Periodic Review Report

For

CMS ASSOCIATES REMEDIATION SITE
Site no. 915168

210 French Road
Town of Cheektowaga
Erie County NY

July 2021

Prepared for:

CMS Property Associates, LLC
240 Pound Rd
Elma NY 14059

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I INTRODUCTION

1.1 Summary of Site

The CMS Property Associates Remediation Site ("Site") is at 210 French Road in the Town of Cheektowaga, Erie County, NY, and is designated Site no. 915168 on the *NYS Registry of Inactive Hazardous Waste Sites*. The property contains a single masonry-block building used as a warehouse. See Figure 1 for the Site location.

A spill investigation and cleanup began after CMS excavated a leaking, underground, 2,000-gallon, storage tank in March 1996. CMS treated contaminated soil on Site, installed five perimeter bedrock groundwater monitoring wells and four monitoring/extraction wells at the source location, and installed a groundwater extraction/treatment system (GWE/TS) to help arrest the spread of contamination.

In January 2005, the NYSDEC reclassified the Site from Class 2 to Class 4, and CMS installed two sub-slab depressurization systems in the 210 French building and Cugini Ventures LLC purchased the property. CMS still owns and operates all remediation equipment, and has installed additional monitoring wells in 2009 (2,) 2010 (2,) 2011 (1,) and 2015 (2,) and in 2015 it enlarged and improved the SSDS system.

The adjacent Rosina Food Products, Inc. has leased the property from Cugini Ventures since 2005 to warehouse packaging/shipping materials, new parts, maintenance supplies, and used mechanical equipment and parts in 210 French Road building.

1.2 Nature and Extent of Contamination

The complete range of compounds in the UST were not characterized before it was emptied and removed, but the waste apparently contained fuel products, and chlorinated hydrocarbon solvents and other VOC compounds. While removing the LUST, it was evident that an unknown volume of the contents had leaked both into the surrounding soil and onto the bedrock surface on which the UST had been installed.

The LUST had contaminated about 350 tons of soil, and subsequent groundwater monitoring revealed that VOCs had entered the bedrock groundwater regime. 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 of concern* have been identified, although not all are observed in every monitoring well, and total VOC concentrations currently vary by orders of magnitude between the various wells.

Site characterizations soon after the LUST and contaminated soil were removed revealed that contamination had reached the five perimeter monitoring wells and likely extended off site, especially toward the northwest and east. However, at that time the extent of the contaminate plume was undetermined.

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

1.3 Remedial History and Effectiveness of the Program

The four initial Remedial Measures chosen for the Site were to:

1. Remove and properly dispose of the LUST to eliminate the contamination source.
2. Excavate the treat the surrounding contaminated soil on-Site.
3. Install a vacuum-enhanced, multi-phase, groundwater extraction and treatment system (GWE/TS) to help control the groundwater contaminate plume.
4. Impose Institutional Controls (deed restrictions on the use of the property) to minimize the potential for human contact with contaminates.

Additional Remedial Measures subsequently added were to:

5. Install two sub-slab depressurization (trench) systems in the 210 French building in 2006.
6. Enlarge and improving the SSDS systems in 2015 to cover a larger building footprint.

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

The GWE/TS system was installed in an outdoor shed and began operating in June 1998, but a December 1999 fire in the shed destroyed the equipment, so CMS relocated the replacement inside the 210 French Road building. It went back on line in April 2000, but for the first dozen years the extraction system had not operated as it had been designed and specified—so it likely never reached its full potential. However, the extraction wells were retrofitted to the correct design arrangement during 2009 and the revised system went back in service in April 2010.

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

The two sub-slab depressurization systems were installed in 2006 subsequent to soil vapor intrusion sampling. SVI evaluations were subsequently prepared for selected buildings surrounding the CMS Site (2013) and for the 210 French building (2014.) No SVI issues were discovered in off-Site buildings therefore no remediation was required. The 210 French building SVI evaluation revealed that the indoor air contained only low-level VOCs, and that the two SSDSs remediated approximately 80-percent of the building footprint that exhibited above-action-level VOCs. In 2015, the existing SSDS was improved by installing additional sub-slab suction points, two new roof-mounted blowers, connecting suction manifold piping, and blower controllers. Subsequent testing and ongoing monitoring of sub-slab negative pressure demonstrates that the SSDS attains the remedial objective.

Progress Made Toward Meeting the Remedial Objectives of the Site

The remedial objective of minimizing the potential for human contact with contaminants has been attained.

The remedial objective of preventing vapor intrusion into the 210 French building has been attained.

The remedial objective of reducing the spread of contamination is being met and the RM has stabilized the plume. Because the extraction wells were retrofitted and reconfigured after more than a decade of the GWE/TS operating incorrectly, we use year 2011 as the baseline to evaluate the success of that RM on media contamination. There has been a reduction in the groundwater plume since that baseline, and ongoing groundwater monitoring indicates that VOC concentrations at the plume extent continue to decrease, albeit at rates differing by orders of magnitude depending on the location.

Although the function of the GWE/TS RM was to control the spread of the contamination plume (not recover and treat the plume itself) it has additionally helped to reduce both on-site and off-site groundwater VOCs by removing contaminate mass at the source area that if mobile could contribute to the groundwater plume. Modeling of the GWE/TS zone of influence by Groundwater & Environmental Services, Inc. (GES) in 2019 indicates that it intercepts about 1/3 of the groundwater contaminant plume. However, the mass of contamination that is captive in the rock pores versus the fraction that is free to move away from the source via dispersion and diffusion is undetermined.

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

The Institutional Control achieved its remedial objective and it remains in place.

The SSD System in the 210 French building achieved its remedial objective and it remains in place.

The ongoing GWE/TS is effective in helping to reduce the spread of the groundwater VOC plume but its efficiency is controlled by the low groundwater transmissivity of the tight bedrock.

Historical groundwater level monitoring indicates that the GWE/TS cannot maintain a depressed level in the extraction wells during and soon after high precipitation and snowmelt. Otherwise, the system effectively lowers the groundwater surface in the extraction wells. There has been a persistent natural "groundwater mound" at the LUST location since the remediation effort began (see March 2000 *Record of Decision*.) The low volume of groundwater extracted indicates that, due to the transmissivity of the bedrock, the induced zone of depression and vacuum enhancement cannot move large amounts of *surrounding* contamination toward the extraction wells. Nevertheless, the GWE/TS is effective in capturing and removing VOCs from the bedrock groundwater proximate to the former LUST. It also intercepts the upgradient contaminant plume that could otherwise migrate northerly to off site (the groundwater down-gradient direction.) Groundwater modeling in 2019 indicates that the GWE/TS zone of influence intercepts approximately one-third of the upgradient contaminant plume.

1.4 Site Management Plan

The 2015 *Site Management Plan* incorporates the remedial effort, and will be updated to reflect additional and reestablished monitoring wells, fine-tuning of the SSDS in the 210 French building, and other relevant Site information.

1.5 Compliance with the Institutional Control

In the past CMS has complied with, and the current property owner complies with, the Institutional Control and no change is necessary.

1.6 Compliance with the Engineering Controls

CMS continues to comply with operating the SSDS in the 210 French building and the Site GWE/T System Engineering Controls.

The Site inspections show that groundwater control systems operate as intended. In May 2019 the GWE/TS was temporarily discontinued in order to evaluate groundwater contamination and reaction of the plume, absent the artificially depressed groundwater levels. This is to develop data relative to evaluating alternative remedial methods, including monitored natural attenuation.

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. Update the tabulation of historical groundwater elevations based on the new elevation survey that was done for the entire Site.

3. Prepare a top-of-bedrock elevation map using the new elevation survey and the previous depth-to-bedrock probes to help determine:
   a. The route contaminants from the LUST may have taken when travelling across the bedrock surface.
   b. How bedrock micro-variability might affect the recharge of bedrock groundwater in the area around the former LUST.

4. Continue monitoring well MW-16 to evaluate whether perched groundwater being recharged from permeable areas north of the 210 French building contributes to the "groundwater mound" that persists in the area of the former LUST.
   (Ongoing effort)

5. Continue to monitor MW-5 to develop a data set to be used to determine the contaminant mass flux across and the mass discharge off site.

6. Continue to investigate the cause of the blockage of the MW-2 suction line.

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 of the contaminant plume to the east of the 210 French building.
   (Ongoing effort)

The following addresses data gaps and their sequencing is based on CMS's annual financial resources:

8. Continue to monitor the plume stability and evaluate 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.
   (Ongoing effort)

9. Evaluate if additional optimization of the GWE/TS if possible.

10. Evaluate if a more-aggressive RM is feasible. 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 of VOCs.

11. Investigating the feasibility of adopting the *Monitored Natural Attenuation* option for the Remedial Method.

II SITE OVERVIEW

2.1 Site Location and Features

The CMS Associates Remediation Site occupies 3.74 acres at 210 French Road in Cheektowaga, NY, east of Union Road (NYS Route 277.) French Road and Industrial Parkway border it on the south and north respectively (see Figure 1 for location.) It contains one structure close to French Road; a single-story, 44,750-square-foot, concrete-slab-on-grade, masonry-block warehouse. Adjacent is a large asphalt parking lot, which has been expanded, new asphalt overlays in sections, and spot repairs over the years since the LUST was removed in 1996.

The following property uses are currently adjacent to the CMS Remediation Site (see Figure 2):

• Northwest	Latina Food Services warehouse/distribution center 1 Scrivner Drive (across Industrial Parkway)
• North	UPS Supply Chain distribution center 60 Industrial Parkway (across Industrial Pkwy)
• North	Rosina Food Products Customer Focus Center 109 Industrial Parkway
• Northeast	Darling Paint (commercial/residential painting contractor) 60 Boxwood Lane
• Northeast	Vacant Commercial (recently purchased by Darling Paint) 56 Boxwood Lane
• East	South Line Fire District #10 station 40 Boxwood Lane
• East	Absolute Canine Experience (dog daycare and boarding) 240 French Road
• South	Single-family Patio Home Development (across French Road along Hickory Grove Lane)
• West	Rosina Food Products, Inc. 170 French Road and 75 Industrial Parkway

Utilities at the site include underground public water and natural gas, and aboveground electricity, telephone, and cable TV. There are no known potable water or other groundwater supply wells, nor any features on or near the site to indicate a material risk for public contact with groundwater contaminants.

Figure 3 depicts the area land use, which consist of:

- Commercial and light industrial to the west, northwest, north, and east.
- Multi-family apartments to the southwest.
- Single-family patio homes to the south.
- Detached single-family neighborhoods to the southeast.
- No nearby public-use areas that present a risk of exposure to groundwater contaminants.

The nearest watercourse is Slate Bottom Creek (Class C, ~1,900 feet to the north-northeast,) which is a tributary of Cayuga Creek (Class B and Class C.) See Figure 3.

There are no state-regulated wetlands within one-mile of the site, but there are various narrow, linear, US Fish and Wildlife Service *National Wetland Inventory* wetlands along Slate Bottom and Cayuga Creeks.

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

2.2 Nature and History of Contamination Prior to the Remediation Effort

According to CMS, a former tenant installed a UST in the 1960s for a vehicle fuel supply and later abandoned its use. Presumably, at some unknown point(s) in time, that or a different tenant disposed of chlorinated solvents and other VOCs in the UST as either a one-time event or a continuing practice.

In April 1996, CMS properly disposed of approximately 1,810 gallons contained in the UST, and then excavated the tank and discovered it was compromised. An unknown quantity if its contents had leaked into the surrounding soil and onto the bedrock surface upon which it had been originally installed. Figure 4 depicts the location of the former leaking UST.

CMS began a Remedial Investigation and the initial groundwater sampling at the site perimeter revealed that contamination reached and extended beyond the property boundary. The highest Total VOCs were toward the east (well MW-4; ~ 20,970 ppb,) northwest (MW-5 at Industrial Parkway; ~12,990 ppb) and toward Boxwood Lane to the east (MW-7; ~1,500 ppb.) See Figure 4 for the location of these monitoring wells (during that RI, only monitoring wells MW-1 through MW-9 had been installed.)

2.3 Selected Remedial Program

Four Remedial Measures were initially chosen for the CMS Site and a fifth was subsequently added. Of the five RMs, three have been successfully completed and the two Engineering Control RMs shown on Figure 4 are ongoing.

The initial four RMs were to:

1. Properly remove the contamination source (LUST) and dispose of it off site. This RM was successfully completed in April 1996.

2. Properly excavate about 350 tons of contaminated soil adjacent to the LUST and biologically treat it in site-constructed, ventilated soil boxes to achieve NYSDEC TAGM 4046 guidance values. The remediated soil was subsequently spread on the lawn area north of the building, and graded, topsoiled and seeded. This RM was successively completed in 1997.

3. Place Institutional Controls (Deed Declarations) on the property to minimize the potential for human contact with the groundwater contaminants. CMS filed the deed restrictions with Erie County in 2003 and this Institutional Control RM has been effective.

4. Install a Carbtrol Corporation model MPX-75, vacuum-enhanced, multi-phase groundwater extraction/treatment system in 1998 to reduce the spread of the contaminate plume (see Figure 4.) Wells MW-1, -2, -3, and -9 were connected to a buried, common suction manifold, and 1996 and 1997 RI reports discuss the anticipated levels of VOCs to be extracted and treated by the so-called "*shallow groundwater pumping"* system. However, the RIs contain no discussion of the anticipated groundwater production from the extraction wells and how bedrock and groundwater well elevations would affect performance, how pumping would affect the groundwater hydraulic gradient, or the location/elevation of the proposed GWE equipment and its anticipated ability to extract contaminants from the tight bedrock. This Engineering Control RM has been modified and enhanced since its installation, and it is ongoing.

2.4 Additions to the Original Remedial Program

2.4.1 210 French Building Sub-Slab Depressurization System Remedial Measure

This fifth Engineering Control Remedial Measure was instituted in 2006 after sub-slab vapor and indoor-air sampling showed high VOCs under portions of the 210 French building footprint and low-level VOCs in the air. Two independent sub-slab-depressurization (trench) systems were installed inside the northwest corner (nearest the former LUST) and near the east wall of the building. This RM operated continuously (24/365) until 2015.

Subsequent to additional soil-vapor-intrusion investigations at the building in 2014, additional sub-slab suction points and two new roof-mounted blowers were added in 2015 to enlarge and enhance the two trench SSD Systems (see Figure 4.) Additionally, several locations in the building received passive remediation consisting of sealing (1) cracks in the concrete floor slab, (2) open slab-to-wall joints, and (3) penetrations of the slab. This RM is ongoing and CMS operates it continuously (24/365.)

2.4.2 Additional Groundwater Monitoring Wells

The initial remedial program included ongoing monitoring at five site perimeter bedrock wells (MW-4, -5, -6, -7, -8) and four extraction bedrock wells (MW-1, -2, -3, -9) adjacent to the former LUST location.

In 1998, off-site bedrock wells MW-10 and MW-11 were installed northeast and northwest of the site, respectively.

In 2010, off-site bedrock wells MW-12 and MW-13 were installed northwest and north of the site respectively and in 2011 a sixth bedrock perimeter well MW-14 was installed on the east property line.

In 2015, the seventh perimeter bedrock well MW-15 was placed near the southeast corner of the site and a shallow overburden well MW-16 north of the 210 French building was installed to top of bedrock.

The remedial program and Site Maintenance Plan includes ongoing groundwater elevation and quality monitoring at all these wells (locations are shown on Figure 4.)

III PERFORMANCE of the REMEDIAL MEASURES

3.1 Conceptual Site Model

There were no additions to or refinements of the *Conceptual Site Model* during the reporting period. Additional investigations proposed for the Site (see Section 1.7, Recommendations) will be used to further refine the *CSM*.

The CSM graphic (see Figure 5) depicts a north-south cross-section of the remediation Site from north of Industrial Parkway to French Road, running approximately through MW-6, MW-1, and MW-8, and well locations plotted perpendicular to the profile baseline. For reference, groundwater levels reported at the time (17 months after CMS removed the LUST) are depicted at each well location.

3.2 Performance of Groundwater Extraction in Controlling the Piezometric Surface

According to the 1997 RI report, the groundwater extraction/treatment system was installed to control the movement of the contaminant plume toward offsite using "*shallow groundwater pumping"* and applying a vacuum to the bedrock proximate to the former LUST. However, the 1996 and 1997 RIs contain no evaluation of either the GWE/TS's ability to lower the piezometric surface, or its anticipated zone of influence in the tight bedrock. There was also no discussion of what groundwater elevation the extraction wells were expected to maintain, or how pumping would affect the hydraulic gradient across the Site.

Figure 4 shows a schematic depiction of the GWE/TS, which has gone through significant modifications since 1997 so the current configuration does not reflect its original installation. Therefore, we measure system performance against what it is able to accomplish, because there is no data to compare it to what it was designed to accomplish.

