.1	dry	617.5	621.3	619.1	619.3	618.8	625.4	621.4		
Oct 18, 2011	614.9	624.6	626.0	615.2	616.1	615.9	dry	617.1	615.0	619.1	618.6	618.5	625.1	619.5		System pumping regularly, readings w/ pump running >2 hrs.
Nov 12, 2011	615.5	625.0	622.3	613.8	617.8	615.4	dry	618.5	622.4	617.5	619.3	617.3	624.9	622.9		System running; after heavy rain days
Dec 12, 2011			621.7				617.9									Pumping regularly, readings w/ pump running >1 hrs; mw-1,2,3 closed off
Dec 24, 2011	625.1	626.6	624.7	616.3	616.5	612.6	dry	619.7	616.2	617.7	621.2	616.3	624.8	623.5		Pumping regularly, readings w/ pump running >1 hrs; mw-1,2,3 closed off
Jan 26, 2012	623.4	624.2	625.0	616.6	623.2	618.1	618.9	622.0	611.9	618.8	620.8	617.6	624.8	622.6		Pumping regularly, readings w/ pump running >1 hrs; mw-1,2,3 closed off
Mar 21, 2012	616.6	617.2	623.3	624.7	620.5	10.1	618.6	618.5	616.5	618.9	618.9	617.3	624.5	623.2		Pumping 24/7 for week w/ PV-8 pump @20" Hg; mw-3 closed; mw-4 plug loose so high level (prior reads under pressure?)
Apr 16, 2012	618.8	617.4	614.3	607.5	609.4	610.2	617.7	621.9	617.5	617.9	618.6	617.0	624.1	622.8		Pump 24/7 w/P-8 @ 24" Hg; MW-3 open; MW-4 plug loose.
Apr 26, 2012	615.0	619.3	624.1			610.7			618.7							Pump 24/7; MW-3 open , plug loose;
May 22, 2012	617.2	618.6	623.3	625.0	615.6	611.8	617.4	621.8	615.8	617.4	618.2	617.0	623.7	622.6		Pump 24/7; MW-3 open , plug loose;
Jun 23, 2012	623.6	624.1	623.7	625.2	616.5	612.8	616.9	621.6	623.2	616.9	617.9	616.7	623.3	622.3		Pump down 6/1; MW-3,4 plugs loose;
Jul 28, 2012	623.2	623.9	623.3	607.4	617.2	610.0	615.6	621.3	624.7	615.6	618.2	616.9	622.5	622.0		system down; mw-3 was/left loose; mw-8 was tight/left loose, under slight pressure.
Aug 1, 2012		623.8	623.2	607.4		610.1		621.3	622.7							day after rain; system still down; mw-3 was/left loose; mw-8 was loose/left loose.
Sep 2, 2012			622.1	608.2	616.9	611.2	615.0	621.2		615.0	6.2	616.7	621.6			straws set to test depths,
Oct 1, 2012	623.4		614.5	609.6	616.8	610.0	616.8	621.3	607.8	616.8	618.0	616.8	623.6	622.2		sys running ok
Nov 18, 2012			624.0		616.5	610.1	617.2	621.8		617.5	619.6	616.9	624.5	626.3		sys @ 20"
Dec 17, 2012	620.1	614.8	625.5	625.3	617.2	613.9	618.1	622.3	610.5	618.4	621.2	617.3	625.0	624.9		sys at 25"
Feb 7, 2013	623.7	624.0	624.5	607.1	618.2	613.4	618.4	622.3	624.1	619.0	621.1	617.2	625.0	623.4		sys off;
Apr 5, 2013	624.7	624.6	624.2	621.4	618.2	618.2	619.2	622.2	624.1	619.3	620.9	617.3	624.4	623.1		sys off;
Jun 16, 2013	624.5	614.5	615.0	609.4	618.4	617.9	618.8	622.2	617.4	618.6	619.9	617.4	624.2	622.6		sys on
Jul 17, 2013	623.8	614.3	614.9	609.8	618.3	617.9	618.7	622.0	617.1	618.5	619.5	617.6	624.0	622.5		sys on
Sep 26, 2013	620.8	614.5	614.8	625.0	618.1	617.7	618.6	621.9	617.0	618.4	619.2	617.5	623.7	622.4		sys on;
Oct 15, 2013	622.6	613.5	614.0	609.1	614.3	617.4	615.9	621.6	614.5	615.8	617.9	616.9	623.1	622.3		sys @ 27", MW1 off
Oct 29, 2013	623.6	621.0	617.8	609.6	617.6	617.7	617.8	621.7	624.8	618.2	621.2	617.0	625.0	622.9		sys @ 28, MW1 off
Dec 10, 2013	624.8	613.5	616.4	610.1	617.8	620.8	617.9	622.5	615.1	618.3	621.4	617.3	625.0	623.1		sys 27";

	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	
Dec 20, 2013	624.2	621.2	620.4												sys @ 20"	
Feb 2, 2013	624.3	624.7	623.2	609.9	619.8	619.8	619.6	622.7	614.4	619.3	621.3	617.5	624.9	623.2	sys on	
Apr 24, 2014	622.8		614.2	625.2	620.7	619.5	620.7	622.2	608.3	620.1	621.1	617.7	624.8	623.3	system manifold operating @ 29" Hg, bailed manholes full of rainwater, note mw-4 at top of well	
May 29, 2014		625.7	623.8	625.3	622.5	619.0	619.1	621.9	614.3	618.7	619.7	617.6	624.3	622.6	sys @ 27" Hg; ok. Mhs full of rainwater, pumped down.	