Retrofitting the groundwater extraction wells in 2009 has had a positive result because the system has been able to lower the groundwater level in the extraction wells significantly (or some dozen years after its installation the system actually raised the groundwater level proximate to the former LUST location.) See Figure 6, which shows typical groundwater profiles before and after retrofitting the GWE/TS.

While the GWE/TS can draw down the extraction wells during dry weather, the system cannot maintain those levels during long periods of wet weather or high snowmelt. The extraction pump requires periodic maintenance due to the scale deposited from the groundwater, and it is serviced whenever necessary (cleaning/descaling, replacing diaphragms, valve balls and seats, air valves, etc.)

The GWE/TS was installed with a single, buried, suction manifold connecting the pumping equipment inside the building to the extraction wells—so losing vacuum at one well affects performance of the entire system. Constant/consistent vacuum on the extraction well network is otherwise typically maintained, unless an issue arises that requires servicing of the extraction pump.

Because the GWE/TS has a single, shared suction manifold, from the standpoint of system maintenance/repair, a manifold leak or a leak between it and any single extraction well affects the performance of the entire system. This last occurred in September 2018 when the suction manifold into the building was damaged and subsequently repaired.

The GWE/TS remained off during most of the reporting period in order to better characterize the groundwater and contaminate movement in order to develop data necessary to evaluate alternatives to the adopted Remedial Measures.

Observations and Conclusions Regarding the Groundwater Surface

We use conditions in 2011 as the baseline to evaluate the GWE/TS performance because this RM had operated as it had been designed only after the extraction wells were rebuilt and reconfigured, and placed back in service in 2010. Also, after 2011 additional key bedrock-groundwater-quality data became available at MW-12, MW-13, and MW-14, and most recently MW-15. Figure 7 depicts groundwater conditions at baseline year 2011.

Accurate static groundwater levels in wells that have an applied vacuum are problematic in determining the Site groundwater gradient. Therefore, one extraction well is usually isolated from the GWE/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 MW-2 is out of service because the PVC suction line to the suction manifold became clogged. Therefore, during the reporting period MW-2 was used to monitor static groundwater levels.

The following are observed relative to the "groundwater mound" at the LUST source area:

- Adjacent to the east and northeast is a substantial permeable lawn area, which accepts roof runoff from the 210 French building, and likely contributes to short-term perched groundwater, and may subsequently contribute to a localized, rapid recharge of the confined bedrock groundwater.

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

- Bedrock elevations derived from groundwater well installation logs indicate micro variability of the top-of-rock, so perched groundwater moving across the bedrock surface could pond at certain locations and contribute to localized bedrock groundwater recharge.

- Excavating the former LUST and backfilling it and the adjacent contaminated soil areas likely had increased the permeability of the overburden, allowing more perched groundwater to migrate into and pool on top of bedrock proximate to the extraction wells.

The above observations support a hypothesis that the "groundwater mound" occurs due to local recharge proximate to the extraction wells. It is also possible that the bedrock in that vicinity could have greater fracturing—which would contribute to greater and more rapid recharge than at other areas of the CMS Site.

Significant differences in groundwater elevations between MW-4 and other wells on the Site continues to suggest a hydraulic discontinuity at MW-4.

The lower the piezometric surface that the GWE/TS can consistently maintain, the more effectively it will capture groundwater contamination. However, the Conceptual Site Model (Figure 5) and historic groundwater elevations (Figure 6) show that lowering the groundwater surface in the extraction wells has the greatest effect on the confined piezometric surface toward the south (the up-gradient side of the Site) than toward the north (down-gradient direction.) Conversely stated, groundwater would need to be greatly depressed in the extraction well field in order to have a significant effect in the northerly direction, toward which the plume has historically migrated.

To maximize drawdown of the piezometric surface across the Site to control the contaminant plume, it is critical to maintain the maximum vacuum and drawdown at the extraction wells—but this is constrained by the shallower depths of extraction wells MW-1 (16.0',) MW-2 (15.2',) and MW-3 (14.6'.) Compared to MW-9 (25.0') the three wells that were drilled earlier limit the ability of the GWE/TS to draw down the groundwater surface—deeper extraction wells like MW-9 would have been more effective.

Additional Investigations To Address Issues Regarding Groundwater Control

The additional RIs described in Section 1.7 are expected to assist in answering 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.

Toward that, with the concurrence of the NYSDEC, the GWE/TS was temporarily turned off in May 2019 to allow additional RIs into how groundwater levels and VOCs at the source area respond without the extraction wells being influenced by artificial manipulation of the groundwater surface. Both groundwater elevation and quality sampling continued during the reporting period.

3.3 Performance of Groundwater Extraction in Controlling the Contaminant Plume

Presumably, the intent of installing the GWE/TS was additionally to capture contaminates residing in the source area and to create an unspecified zone of influence around the LUST source area (well extraction field MW-1, -2, -3, -9) to capture additional contaminated groundwater.

The 2019 evaluation of the GWE/TS zone of influence by Groundwater & Environmental Services indicates that extraction can intercept about one-third of the up-gradient contaminant plume (see Figure 8.) Groundwater evaluations and depths of the extraction wells demonstrate that the system is unable to back-draw the down-gradient contamination. However, even if the system minimally influences the down-gradient groundwater level, extracting groundwater from upgradient and at the source area will still help to reduce VOCs at and beyond the Site boundary. This is the primary benefit of operating the GWE/TS on the Site.

Pursuant to a request by the project Hydrogeologist and after discussion with the NYSDEC Region 9, CMS temporarily discontinued extraction in May 2019 to assist in developing data for further Remedial Investigations. This will allow evaluations of groundwater movement and the stability of the contaminant plume without the influence of groundwater being artificially manipulated by the GWE/TS.

Observations Regarding Control of the Contaminant Plume

Appendix A and Appendix B summarize the VOCs observed in the groundwater extraction wells (MW-1, -2, -3, -9,) the perimeter wells (MW-4, -5, -6, -7, -8, -14, -15,) and in the off-site wells (MW-10, -11, 12, -13) since implementing the RMs and reconfiguring the extraction wells. Reviewing the groundwater VOC concentrations and Figure 8 indicates that the contaminant plume has been stabilized and the outside limits of the highest VOC levels continue to contract.

While the Remedial Measures have reduced the Total VOCs that were initially observed in the perimeter wells, compared to the wells in other locations the VOC levels remain problematic toward the southeast (MW-14,) where the highest concentrations remain. Nevertheless, the trend of the extent and contaminant density of the plume (see Figure 9 and Figure 10) indicates that it has stabilized and its extent reducing. Additionally, the graphic presentation of Total VOC concentrations (see Appendix B) at the up-gradient wells (south of the LUST source area) continue in a downward trend (though significantly less at MW-14.) We anticipate both those trends to continue over the long term, despite whether the ongoing groundwater-quality monitoring reveals short-term variances.

The retrofitted GWE/TS portion of the RMs has contributed to the reduced VOC concentrations in the perimeter wells (except MW-6) and off-site wells, and in arresting the spread of the contaminant plume. And as noted above the trend at MW-14 is reducing Total VOC concentrations (albeit at a slower rate.)

The VOC concentrations at MW-14 are higher than what is currently observed in wells at the source area. Being on the upgradient side of the source, those higher VOC levels are consistent with the *CSM*'s depiction of the tank contents having migrated to the south, across the top-of-bedrock. Consistent with that hypothesis, at some point contaminated perched groundwater would likely have encountered vertical fractures that allowed it to enter the confined groundwater regime.

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. Historically, the treatment system effluent has consistently been below the discharge limit of 155 µg/l VOCs 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, annual compressor preventive maintenance, and the temporary shutdown for additional RIs. There were no extraordinary equipment failures or replacements on the system itself, but the suction pump was serviced during the shutdown.

The GWE/T System typically operates continuously (24/7) and since the system was installed in 1998, we estimate the following performance:

Reporting Period	
GWE/T System operated	126 days
Mass VOC removed, lbs	0.15
Cumulative VOC mass removed, lbs	46.032
Groundwater volume extracted, gal	26,500
Cumulative extracted, gal	1,042,594

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

There is no historical data available to compare removals of the VOC mass that was released from the LUST to the soil, bedrock, and groundwater. Nevertheless, the estimates allow a comparison of the relative ongoing performance of the GWE/T System.

3.5 Current Extent of Groundwater Contamination Plume

During the reporting period, contamination extended to all perimeter wells and to the off-site well toward the northwest (MW-12.) Nearby off-site well MW-13 has been non-detect and is used to verify the extent of the contaminant plume. Figure 10 shows the estimated down-gradient extent of the contaminant plume during the reporting period.

Observations Regarding the Extent of the Contaminant Plume

The six bedrock monitoring wells that were most recently added to the Remedial Program have been invaluable in defining the extent and density of the plume.

The chosen RMs may not have been as effective in controlling the contaminant plume as quickly as might have been anticipated in 1997 because the GWE/TS never operated as intended until April 2010, and therefore for a dozen years it never reached its full potential. Nevertheless, the indication from the cumulative groundwater sampling program is that the extent of the plume had reduced, and continues to do so after the GWE/TS retrofit. See the estimates of the plume for the baseline year 2011 (Figure 9) and reporting period (Figure 10.) Note that due to the wide spacing of wells south of the LUST source area, the plume representation is considered overly conservative. Caution should be used when interpreting the depicted contamination zones, and the plume limits should be considered approximate.

The number of *contaminants of concern* (n ~50) makes it unwieldy to place the the analytical results on a single sampling location map—therefore Appendix A we tabulated in the lab results from the initiation of the Remedial Investigation through the reporting period.

Appendix B contains a graphical analysis of each monitoring well since the date that the original contamination sources (LUST and soil) were removed, since the period after the GWE/TS Remedial Method began operating, and the period to date after the extraction system and four extraction wells were reconfigured.

Additional Investigations to Address Issues Regarding Contaminant Plume

To address the high VOCs at MW-14, CMS installed MW-15 in 2015 to help establish the limit of the groundwater plume toward the east and southeast. An additional well may be warranted in the future to establish the extent and/or stability of the plume to the east, and the ongoing monitoring at MW-14 and MW-15 will assist in that determination.

See Section 1.7 for a summary of additional Remedial Investigations that are anticipated.

IV COMPLIANCE with SITE INSTITUTIONAL and ENGINEERING CONTROLS

4.1 Compliance with the Institutional Control

The Institutional Control to minimize potential human exposure to the contaminants were filed as a Deed Declaration that runs with the land and precludes the owner, Cugini Ventures, LLC, from:

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

CMS, Cugini Ventures, and Rosina Food Products (the site occupant) all continue to comply with ICs, which have attained their intended remedial objective, and no modifications or additions are necessary.

4.2 Compliance with Engineering Controls

The ongoing Engineering Controls consist of (1) operating the GWE/T System RM, and (2) operating Sub-slab Depressurization System RM to prevent soil vapor intrusion in the 210 French Building. See Figure 4 for the location of these ongoing RMs.

Groundwater Extraction and Treatment System

CMS continues to own and operate the GWE/TS EC, which has continued to operate substantially as designed according to the specifications for the system supplied by the equipment manufacturer and specified by Hazard Evaluations, Inc. in the 1996 and 1997 RIs.

Description of Performance Monitoring

The operation and performance of the system is checked daily and the vacuum in the suction manifold that is applied to the extraction wells is recorded in a logbook. Groundwater extraction was temporarily discontinued during most of the reporting period to obtain additional groundwater and contaminant plume data (see Section 1.7.10-11.) Otherwise, the equipment typically performs well, without significant/unusual issues.

The performance of the treatment (air stripper) portion of the system in removing VOCs is determined by compliance sampling required by the Erie County/Buffalo Sewer Authority permit for the effluent discharge to the sanitary sewer system. It was unnecessary to operate the treatment (VOC stripping) portion of the system when the GWE/TS was operating during the reporting period, because air sparging that occurs in the extraction wells themselves significantly reduces the VOC concentrations. Consequently, the treatment system effluent is consistently well below the EC/BSA permit discharge limits. The semiannual compliance reports are filed with the NYSDEC Region 9 DER and additionally, the effluent is typically sampled for compliance whenever groundwater wells are sampled.

The ability of the GWE/TS to control VOCs in the down-gradient contaminant plume is determined by groundwater sampling and the concentration of VOCs in those site perimeter and off-site wells. The plume has stabilized since the reconfigured extraction wells came on line in April 2010. What remains to be determined is what portion is due to the GWE/TS removing VOCs from the source area versus natural attenuation of VOC compounds in the contaminate plume.

Routine Maintenance and Inspections

Any maintenance is recorded in the daily inspection logbook that also documents system performance, and additionally all shop tickets and repair reports are maintained on file. The daily readings are reviewed to identify trends such as low vacuum or a persistent maintenance condition. See the copy of the logbook for the GWE/TS performance that is submitted separately with the PRR.

Whenever 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 groundwater extraction pump. The frequency of these inspections is as necessary if any issue affecting system operation or performance arises.

Adjustments to the extraction system (e.g., air compressor and pump operation, vacuum applied to the suction manifold, well vacuums) are performed as needed.

During the monitoring period these adjustments, maintenance, and repairs were made to the GWE/TS:

- Serviced the groundwater extraction pump.

210 French Building SVI Remediation Systems

The SSD System installed in the 210 French building (see Figure 4) 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 SSDS performance.

Routine Maintenance and Inspections

The routine inspection forms consist of the daily logbook that documents the SSDS system performance. Other standard forms may be prepared in the future if regular maintenance on the system becomes necessary.

During the monitoring period the following adjustments, maintenance, and repairs were necessary:

- In December 2020, the east and west halves of the SSDS system both lost suction due to the roof fans shutting down. We traced the cause to failed electrical contactors in the wall panel, possibly due to a power or lightening surge. Both were replaced by the Rosina electrician and the system was back up and ran normally for the remainder of the reporting period.

V COMPLIANCE with SITE MANAGEMENT PLAN

5.1 Status of SMP

The SMP was updated in 2015 to reflect the RM components and the Engineering and Institutional Controls. It needs minor updating to include new monitoring wells and other 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 reports are also submitted to Region 9 DER as PDFs, and the EDDs are uploaded to the NYSDEC 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 were non-detectable using EPA Method 625 for wastewater (as provided for in the discharge permit.) More recently, effluent has bees analyzed using the lower-detection-limit Method 8021 for groundwater, and currently EPA Method 8260. Using any of the three test methods, the discharge to the sanitary system is typically an order of magnitude below the permitted 1.55 mg/l.

We sampled the GWE/TS effluent these times during the reporting period:

Date	Total VOCs GWE/T System Effluent (µg/l)
May 30, 2019	Non-detected

Permitted discharge limit is 1,550 µg/l

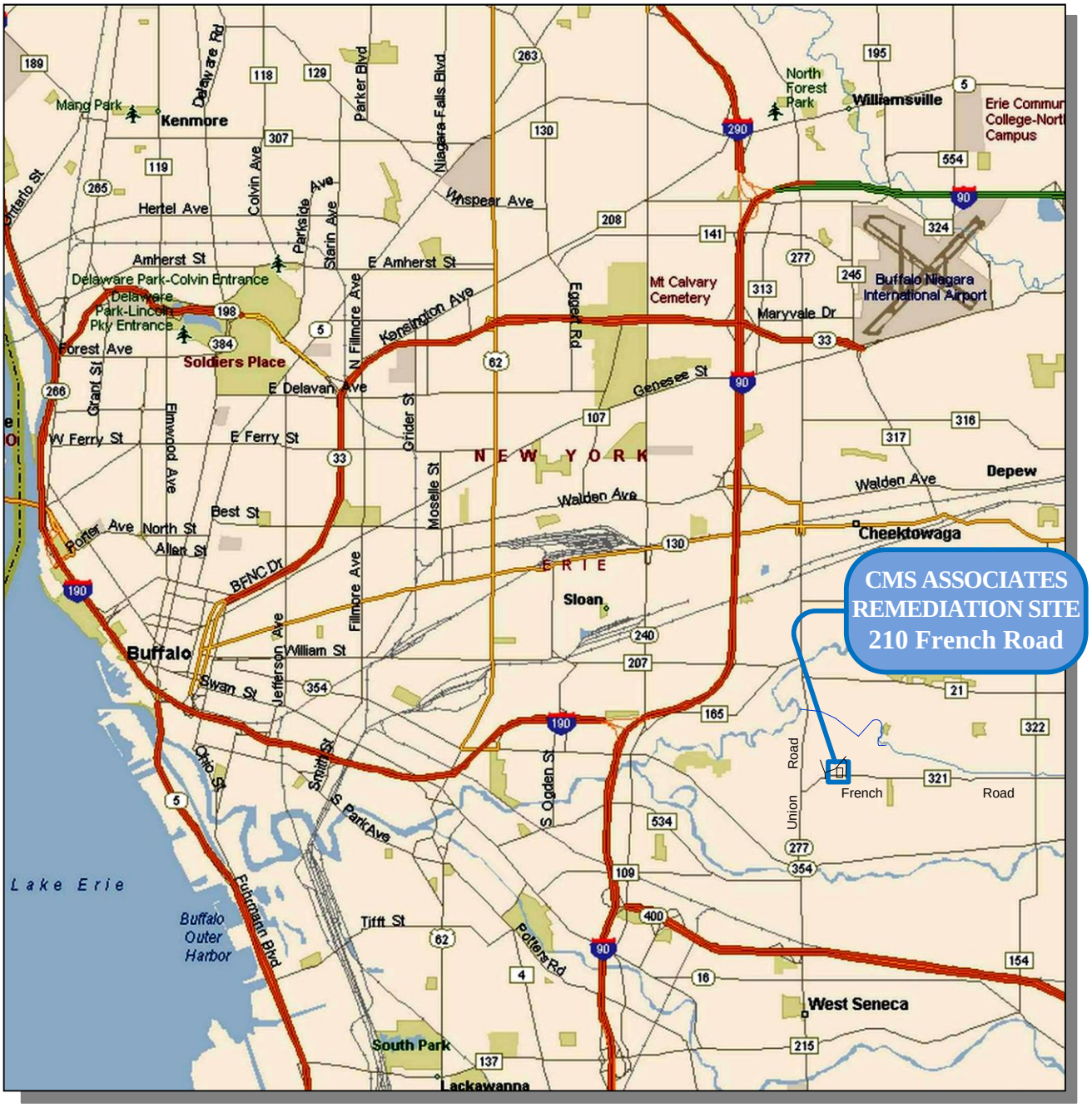
5.3 SVI Remediation System Monitoring

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 ("Carbtrol Room".) The SSD System has operated as designed during the reporting period and it is attaining the Remedial Objective.

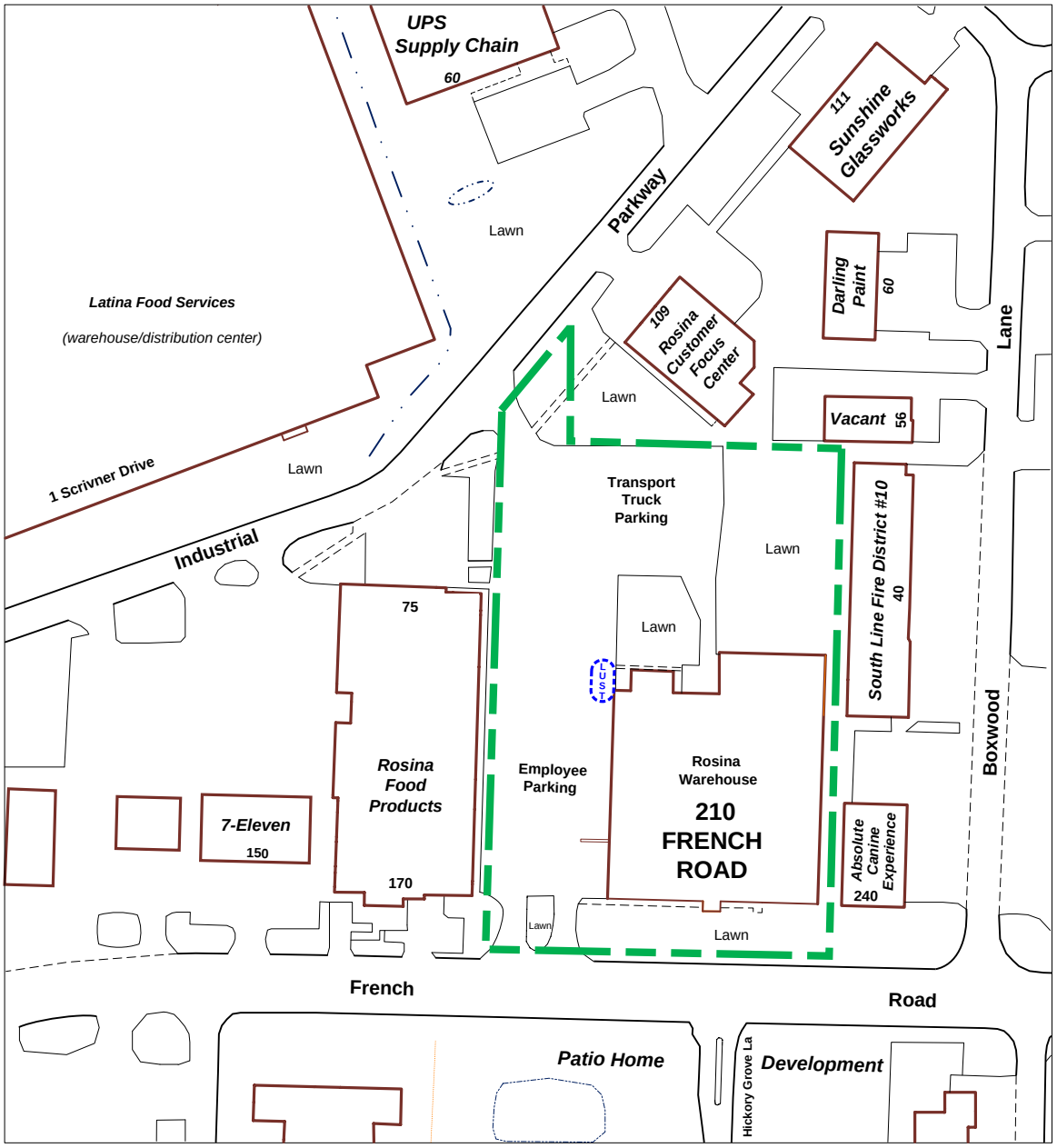
5.4 Groundwater Elevation and Quality Monitoring

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 Leaking UST Location***

CMS Remediation Site Property Boundary

N

0 60 100 200

Approximate Feet

CMS Property Associates Remediation Site
Periodic Review Report

Figure 2

Surrounding Properties

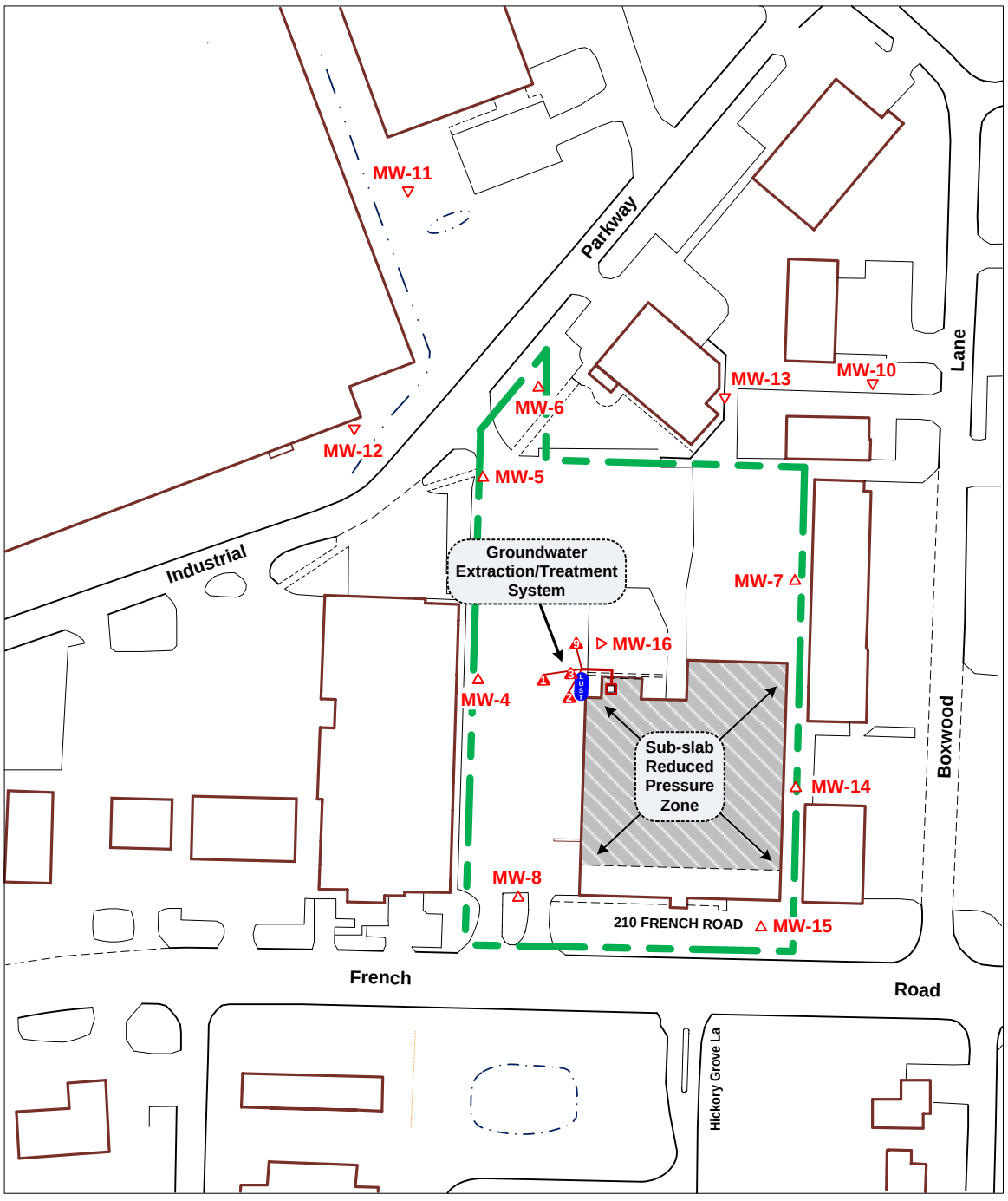
Ken W. Kloeber Consulting Engineers

CMS Property Associates Remediation Site
Periodic Review Report

Figure 3

Area Land Use

Ken W. Kloeber Consulting Engineers



Key

- ***Former Leaking UST Location***
- ***Perimeter Monitoring Wells (7)***
- ***Off-site Monitoring Wells (4)***
- ***Extraction/Monitoring Wells (4)***
- ***Shallow Overburden well (1)***

N

0 60 100 200

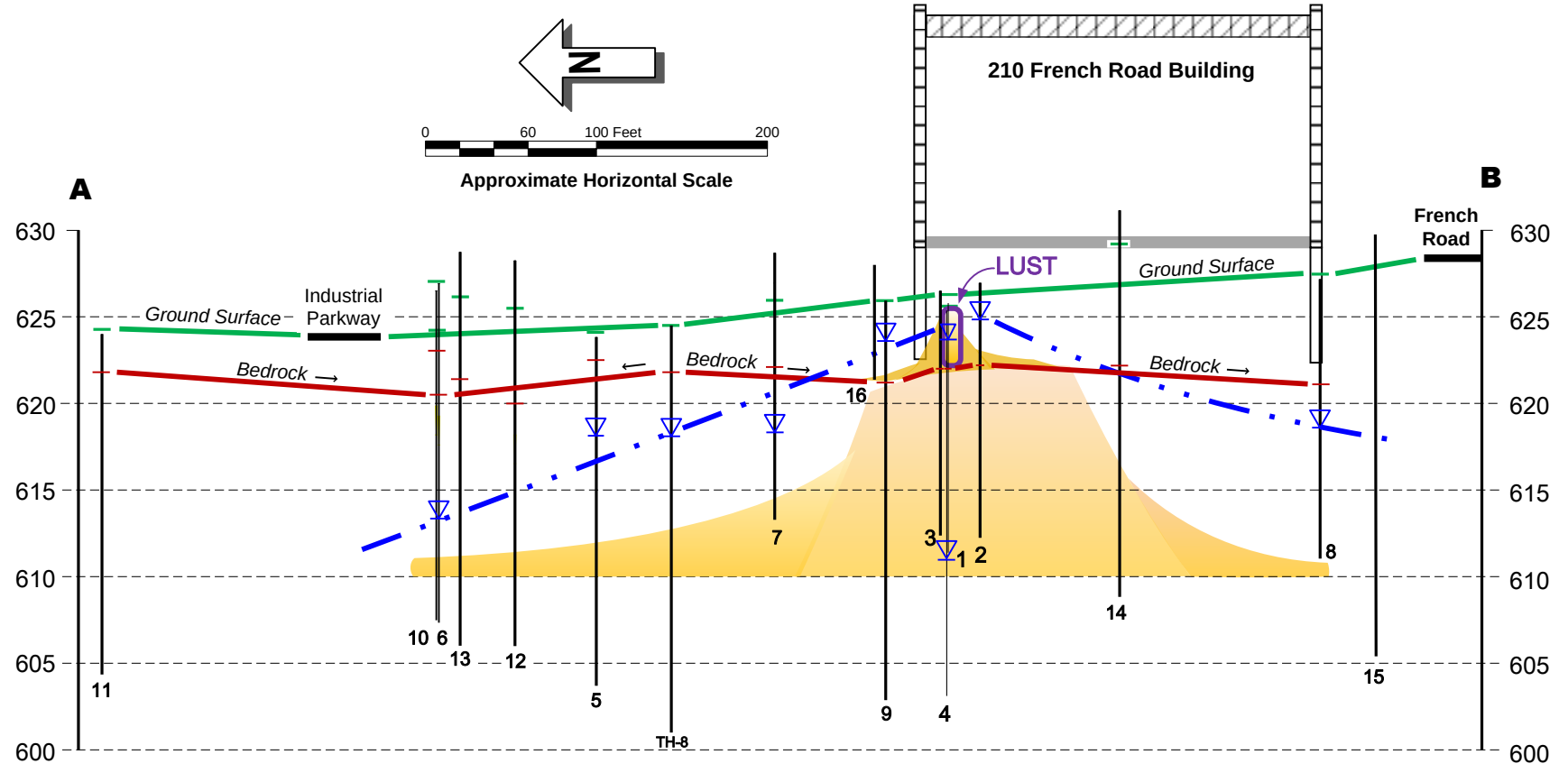
Approximate Feet

CMS Property Associates Remediation Site
Periodic Review Report

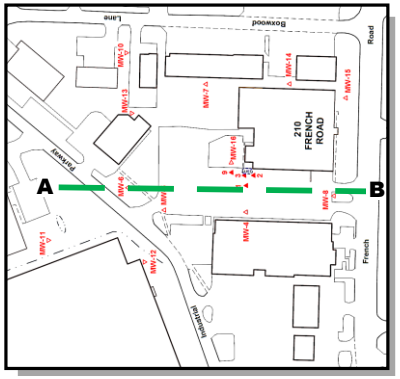
Figure 4

Ongoing Engineering Control Remedial Measures

Ken W. Kloeber Consulting Engineers



The above is a north-south cross-section A-B through MW-6, MW-1, & MW-8:



Key:

Groundwater Monitoring Wells

Ground Surface at well; Elevations are NAVD88

Ground Water Elevation

Top of Bedrock

Monitoring Well No.