Jul 23, 2014	624.3	619.7	623.1	625.3	617.9	618.1	618.0	621.9	617.3	618.0	618.0	617.0	624.2	622.6	sys @ 26" hg; ok. Note mw-4 near top; wells purged for sampling	
Sep 30, 2014	622.9	623.6	624.8	607.7	617.6	617.1	616.3	621.4	618.5	10.3	617.8	616.7	622.6	622.2	system @ 25" hg, ok.	
Oct 15, 2014	623.8	623.9	624.6	610.4	617.8	617.4	617.6	622.1	622.4	617.4	618.1	616.8	623.6	626.0		
Nov 11, 2004	624.3	624.8	624.1	611.0	618.1	617.6	617.5	622.2	623.4	617.6	618.4	617.1	624.6	626.7		
Dec 1, 2014	613.8	614.0	614.0	611.4	618.9	618.9	619.8	623.5	620.4	621.2	623.0	618.4	625.8	624.1		
Jun 6, 2015	616.1		616.9	608.4	622.2	617.5	618.9	621.8	624.8	618.8	618.0	617.0	624.3	622.6	mw-2 vac line blocked, mw will be disconnected from sys until cleared	
Nov 14, 2015	625.4	624.1	626.2	625.2	622.4	617.4	617.0	621.9	625.2	617.3	618.3	616.8	623.9	622.5	mw-3 and mw-9 MH full of H2O;; mw-5 bailer stuck, bottom of well full of road grit?; pumped dry 5x; very fast recovery;	
Dec 17, 2015			626.2	607.2					624.6	617.4					613.6	mw-5 plug broken- no reason observed why.
Feb 2, 2016	623.8	625.0	624.8	607.1		618.1	619.0		618.2	619.5	621.6	617.5	625.2	623.5	619.6	mw-8 frozen over; mw-9 MH full of H2O; mw-5 appears compromised/leaking; cannot purge to dry
Apr 29, 2016				608.1		617.9	619.2	621.4		619.1	618.3	617.2	624.4	622.7		mw-15 bailed 5.5b; btm 1' remains v cloudy; mw-16 @6.49, bailed 2b, btm 2' remains v cloudy; mw-4 plug loose, H20 filled
Jul 20, 2017	622.1	623.3	624.9	606.6		616.8	615.9	621.7	622.5	616.0	618.1	616.7	620.6	621.7	620.2	sys vac was off;
Jul 21, 2016	616.2		613.9						617.9						619.3	w/ system vac running;
Oct 19, 2016	625.0		624.1	605.7		617.1	617.0	621.5	617.4	617.0	619.0	617.0	623.9	622.1		mw-1 MH full of H2O; MW-16 dry
Dec 21, 2016	614.1	624.7	623.7	607.2		617.5	616.8		613.0	618.6	619.5	616.7	625.1	622.8	620.1	mw-8 frozen over
Jan 26, 2017	615.0	624.2	622.9	625.2		618.5	619.2	622.9	615.7	619.4	619.9	617.5	624.9	12.7	621.5	mw-1 MH full of H2O; MW-16 -5.28'; mw-8 cover missing
Feb 24, 2017		624.3	622.0	609.3		618.4	619.4		617.0	619.2	619.4	617.3	624.6	12.8	621.3	
Apr 1, 2017	620.3	624.4	621.0	608.7		618.0	618.5	622.7	616.2	619.0	619.1	617.2	624.1	13.1	621.0	mw-1 MH full of H2O; MW-16 -dry; mw-2 dis
May 3, 2017	621.5	624.2	619.9	608.6		617.8	618.2	622.7	616.0	618.5	618.5	617.1	624.0	13.5	620.6	mw-1 MH, -9 full of H2O; MW-16 -7.0; mw-2 disconnected
Jun 1, 2017	620.6	624.2	618.3	608.4		617.5	621.7	622.5	607.2	618.4	618.2	617.0	623.9	14.0	620.2	mw-2 disconnected; mw-9 rose to 16.7 after 20 min; mw-16 @ 6.75
Jun 16, 2017	619.5	624.2	614.3	608.5		10.8	617.9	621.2	622.5	4.8	619.2	616.7	623.2	13.3	620.8	mw-1 mh full of h2o; mw-2 disconnected; mw-13 btm sl cloudy, much improved; mw-16 dry
Aug 16, 2017	622.8	624.4	623.6	605.3		617.2	617.5	618.5	623.0	617.6	617.8	616.9	623.2	14.5	619.6	mw-2 disconnected; mw-9 issues w/ bleed drawing down h20 in mh (low pumop vac?) mw-13 btm 3' muddy.
Jul 8, 2017	621.4	623.9	621.0	608.5		617.1	616.6	620.1	618.0	617.5	617.9	616.9	623.2	13.1	621.0	mw-2 disconnected;
Oct 6, 2017	614.0	#VALUE!	620.1	606.1		617.1	616.1	620.8	617.6	616.2	618.4	617.0	623.1	14.0	620.2	mw-2 disconnected;
Nov 2, 2017	620.7	624.3	622.5	611.3		618.6	622.0	622.8	622.3	620.7	620.6	618.5	625.0	13.0	621.2	mw-2 disconnected; mw-16 4.30;
Dec 2, 2017	620.4	624.2	621.3	608.3		618.8	621.9	623.1	617.2	616.4	620.7	618.6	625.5	12.2	621.9	mw-2 disconnected;