5

Existing Site Grade

Top of Bedrock

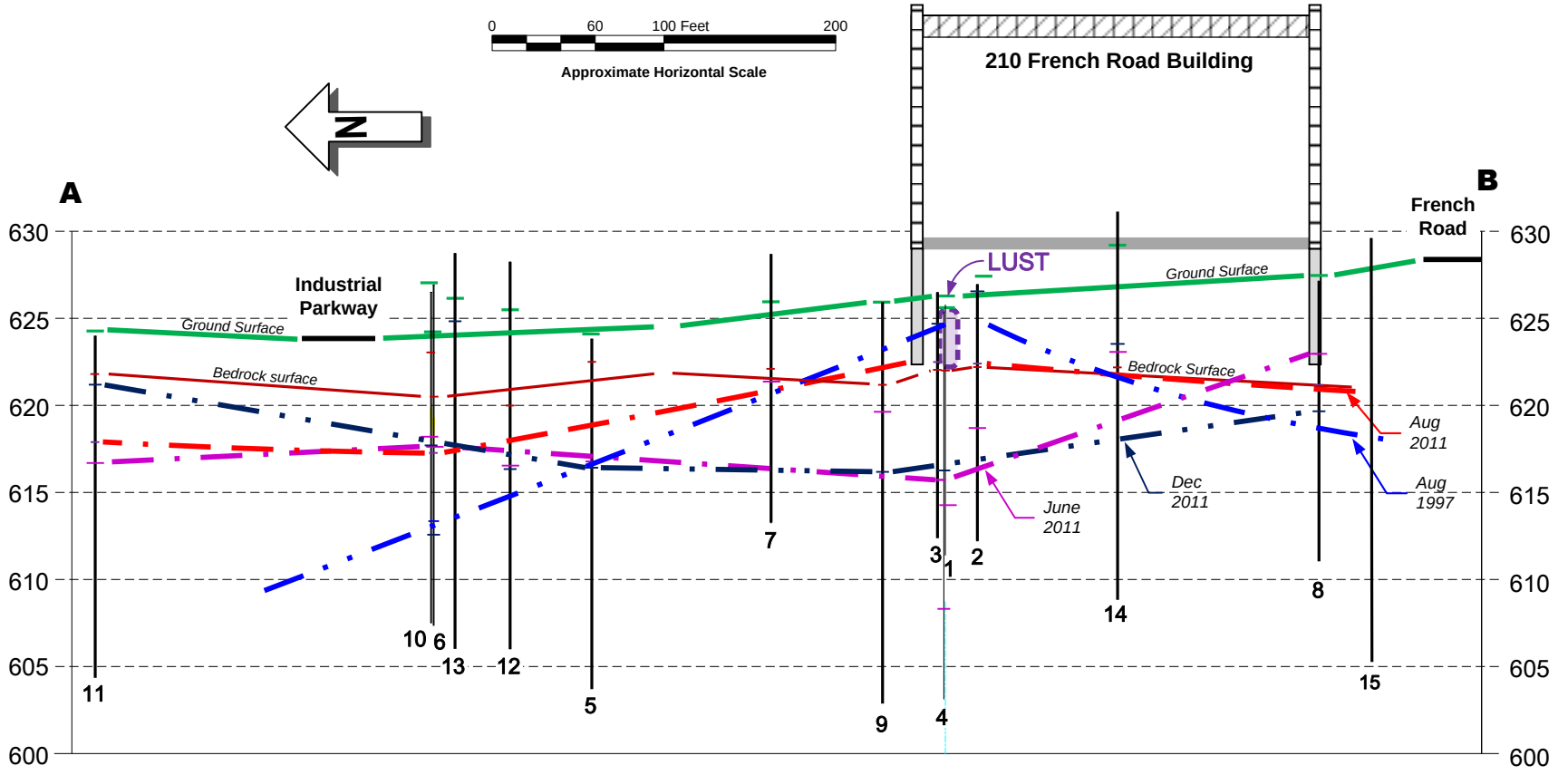
Inferred Piezometric Surface Aug 1997 after LUST removed

CMS Property Associates Remediation Site
Periodic Review Report

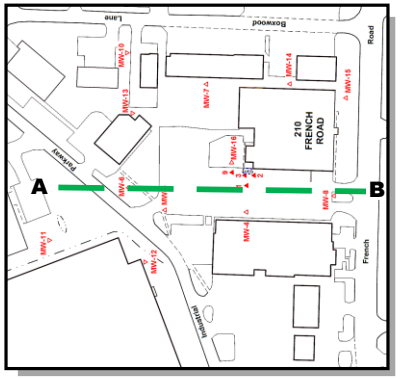
Figure 5

Conceptual Site Model

Ken W. Kloeber Consulting Engineers



The above is a north-south cross-section A-B through MW-6, MW-1, & MW-1:



Key:

Groundwater Monitoring Wells

Ground Surface at well; Elevations are NAVD88

Ground Water Elevation

Bedrock Surface

5 ***Monitoring Well No.***

Existing Site Grade

Top of Bedrock

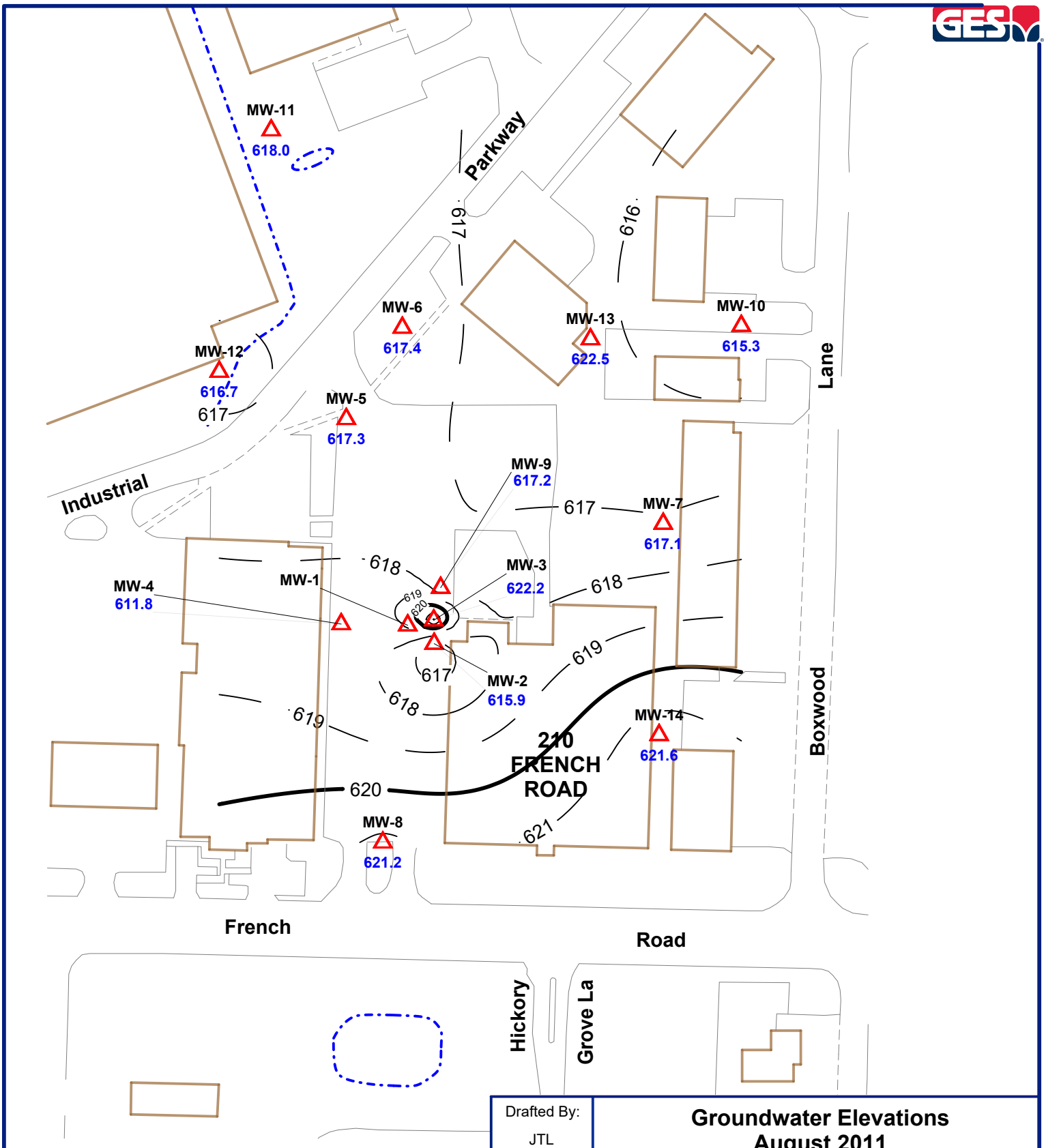
Inferred Piezometric Surface Between Wells

CMS Property Associates Remediation Site
Periodic Review Report

Figure 6

Confined Groundwater Piezometric Surface

Ken W. Kloeber Consulting Engineers



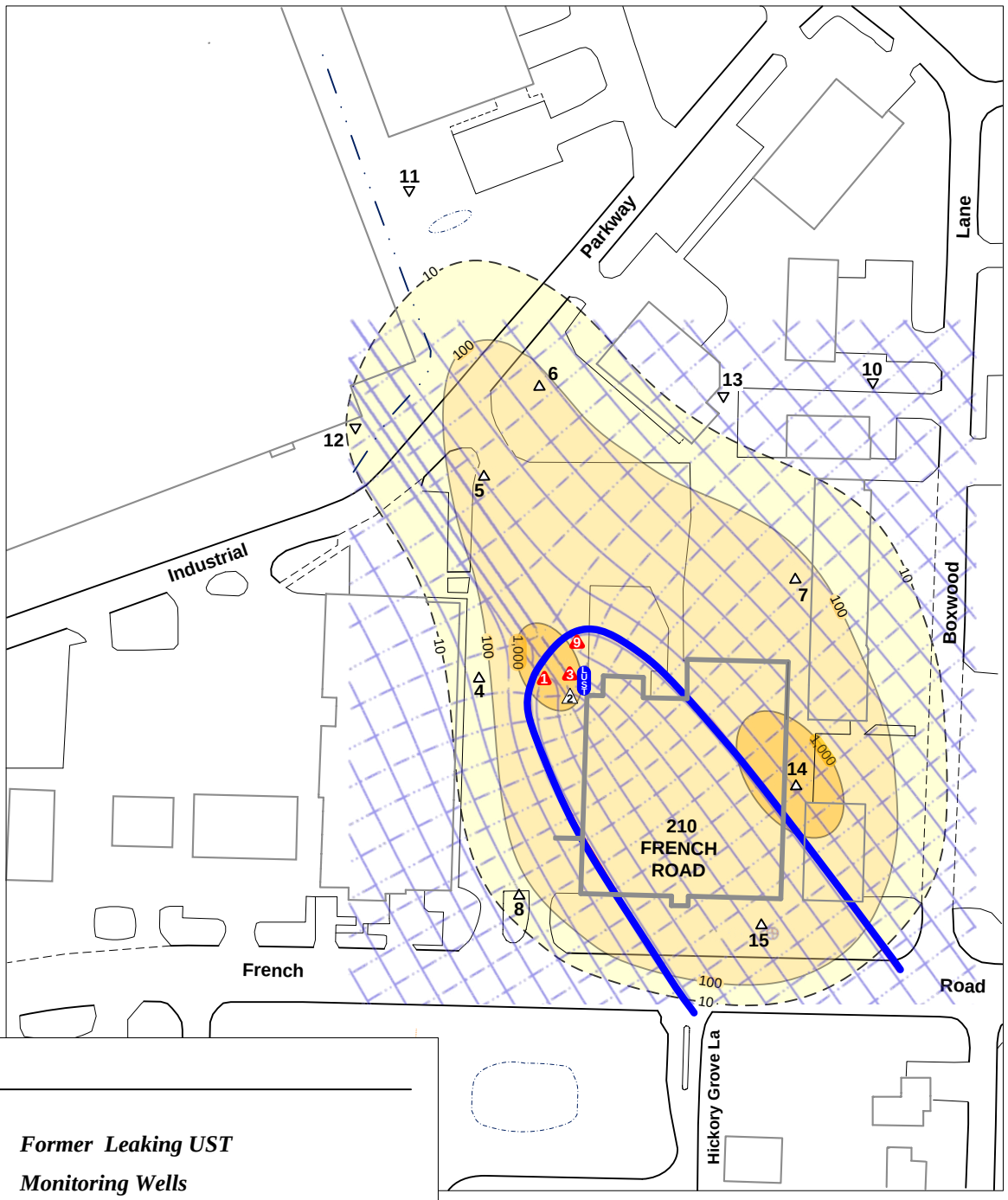
Notes:
- MW-4 and MW-13 were discounted
- The piezometric head in the extraction wells is artificially depressed by the GWE/TS

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 7**



Key

- *Former Leaking UST*
- *Monitoring Wells*
- *Extraction Wells*
- *Groundwater Total VOCs, µgl; June 2020*
- *Flownet Analysis (Streamline and Drawdown Contours)*
- *Groundwater Zone of Influence*

N

0 60 100 200

Approximate Feet

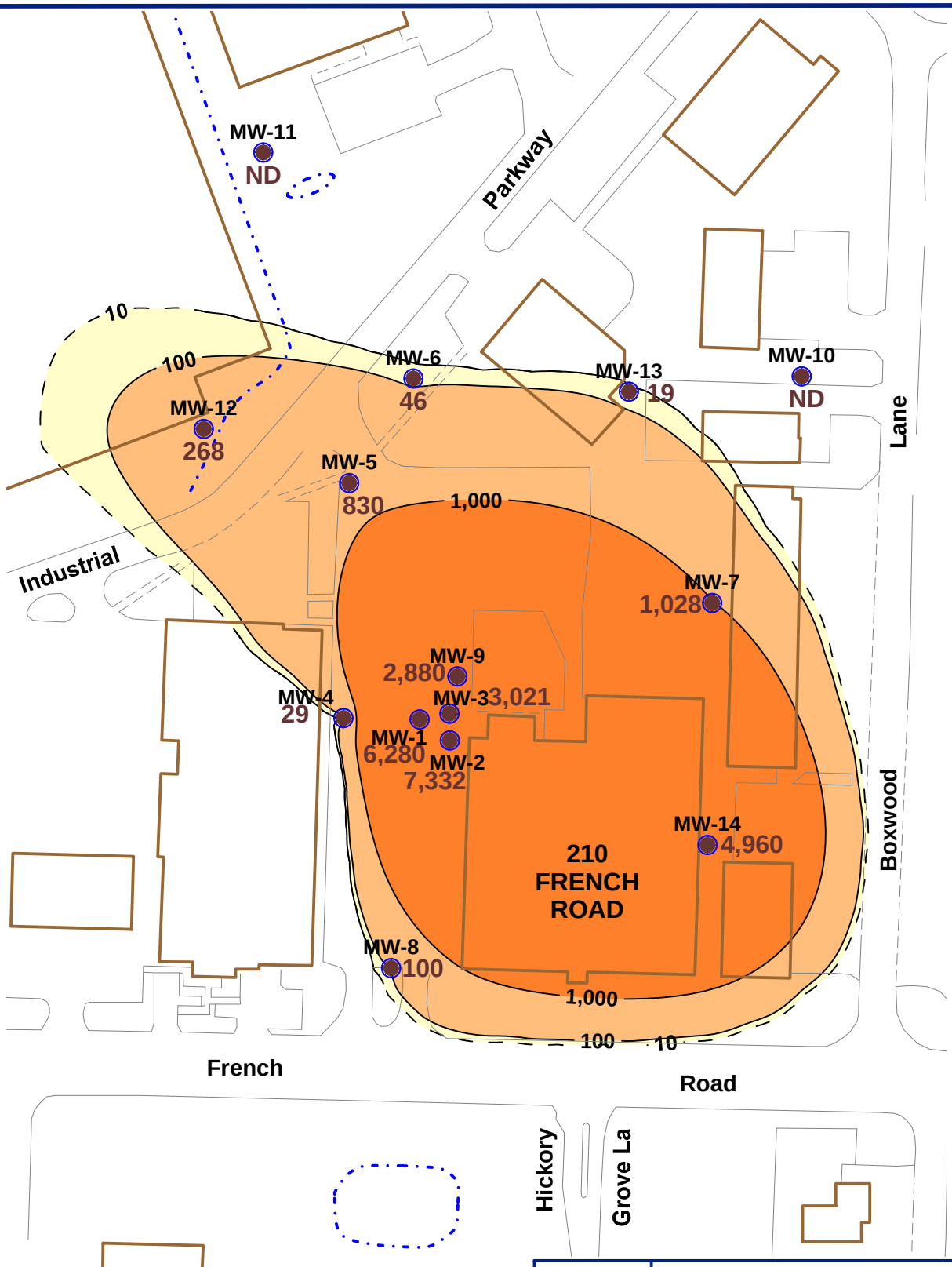
Sources: *ISO-Concentration lines interpolated by Don A Lundy PhD, PG; Hydrogeologist*
Groundwater capture zone adapted from GES site flownet analysis; June 2019

CMS Property Associates Remediation Site
Periodic Review Report

Figure 8

Groundwater Extraction Zone of Influence

Ken W. Kloeber Consulting Engineers



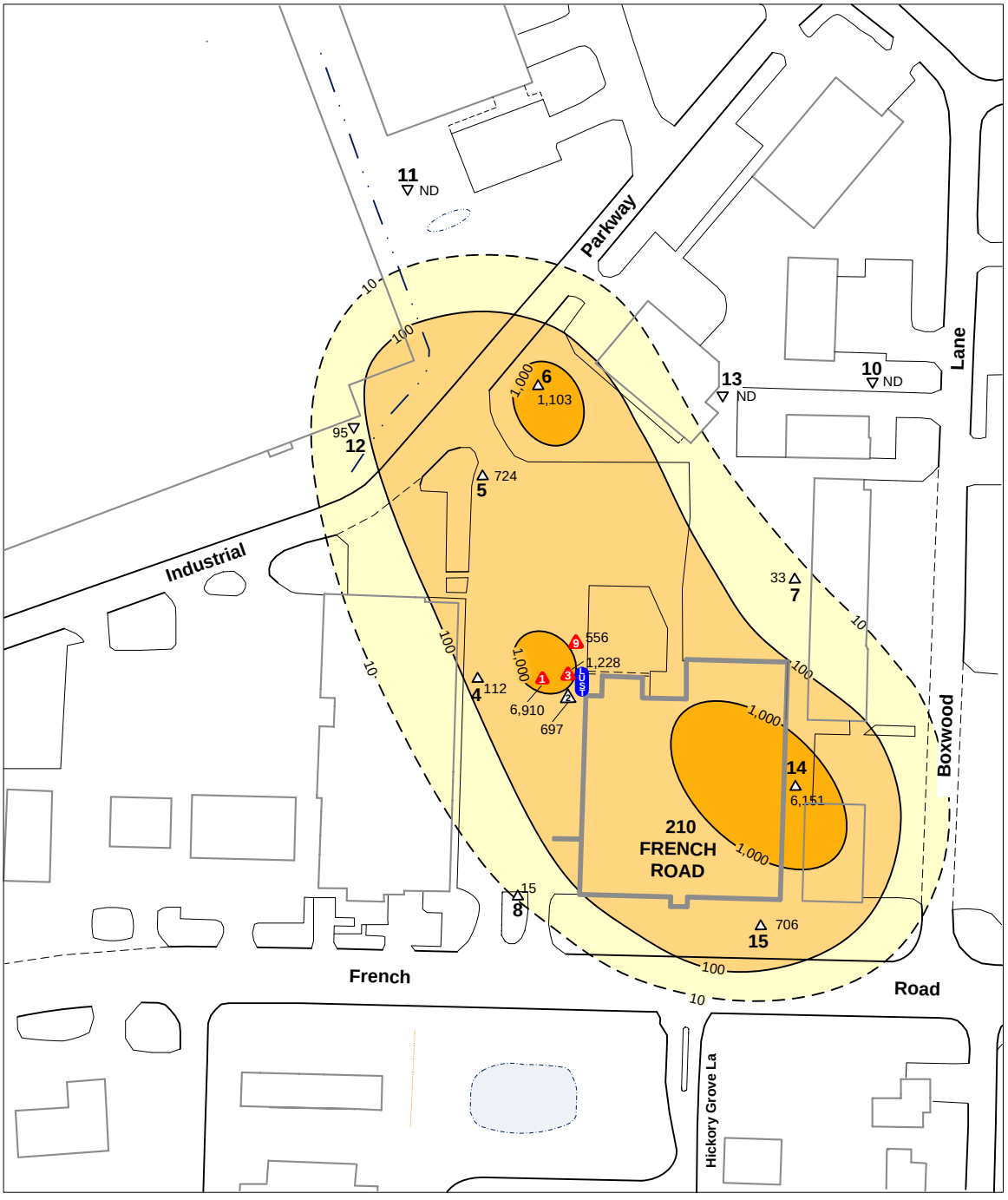
Legend:

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 9



Key

- *Former Leaking UST*
- *Monitoring Wells*
- *Extraction Wells*
- *Total VOCs, µg/l; Nov 2019*

N

0 60 100 200

Approximate Feet

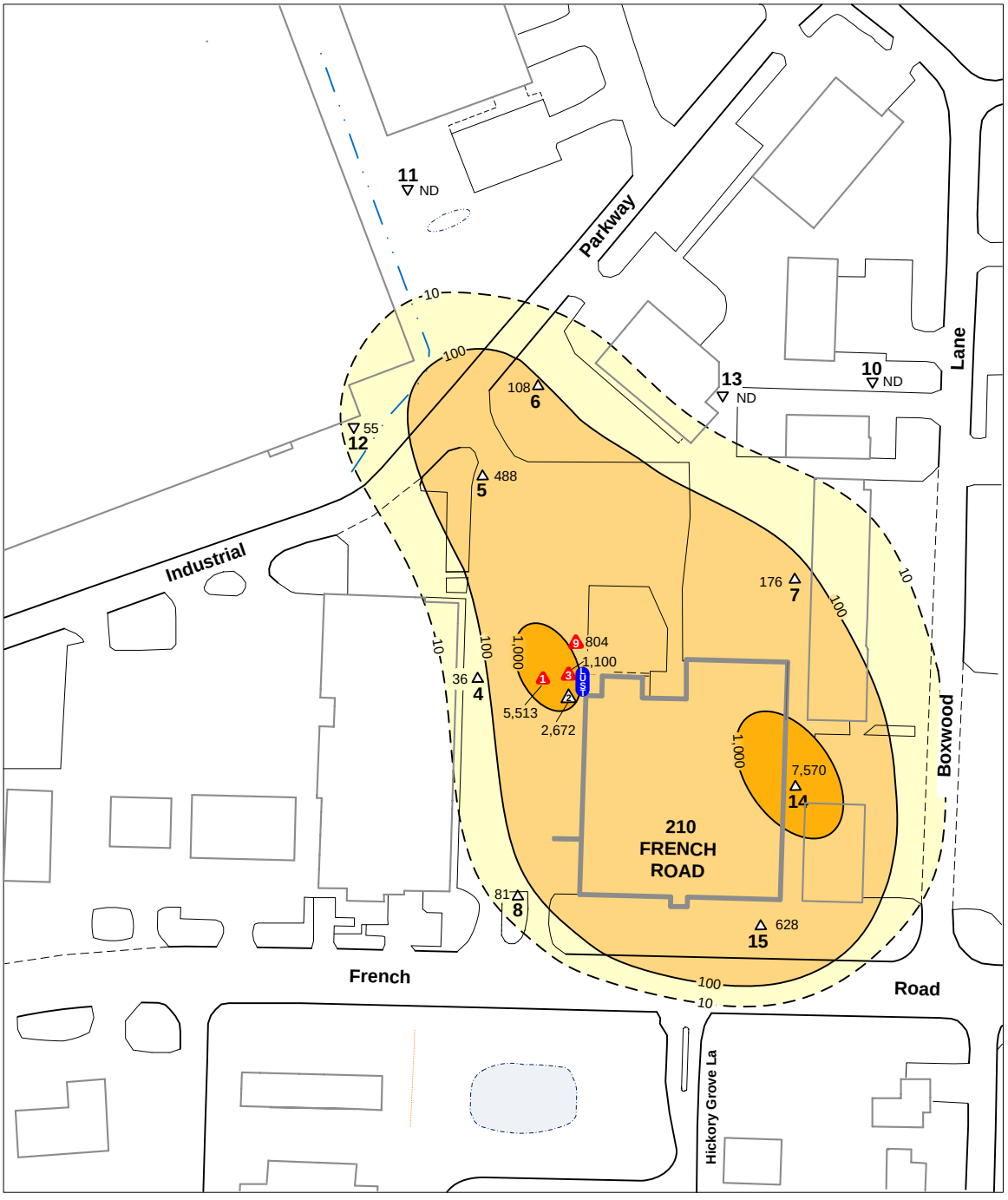
Source: ISO-concentration lines interpolated by Don A Lundy PhD, PG; Hydrogeologist

CMS Property Associates Remediation Site
Periodic Review Report

Figure 10a

Total Groundwater VOCs 2019

Ken W. Kloeber Consulting Engineer



Key

- LUST — *Former Leaking UST*
- △ — *Monitoring Wells*
- 1 — *Extraction Wells*
- 100 — *Total VOCs, µg/l; June 2020*

N

0 60 100 200

Approximate Feet

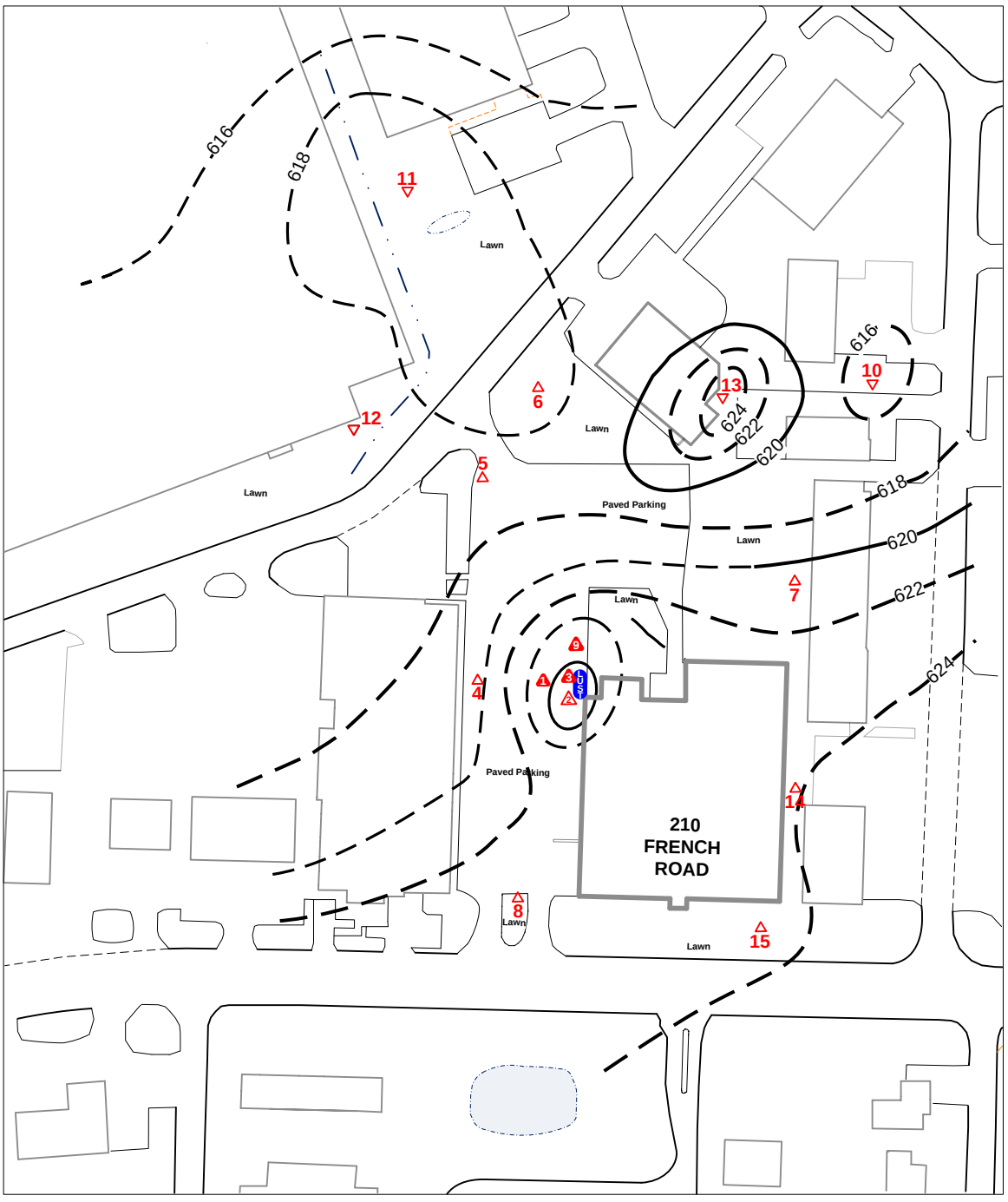
Source: ISO-concentration lines interpolated by Don A Lundy PhD, PG; Hydrogeologist

CMS Property Associates Remediation Site
Periodic Review Report

Figure 10b

Total Groundwater VOCs 2020

Ken W. Kloeber Consulting Engineers



Key

- ***Former Leaking UST***
- ***Monitoring Wells***
- ***Extraction Wells***
- ***Groundwater Elevation,*** *NAVD88; Nov 2019*

N

0 60 100 200

Approximate Feet

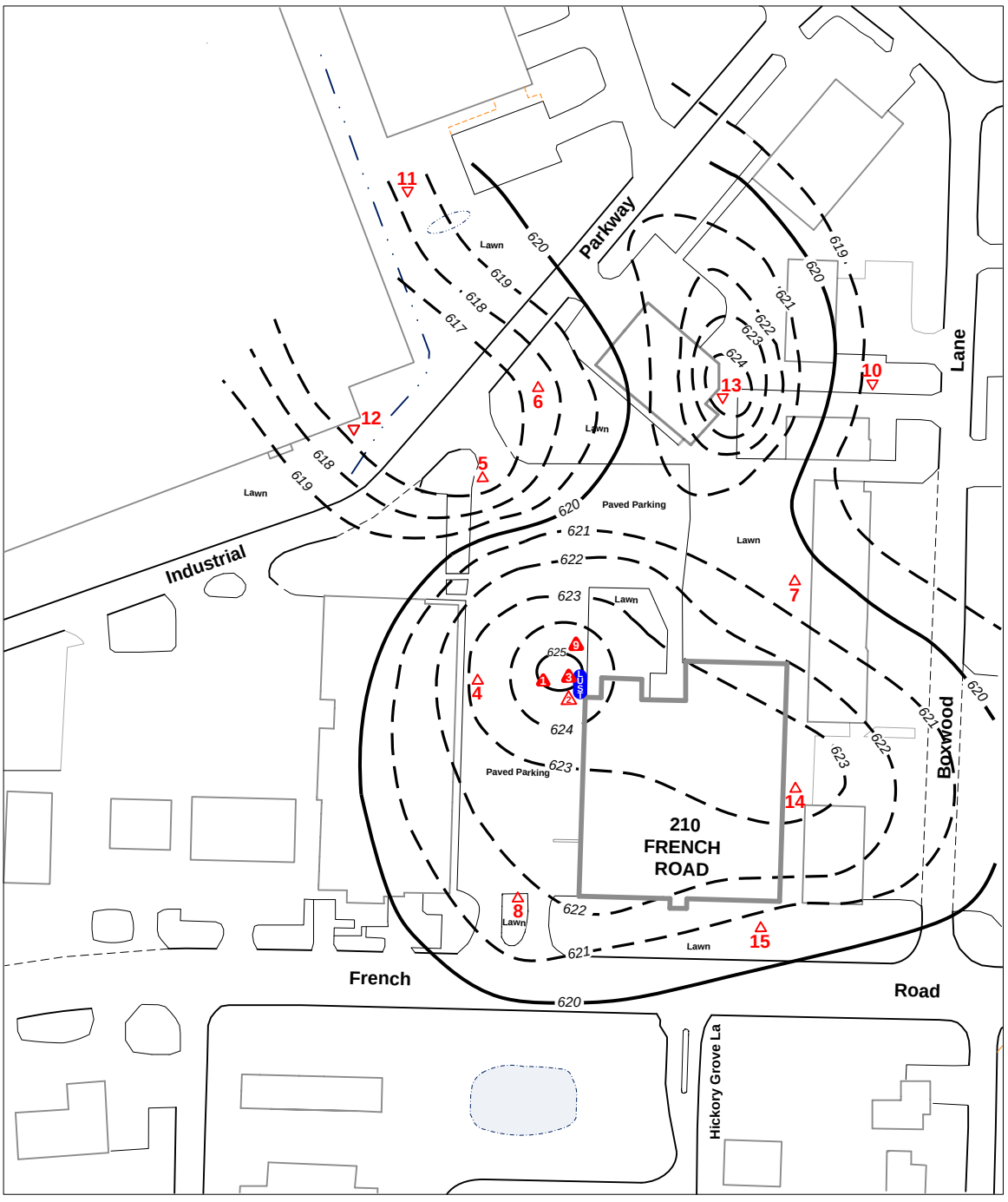
Source: Groundwater contours prepared by Don A Lundy PhD; PG; Hydrogeologist

CMS Property Associates Remediation Site
Periodic Review Report

Figure 11a

Groundwater Elevations 2019

Ken W. Kloeber Consulting Engineers



Key

- LUST — ***Former Leaking UST***
- △ — ***Monitoring Wells***
- 1 — ***Extraction Wells***
- 620 — ***Groundwater Elevation,*** *NAVD88; Dec 2020*

N

0 60 100 200

Approximate Feet

Source: Groundwater contours interpolated by Don A Lundy PhD; PG; Hydrogeologist

CMS Property Associates Remediation Site
Periodic Review Report

Figure 11b

Groundwater Elevations 2020

Ken W. Kloeber Consulting Engineers

APPENDIX A

Tabular Summary of Groundwater Quality Monitoring – through 2020

Summary of Total VOC Concentrations (µg/l)

After Removing Source (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								
5/15/1996		27,440	94,560	19,130		Wells Installed May 1996				
5/29/196	Phase I	--	--	--		20,970	12,990	--		
5/31/1996		--	--	--		--	--	86	Wells Installed 9/26/96	
6/5/1996		--	--	--		138	4,028	--		
6/15/1996		42,180	130,070	49,387		443	3,727	147	--	--
10/9/1996	Phase II	--	130,600	55,700	Well Installed 7/18/97	620	5,230	277	1,500	249
10/30/1996		--	153,300	--		--	--	--	--	--
3/20/1997		--	117,861	29,134		600	5,800	100	2,000	72
1/7/1998	Phase III	--	6,830	--	--	--	--	--	--	--
2/11/1998		--	457	--	--	--	6,700	111	2,000	--

Summary of Total VOC Concentrations (µg/l)

After Installing Groundwater Extraction / 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):												
8/12/1998		--	3,740	--	--	--	4,080	--	751	--	Wells Installed 11/23-24/98	
10/12/1988		27,400	30,100	10,600	29,800	--	--	--	--	--		
1/13/1999	Phase	--	--	--	--	--	--	--	--	--	nd	nd
2/10/1999	III	5,240	8,920	14,300	--	--	--	--	--	--	--	--
5/28/1999		8,500	12,270	10,600	3,210	--	--	--	--	--	--	--
6/25/1999	Phase	--	33,000	--	--	16	5,040	102	1,100	282	nd	nd
10/22/1999	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												
6/13/2000		6,530	379	29,400	5,220	--	--	--	--	--	--	--
11/1/2001		2,027	2,152	7,114	8,015	226	2,631	23	2,092	74	nd	nd
9/25/2002		2,442	3,943	5,621	9,813	--	2,462	23	241	138	nd	nd
6/29/2003		--	--	--	--	--	3,177	20	870	--	nd	nd
6/30/2003		2,174	5,081	17,918	12,984	--	--	--	--	--	--	--
8/9/2003		6,372	375	5,890	3,926	31	1,740	31	676	140	nd	nd
11/7/2003		3,830	8,900	18,500	8,700	14	3,434	--	1,400	115	--	--
3/31/2004		6,920	4,280	14,600	1,626	22	1,490	--	804	63	--	--
5/28/2004	Phase	9,280	1,624	8,630	1,715	37	3,220	69	610	112	nd	nd
9/26/2004	IV	13,030	9,940	34,100	6,580	--	--	--	--	--	--	--
9/28/2004		--	--	--	--	23	3,400	69	782	(1)	--	--
5/22/2005		9,540	5,060	13,250	3,980	8	2,810	50	850	86	nd	nd
1/31/2006		469	4,860	9,800	1,092	0	2,950	33	984	22	nd	nd
6/9/2006		9,940	2,836	10,600	5,040	89	1,700	27	680	95	nd	nd
9/29/2006		5,500	3,681	4,810	6,060	0	1,770	30	1,078	57	nd	nd
12/17/2006		11,590	4,920	4,240	2,200	1	3,010	21	1,420	68	--	--
3/27/2007		3,390	2,913	8,580	2,156	4	1,443	28	596	50	--	--
3/17/2008		--	--	--	--	57	2,530	25	1,300	47	--	--
3/18/2008		6,650	4,630	6,700	2,278	--	--	--	--	--	--	--
10/2/2008		--	--	--	--	590	3,290	26	910	62	nd	nd
10/7/2008		5,970	6,020	8,850	7,600	--	--	--	--	--	--	--

Note:

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

Summary of Total VOC Concentrations (µg/l)

After Rebuilding Groundwater 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-5 connected to suction manifold; MW-3 suction closed in October 2008														
4/10/2009	7,070	8,940	4,600	5,580	4	1,370	42	1,500	60		nd	nd		
9/4/2009	2,910	4,780	3,960	5,590	52	780	26	540	68		--	--		
Extraction system shut down October 2009 for well rebuilding and manifold repairs														
2/25/2010	7,040	13,970	1,268	670	44	880	21	1,200	--		--	--		
3/24/2010	--	--	--	--	--	--	--	--	64		--	--		
MW-1, -2, -3, -9 Rebuilt / fully operating in April 2010														
4/13/2010	8,940	16,790	2,170	1,437	49	1,200	39	1,300	49		nd	nd	Installed 10/21-25/10	
10/29/2010	5,070	2,108	1,970	1,480	43	1,780	70	580	169		--	--		
11/20/2010	--	--	--	--	--	--	--	--	--		--	--	136	5
2/3/2011	--	19,560	8,610	2,910	14	--	34	740	--	Installed 4/7/11	--	--	126	5
4/15/2011	4,990	920	5,130	238	8	136	39	1,700	35	5,380	nd	nd	312	5
6/8/2011	--	--	--	--	--	556	--	--	--	4,500	--	--	560	3
7/21/2011	--	--	--	--	--	950	--	--	--	3,460	--	--	197	16
10/18/2011	6,118	4,615	46	8,335	33	355	47	--	146	6,498	1	nd	277	86
12/12/2011	--	--	193	--	--	--	--	820	--	--	--	--	--	--
1/31/2012	43	2,886	1,753	1,135	8	537	46	125	81	8,308	< 1	--	338	< 1
3/22/2012	2,927	5,096	5,088	1,136	33	1,196	45	125	67	7,922	< 1	1	358	10
6/30/2012	3,262	3,742	2,577	1,495	3	1,573	55	1,291	134	7,794	< 1	< 1	239	4
10/2/2012	111	1,758	133	284	12	1,458	52	587	175	12,548	< 1	< 1	247	6
12/18/2012	4,245	865	214	1,860	20	2,202	14	292	359	4,955	< 1	2	325	< 1
4/5/2013	556	3,032	922	1,213	27	2,154	193	846	66	5,308	< 1	--	215	4
7/24/2014	nd	186	455	2,203	54	1,265	76	571	130	61	< 1	1	64	< 1
12/4/2014	2,746	377	233	871	21	1,537	55	196	93	8,006	< 1	< 1	226	< 1

Summary of Total VOC Concentrations (µg/l)

After Rebuilding Groundwater Extraction Wells

MW	-1	-2	-3	-9	-4	-5	-6	-7	-8	-14	-15	-10	-11	-12	-13
Date	Extraction Wells				Perimeter Wells							Off-site Wells			
MW-5 connected to suction manifold; MW-3 suction closed in October 2008															
4/10/2009	7,070	8,940	4,600	5,580	4	1,370	42	1,500	60			nd	nd		
9/4/2009	2,910	4,780	3,960	5,590	52	780	26	540	68			--	--		
Extraction system shut down October 2009 for well rebuilding and manifold repairs															
2/25/1010	7,040	13,970	1,268	670	44	880	21	1,200	--			--	--		
3/24/2010	--	--	--	--	--	--	--	--	64			--	--		
MW-1, -2, -3, -9 Rebuilt / fully operating in April 2010															
4/13/2010	8,940	16,790	2,170	1,437	49	1,200	39	1,300	49			nd	nd	Installed 10/21-25/10	
10/29/2010	5,070	2,108	1,970	1,480	43	1,780	70	580	169			--	--		
11/20/2010	--	--	--	--	--	--	--	--	--	Installed 4/7/11		--	--	136	5
2/3/2011	--	19,560	8,610	2,910	14	--	34	740	--			--	--	126	5
4/15/2011	4,990	920	5,130	238	8	136	39	1,700	35	5,380		nd	nd	312	5
6/8/2011	--	--	--	--	--	556	--	--	--	4,500		--	--	560	3
7/21/2011	--	--	--	--	--	950	--	--	--	3,460		--	--	197	16
10/18/2011	6,118	4,615	46	8,335	33	355	47	--	146	6,498		1	nd	277	86
12/12/2011	--	--	193	--	--	--	--	820	--	--		--	--	--	--
1/31/2012	43	2,886	1,753	1,135	8	537	46	125	81	8,308		< 1	--	338	< 1
3/22/2012	2,927	5,096	5,088	1,136	33	1,196	45	125	67	7,922		< 1	1	358	10
6/30/2012	3,262	3,742	2,577	1,495	3	1,573	55	1,291	134	7,794		< 1	< 1	239	4
10/2/2012	111	1,758	133	284	12	1,458	52	587	175	12,548		< 1	< 1	247	6
12/18/2012	4,245	865	214	1,860	20	2,202	14	292	359	4,955		< 1	2	325	< 1
4/5/2013	543	3,032	922	1,213	27	2,154	193	846	66	5,308		< 1	--	215	4
7/24/2014	nd	186	455	2,203	54	1,265	76	571	127	61		< 1	1	64	< 1
12/4/2014	2,746	377	233	858	21	1,537	55	196	92	8,006		< 1	< 1	224	< 1
6//7/2015	2,988	--	756	432	26	73	115	173	109	7,710	Installed 10/19/15	nd	nd	151	< 1

Summary of Total VOC Concentrations (µg/l)

After Rebuilding Groundwater 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 Overburden Well to Top of Bedrock
MW-5 out of service / Additional wells MW-15, MW-16 installed																
											Installed 10/19/15					Installed 10/19/15
12/17/2015	5,146	1,415	289	195	13	Out of service	104	133	145	4,704	--	nd	< 1	183	< 1	dry
5/2/2016	3,226	1,031	2.738	720	28		129	57	26	8,969	838	nd	nd	119	< 1	64
7/21/2016	5,615	863	1,408	992	24		85	410	93	3,710	664	10	nd	158	nd	dry
12/21/2016	45	nd	177	156	21		82	13	--	3,775	984	nd	nd	29	nd	52
4/21/2017	2,587	792	169	554	7		81	79	75	2,798	763	nd	nd	165	nd	36
6/16/2017	5,577	721	682	1,068	69		52	157	61	4,902	770	nd	nd	189	7	48
11/2/2017	4,055	518	644	1,127	nd		103	107	42	5,142	538	nd	nd	55	nd	35
4/24/2018	1,733	570	1,051	144	14		61	2	31	8,917	487	nd	nd	192	nd	40
7/3/2018	3,031	573	436	724	175	Re-established Nov 2018	60	23	67	6,169	440	nd	nd	69	nd	43
10/3/2018	2.669	364	505	809	157		98	633	83	6,660	473	nd	nd	106	nd	99
12/28/2018	3,067	980	1,227	500	98	975	80	8	45	4,408	474	nd	nd	31	nd	50
4/12/2019	1,654	599	1,475	186	119	471	82	0	49	3,995	484	nd	nd	199	nd	46
8/8/2019	377	839	1203	269	62	1,021	88	403	34	3,762	515	nd	nd	65	nd	60
11/5/2019	6,910	697	1,228	556	82	1,021	110	34	15	6,151	706	nd	nd	95	nd	--
3/29/2020	5,836	3,744	1,224	425	31	1,311	108	4	39	4,034	461	nd	nd	82	nd	20
6/19/2020	5,513	2,672	1,101	804	36	488	176	176	81	7,570	628	nd	nd	55	nd	30

CMS REMEDIATION SITE MW-1	pre IRM <=		=> post IRM			system down 12/12/99 - 4/6/00											
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	5/22/05	1/31/06
Detection limit	100																10
1,1,1-Trichloroethane	9400	18000	14000	1400		16000	2200	509	564	688	2350	1000	1900	3200	2200	2300	
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	4500	
1,1-Dichloroethene	560						100		35.1				110				
1,2,4-Trichlorobenzene																	
1,2,4-Trimethylbenzene													310	280		250	40
1,2-Dichloroethane	100						180										
1,3,5-Trimethylbenzene																	27
1,4-Dichlorobenzene	540		1														
2-Butanone																	
4-Isopropyltoluene																	
Acetone																	
Benzene																	39
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	1900	
Cyclohexane																	
Ethylbenzene																	21
Hexachlorobutadiene																	
Methylene chloride																	16LC
Naphthalene																	16
n-Butylbenzene																	
n-Propylbenzene																	
sec-Butylbenzene																	
Tetrachloroethene	3700	2900		100	3300												
Toluene		29															110
trans-1,2-Dichloroethene																	
Trichloroethene	1200		4400	840		990	610	0	37.1				200	220			
Vinyl chloride									164	111	452	330	200	280	1300	590	
m,p-Xylene	100																150
o-Xylene	140																50
Total Xylenes		81															
Total VOCs, µg/l	**27440**	**42180**	**27402**	**5240**	**8500**	**40990**	**6530**	**2027**	**2442.2**	**2173.9**	**6372**	**3830**	**6920**	**9280**	**13030**	**9540**	**453**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-1	<= 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	4/16/11	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12
Detection limit												100	125-2500	0.5 - 10	12 - 500	25 - 500	1 - 20
1,1,1-Trichloroethane	2600	1800	4600	1100	2200	2300	2700	1100	3100	2000	1000	970	855	14.9	606	1070	2.1
1,1,2,2-Tetrachloroethane																	
1,1,2-Trichloro-1,2,2-trifluoroethane														0.14	10	6	
1,1,2-Trichloroethane																	
1,1-Dichloroethane	4800	2300	2100	1400	2300	1700	2000	1100	2600	4600	2700	2500	3790	16.4	1480	1450	8.4
1,1-Dichloroethene														0.32	39.8	13.5	
1,2,4-Trichlorobenzene																	
1,2,4-Trimethylbenzene				110		410						70	112	0.48	69.2	49	1.78
1,2-Dichloroethane																	
1,3,5-Trimethylbenzene												50		0.11	17.8	10.5	0.44
1,4-Dichlorobenzene																	
2-Butanone																	80
4-Isopropyltoluene															8.5		
Acetone														3.75LC		176LC	10LC
Benzene																	
Bromomethane																	
Carbon disulfide														0.11		56	
Chloroethane												60	290		38.2	27	6.42
Chloroform												20					
cis-1,2-Dichloroethene	1900	780	3800	580	1800	740	1400	380	930	1600	660	1000	473	5.54	411	326	0.68
Cyclohexane															7.25		
Ethylbenzene															2.75		
Hexachlorobutadiene																	
Methylene chloride			210LC				530LC			210LC					11.5LC	40.5LC	0.82LC
Naphthalene																	
n-Butylbenzene																	
n-Propylbenzene																	
sec-Butylbenzene																	
Tetrachloroethene																	
Toluene			210												9		0.22
trans-1,2-Dichloroethene															2.5	5.5	
Trichloroethene			240									40	42.5	1.47	36.5	12	
Vinyl chloride	640	620	430	200	350	820	440	330	510	530	710	280	555	3.99	156	236	0.86
m,p-Xylene															13.2		
o-Xylene															19		
Total Xylenes																	
Total VOCs, µg/l	**9940**	**5500**	**11380**	**3390**	**6650**	**5970**	**6540**	**2910**	**7140**	**8730**	**5070**	**4990**	**6117.5** w/ Js	**43.46** w/ Js	**2926.7** w/ Js	**3261.5** w/ Js	**100.9** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-1	<= post extraction well rebuild =>															
Volatile Organic Compound	12/18/12	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	4/24/18	7/3/18	10/3/18	12/28/18
Detection limit	25 - 50	5 - 100	1 - 2	10 - 20	23 - 500	.50 - 10	25 - 500	40 - 400	2 - 20	20 - 200	20 - 200	20 - 200	40 - 200	20 - 100	20 - 200	20 - 100
1,1,1-Trichloroethane	970	106		918	868	1270	762	1850	1.94	519	1540	959	340	636	500	498
1,1,2,2-Tetrachloroethane																
1,1,2-Trichloro-1,2,2-trifluoroethane	5	2		3			8									
1,1,2-Trichloroethane																
1,1-Dichloroethane	2290	311		1330	1420	2750	1710	2960	28	1470	3040	2390	1010	1860	1760	1940
1,1-Dichloroethene	29	2		11	27.5	8	22			16.7						10.2
1,2,4-Trichlorobenzene					110	67.5	107									
1,2,4-Trimethylbenzene	43.5	5.7				31.5		57.9		44.4	74.4	70.8	55.0	90.5	29.9	47.1
1,2-Dichloroethane																
1,3,5-Trimethylbenzene	11	1.9			18		17							11.5		
1,4-Dichlorobenzene																
2-Butanone		14.7														
4-Isopropyltoluene					8											
Acetone		12.8LC			64.5LC											
Benzene																
Bromomethane																
Carbon disulfide																
Chloroethane	49.5	9.7		14.4	39	93.5	57.5	102		78.4	179	252	79.6	105	149	152
Chloroform																
cis-1,2-Dichloroethene	482	38.9		294	277	123	264	135	9.54	212	156		118	87.4		96.1
Cyclohexane		1.1			6.5	18										
Ethylbenzene																
Hexachlorobutadiene						5.5										
Methylene chloride	21LC	2.9LC			69.0LC	10LC										
Naphthalene						89.5										
n-Butylbenzene																
n-Propylbenzene					9	10	8.5									
sec-Butylbenzene																
Tetrachloroethene				4.2												
Toluene	5	1.2		2.4		7										
trans-1,2-Dichloroethene				2.0		5	5.5									
Trichloroethene	37	3.2		23	19	14	33		4.92	23.2	21.6			13.8		19.4
Vinyl chloride	318	44.7		144	186	434	224	510	1.04	223	566	383	130	227	230	304
m,p-Xylene																
o-Xylene	5	1.2				23	7									
Total Xylenes																
Total VOCs, µg/l	**4245** w/ Js	**543.3** w/ Js	**nd** w/ Js	**2746** w/ Js	**2988** w/ Js	**5145.5** w/ Js	**3225.5** w/ Js	**5614.9** w/ Js	**45.44** w/ Js	**2586.7** w/ Js	**5577** w/ Js	**4054.8** w/ Js	**1732.6** w/ Js	**3031.2** w/ Js	**2668.9** w/ Js	**3066.8** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-1	<= post extraction well rebuild =>				
Volatile Organic Compound	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	10 - 200	2 - 20	50 - 500	25 - 500	50 - 250
1,1,1-Trichloroethane	334	74.0	874	1070	1120
1,1,2,2-Tetrachloroethane					
1,1,2-Trichloro-1,2,2-trifluoroethane					
1,1,2-Trichloroethane					
1,1-Dichloroethane	978	238	4300	3610	3700
1,1-Dichloroethene	11				
1,2,4-Trichlorobenzene					
1,2,4-Trimethylbenzene	33.7	24.8	72.2	108	41.0
1,2-Dichloroethane					
1,3,5-Trimethylbenzene		3.71			
1,4-Dichlorobenzene					
2-Butanone					
4-Isopropyltoluene					
Acetone		12.3			
Benzene					
Bromomethane					
Carbon disulfide					
Chloroethane	67.2		1170	345	177
Chloroform					
cis-1,2-Dichloroethene	79.5		52.6	195	97.0
Cyclohexane					
Ethylbenzene					
Hexachlorobutadiene					
Methylene chloride		7.74			
Naphthalene					
n-Butylbenzene		2.07			
n-Propylbenzene					
sec-Butylbenzene		2.04			
Tetrachloroethene					
Toluene					
trans-1,2-Dichloroethene					
Trichloroethene	18.9			35.5	
Vinyl chloride	132	12.6	441	472	378
m,p-Xylene					
o-Xylene					
Total Xylenes					
Total VOCs, µg/l	**1654.3** w/ Js	**377.26** w/ Js	**6909.8**	**5835.5** w/ Js	**5513**
italic = found in tank contents					
underlined = found in soil					

CMS REMEDIATION SITE MW-2	pre IRM <=							=> post IRM						system down 12/12/99 to 4/6/00			
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	6/13/00	11/1/01	9/25/02	6/30/03
Detection limit	500			3-10,000	5000												
1,1,1-Trichloroethane	45000	84000	82000	81000	84000	2700	230	1500	12000	1600	6200	21000	9400	320	625	1040	1460
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		616	854	1280
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																
1,4-dioxane																	
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		865	1930	2250
Cyclohexane																	
Ethylbenzene		80			81												
Isopropylbenzene																	
Methylcyclohexane																	
Methylene chloride																	
Naphthalene																	
n-Propylbenzene																	
sec-Butylbenzene																	
Tetrachloroethene	12000	11000	14000	14000	14000		17	190						59			
Toluene		290			230												
trans-1,2-Dichloroethene																	
trans-1,3-dichloropropene																	
Trichloroethene	1300	3300				760	47	1200	12000	1900	2800	4900	4700		46.4	119	
Vinyl chloride																	91.4
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**	**379**	**2152.4**	**3943**	**5081.4**
						sample re-run with lower limits											

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-2	<= post IRM =>															
Volatile Organic Compound	8/9/03	11/7/03	3/31/04	5/28/04	9/26/04	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06	3/27/07	3/18/08	10/7/08	4/10/09	9/4/09	2/25/10
Detection limit																
1,1,1-Trichloroethane	143	3300	1200	560	3200	1300	1400	1000	1000	1800	770	1800	1700	3800	1600	5600
1,1,2,2-Tetrachloroethane																
1,1,2-Trichloro-1,2,2-trifluoroethane																
1,1,2-Trichloroethane																
1,1-Dichloroethane	85	2600	1100	400	2900	1300	2000	990	1100	1400	710	1200	1700	2200	1300	4100
1,1-Dichloroethene																
1,2,3-Trichloropropane																
1,2,4-Trimethylbenzene						110					60		420			
1,2-Dichloroethane																
1,3,5-Trimethylbenzene																
1,3-Dichloro-2-propanol																
1,4-Dichlorobenzene																
1,4-dioxane																
2-Butanone																
Acetone																
Allyl chloride																
Benzene																
Bromomethane	17.9															
Carbon tetrachloride																
Chloroethane											71					
Chloroform					230											
Chloromethane																
cis-1,2-Dichloroethene	112	3000	1600	610	2700	2200	1000	760	1100	1500	1100	1500	1500	2600	1500	3900
Cyclohexane																
Ethylbenzene																
Isopropylbenzene																
Methylcyclohexane																
Methylene chloride					400		170							340		
Naphthalene																
n-Propylbenzene																
sec-Butylbenzene																
Tetrachloroethene																
Toluene																
trans-1,2-Dichloroethene																
trans-1,3-dichloropropene																
Trichloroethene			380	54					81		52					
Vinyl chloride	17.4				510	150	290	86	400	220	150	130	700			
m,p-Xylene																
m-Xylene																
o-Xylene																
Total Xylenes															380	370
Total VOCs, µg/l	**375.3** w/ Js	**8900**	**4280**	**1624**	**9940**	**5060**	**4860**	**2836**	**3681**	**4920**	**2913**	**4630**	**6020**	**8940**	**4780**	**13970**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-2	==> post extraction well rebuild																
Volatile Organic Compound	4/13/10	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	12/4/14	12/17/15	5/2/16	7/21/16
Detection limit			500	100	25-499		25 - 200	25 - 500	25 - 500	10 - 40	25 - 50	2.50 - 50	1 - 20	1 - 20	10 - 200	10 - 200	20 - 100
1,1,1-Trichloroethane	7600	610	5900	190	1010	698	1730	1080	128	162	784	49.9	67.2	67.2	111	64.8	32.4
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				3.8	
1,1,2-Trichloroethane															1.76		
1,1-Dichloroethane	5300	680	7400	260	1490	1130	1570	1400	1180	363	1170	26.2	127	127	1110	774	709
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		68			109	25.5	89	92	40	5.8	33.5	4.65	36.8	36.8	21.7	10.8	
1,2-Dichloroethane	560				20.5			8.5		4.4			3.54	3.54	5.58	3.4	
1,3,5-Trimethylbenzene					18.5	5.5	27	16.5	7		6.5		5.52	5.52		2.6	
1,3-Dichloro-2-propanol																	
1,4-Dichlorobenzene																	
1,4-dioxane																	
2-Butanone								59	129			24.4	3.42	3.42	13.8		
Acetone								154				28	4.46	4.46		46.8L	
Allyl chloride																	
Benzene															0.28		
Bromomethane																	
Carbon tetrachloride															15.7		
Chloroethane				20	53.5	36.5	69	122	17.5		32	3.65	3.36	3.36		162	122
Chloroform				20													
Chloromethane															92.1		
cis-1,2-Dichloroethene	2000	570	5600	410	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			
Methylcyclohexane																	
Methylene chloride	600						22	41.5L	25L	8.2L	14L		0.98L	0.98L	.54L		
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	2.4	
trans-1,2-Dichloroethene					11		6	6	5				0.6	0.6	4.36	4	
trans-1,3-dichloropropene																	
Trichloroethene					39	14	62	9.5		8	14	1.9	5.74	5.74	0.24		
Vinyl chloride	730	180	660	20	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	3.4	
Total Xylenes															6.54		
Total VOCs, µg/l	**16790**	**2108**	**19560**	**920**	**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	**1031.2** w/ Js	**863.4** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-2	<= post extraction well rebuild =>												
Volatile Organic Compound	12/21/16	4/21/17	6/16/17	11/2/17	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	2 - 10	10 - 50	10 - 100	20 - 100	10 - 50	5 - 25	2 - 10	10 - 100	5 - 100	50 - 100	5 -25	25 - 500	50 - 500
1,1,1-Trichloroethane								29.1	10.0	17.2	25.5	653	148
1,1,2,2-Tetrachloroethane													
1,1,2-Trichloro-1,2,2-trifluoroethane													
1,1,2-Trichloroethane													
1,1-Dichloroethane		605	557	477	382	356	173	589	510	673	382	2420	2260
1,1-Dichloroethene													
1,2,3-Trichloropropane													
1,2,4-Trimethylbenzene		12.4						7.15		6.08	16.0		
1,2-Dichloroethane							1.24	7.82	6.52	5.53			
1,3,5-Trimethylbenzene													
1,3-Dichloro-2-propanol													
1,4-Dichlorobenzene													
1,4-dioxane						54.6	49.0				60.5		
2-Butanone													
Acetone									32.7LC				
Allyl chloride													
Benzene		8.73	4.45		3.49	2.6	1.47	4.77			3.43		
Bromomethane													
Carbon tetrachloride													
Chloroethane		148	160	41.1	184	157	133	235	72.2	101	169	62.2	154
Chloroform													
Chloromethane													
cis-1,2-Dichloroethene							1.49	40.9		16.4	12.1	279	46.2
Cyclohexane													
Ethylbenzene													
Isopropylbenzene													
Methylcyclohexane						2.97	1.86	5.02			13.7		
Methylene chloride										18.8LC			
Naphthalene													
n-Propylbenzene													
sec-Butylbenzene													
Tetrachloroethene													
Toluene		18.1						8.39			9.03		
trans-1,2-Dichloroethene							1.67						
trans-1,3-dichloropropene													
Trichloroethene													
Vinyl chloride							1.66	52.5		20.2		330	63.8
m,p-Xylene											6.15		
m-Xylene													
o-Xylene													
Total Xylenes	nd												
Total VOCs, µg/l	**nd** w/ Js	**792.23** w/ Js	**721.45** w/ Js	**518.1** w/ Js	**569.49** w/ Js	**573.17** w/ Js	**364.39** w/ Js	**979.65** w/ Js	**598.72** w/ Js	**839.41** w/ Js	**697.41** w/ Js	**3744.2**	**2672.0** 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						<= post IRM =>							
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	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
Detection limit																						
1,1,1-Trichloroethane	7,300	22000	23000	16000	4200	8000		11000	16000	1720	1710	7470	2250	5800	6700	4000	15000	6300	4400	3500	1300	1500
1,1,2-Trichloro-1,2,2-trifluoroethane																						
1,1-Dichloroethane	8200	22000	26000	10000	2800	2700	5400	6200	5200	1700	1190	3110	1010	5800	1800	1200	6500	2100	1600	3600	1200	1700
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															1500					
cis-1,2-Dichloroethene	1000	3000	6700	1900		1300		10000	3500	3370	2550	6570	2630	5700	4700	2900	8400	4200	2600	3500	1800	730
Cyclohexane																						
Ethylbenzene		17		16																		
Isopropylbenzene																						
Methylcyclohexane																						
Methylene chloride														1200			2700		410			
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			1400	530		650	510			
Vinyl chloride																			280		510	310
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	**5890**	**18500**	**14600**	**8630**	**34100**	**13250**	**9800**	**10600**	**4810**	**4240**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-3	<= post IRM =>						=> post extraction well rebuild										<= post extraction well rebuild =>					
Volatile Organic Compound	3/27/07	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	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	12/17/15
Detection limit									200	100	25 - 500	0.5 - 25	5 - 100	5 - 100	5 - 100	0.5 - 10	1.0	5 - 10	5.0	5 - 10	2 - 50	5 - 100
1,1,1-Trichloroethane	3800	2400	1400	1700	870	760	660	490	3700	2000	14.6	24.7	798	1730	1090	28.1	41.4	160	164	49.7	284	67.1
1,1,2-Trichloro-1,2,2-trifluoroethane											0.9	2.16	13	36	25	1.85	3.52	7.8	4			
1,1-Dichloroethane	1900	1400	1400	600	840	190	500	530	1500	1000	20.1	82.2	380	1570	454	54.6	86.4	312	196	99.6	248	114
1,1-Dichloroethene										30	0.24	0.85	16.5	68.5	31.2	0.41	0.64	9.7			3.6	
1,2,4-Trimethylbenzene			380			98	66	130	250	80		10.4	13.1	89	112	2.7	19.6	29	13.5		23.8	
1,2-Dichloroethane												0.24						8.1			1.05	
1,2-Dichloropropane												0.3										
1,3,5-Trimethylbenzene										50		0.29	1.3	27	20.2	2.54	1.78	2.7	2.1		2.1	
1,4-Dichlorobenzene																						
1,4-dioxane																						
2-Butanone												2.22			31	1.37						
(p-) 4-Isopropyltoluene												0.16		14.5								
Acetone											1.5L	2.08L			94.8L	3	4.62				15.0L	
Carbon disulfide												0.62					5.86			1.5		1.4
Chloroethane			240							60		0.82	8.4	69	34			21.2			14.3	38.5
Chloroform																						
cis-1,2-Dichloroethene	2400	2700	3400	1700	1600	220	880	420	2700	1700	6.6	30	435	1130	494	19.4	24.1	236	46.5	50.3	124	20.5
Cyclohexane												0.3				0.15	0.4				2.65	
Ethylbenzene												0.53	1.3	5	6.75	0.15	0.68	2	1.1		1	
Isopropylbenzene												0.57					0.32					
Methylcyclohexane																						
Methylene chloride				410			64							22L	29.5L	0.24L	0.48L	2.9L	9.7L	3.5L	8.65L	1.7
n-Propylbenzene												1.36	1		4		0.96	2.1			1.45	
sec-Butylbenzene												0.98					0.8	1.6			1.2	
Tetrachloroethene											0.2	0.37	1.4		3	0.29	0.92	3.9			0.55	
Toluene												0.61		19.5	23	0.45	0.92	3.8	1.6		2.65	
trans-1,2-Dichloroethene											0.25	0.38	2.1	6	4.5	0.22	0.46	1.4	1		1.2	
Trichloroethene	220									70	0.86	1.78	17.9	62	29.2	1.47	3.64	10.4	3.2	1.7	6.3	1.3
Vinyl chloride	260	200	1200	190	650			400	260	140	2.57	29.9	59.8	202	179	14.1	12.4	103	10.3	16.8	29.6	30.3
m,p-Xylene			340						200				2	23.5	16.5	0.54	0.78	3.2			1.4	
o-Xylene			320									1.05	2.2	36	20	1.81	3.44	4.4	1.5		2.6	4.2
Total Xylenes																					4	
Total VOCs, µg/l	**8580**	**6700**	**8680**	**4600**	**3960**	**1268**	**2170**	**1970**	**8610**	**5130**	**46.32**	**192.79**	**1753**	**5088**	**2577.35**	**133.15**	**213.64**	**922.3**	**444.8**	**219.6**	**755.45**	**289.2**
											w/ Js	w/ Js	w/ Js	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-3	<= 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	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	12.5 - 250	20 - 100	2 - 10	2 - 10	10-100	2 - 10	10 - 100	2 - 10	5 - 25	10 - 100	10 - 100	10 - 100	5 - 50	5 - 50	10 - 50
1,1,1-Trichloroethane	1150	299	8.13	87.1	245	75.9	349	137	46.9	304	546	284	12.7	305	143
1,1,2-Trichloro-1,2,2-trifluoroethane	32.8			6.62				1.22		10.2	15.6			7.87	
1,1-Dichloroethane	846	1010	103	41	290	480	441	172	352	574	519	556	477	525	805
1,1-Dichloroethene							9.14			7.30	13	6.83		9.74	
1,2,4-Trimethylbenzene		26		6.29			18.8	7.27		24.6	23.9	17.8	11.0	25.4	6.32
1,2-Dichloroethane															
1,2-Dichloropropane															
1,3,5-Trimethylbenzene								1.10							
1,4-Dichlorobenzene				1.17											
1,4-dioxane			26.9				8.36	58.5	61.5				199		
2-Butanone															
(p-) 4-Isopropyltoluene	.2.0														
Acetone								9.82 LC							
Carbon disulfide				1.34				8.37							
Chloroethane			2.26			37.4	13.2	4.90	10.2	11.9	18.5	43.4	528	23.5	57.7
Chloroform															
cis-1,2-Dichloroethene	474	22.4	39.4	16.9	89.9		137	24.9	10.0	138	210	124		167	27.3
Cyclohexane															
Ethylbenzene	3.6														
Isopropylbenzene	1.8														
Methylcyclohexane								2.83							
Methylene chloride	11.5L											23.0			
n-Propylbenzene	4.4														
sec-Butylbenzene	2.75														
Tetrachloroethene	4														
Toluene	8.15														
trans-1,2-Dichloroethene	4.6														
Trichloroethene	28.4		20	3.44			16.7	3.5	7.92	12.5	19.1	10.0		12.7	7.02
Vinyl chloride	145	50.1	3.97	5.5	56.7	50.5	57.4	14.3	16.5	144	110	138		148	54.3
m,p-Xylene															
o-Xylene	9.35														
Total Xylenes	17.4														
Total VOCs, µg/l	**2737.5**	**1407.5**	**203.66**	**169.36**	**681.6**	**643.8**	**1050.6**	**435.89**	**505.02**	**1226.5**	**1475.1**	**1203.03**	**1227.7**	**1224.21**	**1100.64**
	w/ Js	w/ Js	w/ Js	w/ Js	w/ Js	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-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	9/28/04	5/22/05	1/31/06	6/9/06	9/29/06
Detection limit																
1,1,1-Trichloroethane	20,000					3										
1,1-Dichloroethane	400	15	3.5			6	5.84						1.2			
1,1-Dichloroethene	570															
1,2,4-Trimethylbenzene									4						23	
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	19	4.8		30	
Carbon disulfide																
Chloroform																
cis-1,2-Dichloroethene		1														
Cyclohexane																
Ethylbenzene		6	20	23	21		21.7	9.13	3						7.9	
Isopropylbenzene																
Methyl tert-butyl ether								5.38								
Methylcyclohexane																
Naphthalene																
n-Propylbenzene																
Styrene										2						
Tetrachloroethene						2										
Toluene		37	160	240	230					5	6.3	3.5			11	
Trichlorofluoromethane						5										
m,p-Xylene		48		180					3	4	2.2		1.8		14	
o-Xylene		17		67											3.3	
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**	**23**	**8**	**nd**	**89**	**nd**

italic = found in tank contents
underlined = found in soil

(method blank contaminated)

CMS REMEDIATION SITE MW-4	<= post IRM =>						==> post extraction well rebuild									
Volatile Organic Compound	12/17/06	3/27/07	3/17/08	4/10/09	9/4/09	2/25/10	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
Detection limit									10	1	0.5 - 2	0.5 - 10	0.5 - 10	0.5 - 10	0.5 - 2	0.5 - 10
1,1,1-Trichloroethane																
1,1-Dichloroethane											0.41	0.3	0.24	0.11		
1,1-Dichloroethene																
1,2,4-Trimethylbenzene		1.1	6.5		6.2	18	15	11		0.5	0.92		2.43			
1,2-Dichlorobenzene																
1,3,5-Trimethylbenzene											0.26		0.58		0.28	0.18
1,4-Dichlorobenzene																
2-Butanone														1.31		4.85
4-Isopropyltoluene										0.6						
Acetone											4.75B	18.3B	18.7B	8.99LC		11.9
Benzene	0.67	0.59	26		28			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
Ethylbenzene			3.3	4.4		10	11			2	0.97	0.72	1.49		2.17	1.36
Isopropylbenzene		1.2								1					0.35	0.2
Methyl tert-butyl ether										1.3	2.18	1.49	0.98	0.18	0.16	
Methylcyclohexane																
Naphthalene		1.4								1.1						
n-Propylbenzene										0.6					0.21	0.3
Styrene																
Tetrachloroethene																
Toluene			16		6.8						4.96	1.01	4.9			
Trichlorofluoromethane																
m,p-Xylene					11	16	23	17	14		1.83		3.63		1.04	
o-Xylene			4.7								1.23	0.82	1.79		0.65	
Total Xylenes																
Total VOCs, µg/l	**1**	**4**	**57**	**4**	**52**	**44**	**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

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-4	<= 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	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19
Detection limit	0.5 - 1	25	0.5 - 1	0.5 - 10	0.5 - 10	0.5 - 10	2 - 10	2 - 10	2 - 20	2 - 10	2 - 10	2 - 20	2 - 10	2 - 10	2 - 10	2 - 20
1,1,1-Trichloroethane																
1,1-Dichloroethane														1.63		
1,1-Dichloroethene																
1,2,4-Trimethylbenzene	1.07	1.57		0.79		0.84								1.10		1.09
1,2-Dichlorobenzene																
1,3,5-Trimethylbenzene	0.19	0.32	0.11	0.14		0.11										
1,4-Dichlorobenzene																
2-Butanone		2.99		1.17						10.4		6.32	14.8	5.63		
4-Isopropyltoluene																
Acetone	23.1	24.7			2.50LC	18.1LC				49.2LC		42.7LC	54.8LC	27.8LC	12.5LC	24LC
Benzene		16.4	14.7	17.7	6.78	17.1	23.8	21.2	6.95	9.81		7.61	51.8	55.0	22.7	37.8
Carbon disulfide																
Chloroform																
cis-1,2-Dichloroethene			0.12													
Cyclohexane	1.46	3.41	1.99	1.81	0.54	2.27							27.7	34.0	33.9	40.9
Ethylbenzene	0.19	1.27	0.53	0.49	0.26	0.99							2.10	3.26	1.93	2.96
Isopropylbenzene	0.14	0.18	0.12	0.17		0.23										
Methyl tert-butyl ether					0.96											
Methylcyclohexane													12.6	14.5	15.5	16.5
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							5.19	5.71	6.81	11.7
Trichlorofluoromethane																
m,p-Xylene	0.46	1.21	0.93	0.4	0.24	0.62							3.79	4.51	2.47	4.25
o-Xylene		0.46	0.64	0.66	0.54	1.21							2.11	3.41	2.45	4.06
Total Xylenes				1.06	0.78	1.83										
Total VOCs, µg/l	**26.61** w/ Js	**54.04** w/ Js	**21.29** w/ Js	**25.47** w/ Js	**13.15** w/ Js	**28.44** w/ Js	**23.8**	**21.2**	**6.95**	**20.21**	**nd**	**13.93** w/ Js	**120.09**	**128.75** w/ Js	**85.76** w/ Js	**119.26** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-4	<= post extraction well rebuild =>			
Volatile Organic Compound	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	2 - 20	2 - 20	2 - 20	2 - 20
1,1,1-Trichloroethane				
1,1-Dichloroethane		2.54		1.05
1,1-Dichloroethene				
1,2,4-Trimethylbenzene		2.66		
1,2-Dichlorobenzene				
1,3,5-Trimethylbenzene				
1,4-Dichlorobenzene				
2-Butanone				
4-Isopropyltoluene				
Acetone	22.5LC	30.1LC	5.48LC	
Benzene	26.3	15.0	19.5	30.5
Carbon disulfide				
Chloroform				
cis-1,2-Dichloroethene				
Cyclohexane	22.8	29.1	6.05	
Ethylbenzene	2.93		1.33	1.81
Isopropylbenzene				
Methyl tert-butyl ether				
Methylcyclohexane	3.9	10.8	2.67	1.01
Naphthalene				
n-Propylbenzene				
Styrene				
Tetrachloroethene				
Toluene		11.0		
Trichlorofluoromethane				
m,p-Xylene	2.28	6.75		
o-Xylene	3.99	4.31	1.32	1.18
Total Xylenes				
Total VOCs, µg/l	**62.19**	**82.16**	**30.87** w/ Js	**35.55** w/ Js
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	11/7/03	3/31/04	5/28/04	9/28/04	5/22/05
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	2100	850	1800	2200	1800
1,1-Dichloroethene		89	59														
1,2-Dichloroethane		31															
1,4-dioxane																	
Acetone																	
Benzene		2	1.2										54				
Chloroethane													100				
Chloroform																	
cis-1,2-Dichloroethene	790	740	960	1200	1300	1100	820	920	110	206	552	122	430	240	530	380	390
Cyclohexane																	
Ethylbenzene		2															
Methylene chloride		11															
Tetrachloroethene		200	260	240													
Toluene		5	4														
trans-1,2-Dichloroethene																	
Trichloroethene			0		270	270							110	210	170		120
Vinyl chloride		320	320	790	730	930	450		141	386	605	158	640	190	720	820	500
o-Xylene		6															
Total Xylenes			2.4														
Total VOCs, µg/l	**12990**	**4028**	**3726.6**	**5230**	**5800**	**6700**	**4080**	**5040**	**2631**	**2462**	**3177**	**1740**	**3434**	**1490**	**3220**	**3400**	**2810**
																	originally mislabeled mw-6 in field/lab repo

italic = observed in tank contents
underlined = observed in soil

CMS REMEDIATION SITE MW-5	<= post IRM =>							<= post IRM =>			==> post extraction well rebuild						
Volatile Organic Compound	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	4/13/10	10/29/10	4/15/11	6/8/11	7/21/11	10/18/11	1/31/12
Detection limit													10	50	50	6 - 125	5 - 100
1,1,1-Trichloroethane																	7.2
1,1,2-Trichloroethane																	
1,1-Dichloroethane	2200	1400	1500	1800	950	1400	1900	780	880	590	1200	1000	81	310	560	268	265
1,1-Dichloroethene																	6.2
1,2-Dichloroethane																4.25	4.8
1,4-dioxane																	
Acetone																	
Benzene																	
Chloroethane					93											8.38	59.4
Chloroform			170														
cis-1,2-Dichloroethene	160	100		430		430	500	300	620	200	400	260	26	86	150	44.1	57.8
Cyclohexane																	1.6
Ethylbenzene																	
Methylene chloride	160B										120LC						
Tetrachloroethene										130							
Toluene																	
trans-1,2-Dichloroethene																1.38	2.1
Trichloroethene					110								3	20	20	4	12.7
Vinyl chloride	430	200	100	780	290	700	890	290	710	330	360	520	26	140	220	24.6	120
o-Xylene																	
Total Xylenes																	
Total VOCs, µg/l	**2790**	**1700**	**1770**	**3010**	**1443**	**2530**	**3290**	**1370**	**2210**	**1250**	**1960**	**1780**	**136**	**556**	**950**	**354.71**	**536.8**
ort													w/ J values	w/ Js	w/ Js	w/ Js	w/ Js

italic = observed in tank contents
underlined = observed in soil

CMS REMEDIATION SITE MW-5	<= post extraction well rebuild =>													
Volatile Organic Compound	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13	7/24/14	12/4/14	6/7/15	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	12 - 125	12 - 250	12.5 - 50	25 - 100	25 - 50	25 - 50	25 - 50	.5 - 10	10 - 100	5 - 50	5 - 50	5 - 50	5 - 100	5 - 100
1,1,1-Trichloroethane								10.1						
1,1,2-Trichloroethane														
1,1-Dichloroethane	716	870	902	1410	1170	758	919	22.1	592	241	621	544	693	357
1,1-Dichloroethene	25.5	11	6.75	10	22			0.65					6.12	
1,2-Dichloroethane	9.5	12.5	12.8	17.5	13	9		0.2	7.26		7.52		9.94	5.29
1,4-dioxane														
Acetone		69.8LC						1.34LC		42.4LC				
Benzene		4.25												
Chloroethane	41.2	104	32.5	91.5	24	37			56.8	13.1	37.8	51.3	25.8	98.4
Chloroform														
cis-1,2-Dichloroethene	125	149			281		81.5	30.2	44.1	56.4	72.8	28.7	118	
Cyclohexane	6.5	6	6		7.5	5								
Ethylbenzene														
Methylene chloride		27.0LC	13LC	38LC	12.5	81.5	12.5				24.9LC			
Tetrachloroethene								0.21						
Toluene														
trans-1,2-Dichloroethene	2.5	4.25	3.25		6			0.29						
Trichloroethene	25.5	4.25	495	9	28			3.13		11.1				
Vinyl chloride	244	408		664	590	374	524	5.56	275	149	282	99.9	458	27.2
o-Xylene														
Total Xylenes														
Total VOCs, µg/l	**1195.7** w/ Js	**1573.25** w/ Js	**1458.3** w/ Js	**2202** w/ Js	**2154** w/ Js	**1264.5** w/ Js	**1537** w/ Js	**72.62** w/ Js	**975.16** w/ Js	**470.6**	**1021.12** w/ Js	**723.9**	**1310.86** w/ Js	**487.89** w/ Js

italic = observed in tank contents
underlined = observed 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	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06
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	35	23	16	23	16
1,1-Dichloroethene																	
1,2,4-Trimethylbenzene																	
1,2-Dichloroethane																	
Acetone																	
Benzene			10	8					5.26	2.02				1.8	2.5		0.66
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	15	6	7	7.4	4.6
Cyclohexane																	
Ethylbenzene		1.3	11	2													
Isopropylbenzene																	
Methylcyclohexane																	
Methylene chloride																	
Styrene																	
Tetrachloroethene		5.2															
Toluene	21	4.3	34	1	0		0	0	0.408	0.908							
Trichloroethene		9.9	6	3	5												
Vinyl chloride		9.7					1.69	9.39	0	0	28	14		2.2	1.6		
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**	**50**	**33**	**27**	**30**	**21**
									w/ J values		mislabeled mw-5						
italic = found in tank contents											in field/lab report						
underlined = found in soil																	

CMS REMEDIATION SITE MW-6	<= post IRM =>						==> post extraction well rebuild										
Volatile Organic Compound	3/27/07	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	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	21	17	19	17	22	15	25	48	23	26	21.9	30.2	24.6	20.4	18.1	8.99	77.9
1,1-Dichloroethene																	
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	0.81	3.9		21				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	6.6	3.8	6.6	2.7	4	4.4	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				1.7							0.22		0.54	1.39			
Isopropylbenzene														0.1			
Methylcyclohexane																	
Methylene chloride						1.5	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	**28**	**25**	**26**	**42**	**26**	**21**	**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	4/24/18	7/3/18	10/3/18	12/28/18
Detection limit	1	0.5	.5 - 10	.5 - 10	.50 - 10	2 - 10	2 - 20	2 - 20	2 - 20	2 - 20	2 - 10	2 - 10	2 - 10	2 - 10
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	35.8	34.1	44.8	45.5
1,1-Dichloroethene			0.18		0.48									
1,2,4-Trimethylbenzene					0.22									
1,2-Dichloroethane		0.71	1.56	1.13	1.81						1.05		1.23	
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		1.15	3.75	2.99
Bromomethane														
Chloroethane		0.37		2.46	0.75		1.31							1.76
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	24.1	23.3	35.2	26.1
Cyclohexane	0.94	0.68	0.48	1.56	2.19								5.17	
Ethylbenzene		0.31		0.21	0.55			1.15						
Isopropylbenzene														
Methylcyclohexane							1.26						1.46	1.09
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		1.29	6.30	2.94
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**	**60.95** w/ J s	**59.84** w/ J s	**97.91** w/ J s	**80.38** w/ J s

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-6	<= post extraction well rebuild =>				
Volatile Organic Compound	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20
1,1,1-Trichloroethane					
1,1,2-Trichloro-1,2,2-trifluoroethane					
1,1-Dichloroethane	37.2	47.6	51.5	61.5	127
1,1-Dichloroethene					1.23
1,2,4-Trimethylbenzene	1.44				
1,2-Dichloroethane		1.22		1.41	8.65
Acetone					
Benzene	11.8	0.958	11.1	5.76	
Bromomethane					
Chloroethane	1.46			1.08	
Chloroform					
Chloromethane					
cis-1,2-Dichloroethene	17.6	34.6	43.3	37.0	11.0
Cyclohexane	5.24				
Ethylbenzene	1.54				
Isopropylbenzene					
Methylcyclohexane	1.04				
Methylene chloride					
Styrene					
Tetrachloroethene					
Toluene					
Trichloroethene					
Vinyl chloride	1.39	3.44	2.31	1.54	28.2
m,p-Xylene	1.65				
m-Xylene					
o-Xylene	1.89		2.08		
p-Xylene					
Total Xylenes					
Total VOCs, µg/l	**82.25** w/ J s	**87.818** w/ J s	**110.29** w/ J s	**108.29** w/ J s	**176.08** w/ J s
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 =>			<= 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	3/31/04	5/28/04	9/28/04	5/22/05	1/31/06	6/9/06	9/29/06
Detection limit																	
1,1,1-Trichloroethane																	
1,1,2-Trichloro-1,2,2-trifluoroethane																	
1,1-Dichloroethane	1500	1900	2000	690	1100	1890	210	743	676	1300	700	610	720	850	910	680	800
1,1-Dichloroethene																	
1,2-Dichloroethane		100		61		52.5		45.6		100	51			0			64
Acetone																	
Benzene																	
Chloroethane							31.3		0								
Chloroform											53						54
cis-1,2-Dichloroethene																	
Cyclohexane																	
Methylene chloride						149									74		60
Trichloroethene								34.1									
Trichlorofluoromethane								31.5									
Vinyl chloride								16					62				100
Total VOCs, µg/l	**1500**	**2000**	**2000**	**751**	**1100**	**2091.5**	**241.3**	**870.2**	**676**	**1400**	**804**	**610**	**782**	**850**	**984**	**680**	**1078**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-7	<= post IRM =>							==> post extraction well rebuild								
Volatile Organic Compound	12/17/06	3/27/07	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	6/30/12	10/2/12
Detection limit											100	12 - 250	12.5	12.5	10 - 200	10 - 40
1,1,1-Trichloroethane																
1,1,2-Trichloro-1,2,2-trifluoroethane													8.00	2.75	2.6	
1,1-Dichloroethane	1300	530	1300	810	1500	540	1200	1000	580	740	1500	684		1080	449	260
1,1-Dichloroethene														20		
1,2-Dichloroethane		34		100							80	49	41.8	67.2	21	6.8
Acetone															46	
Benzene												12.8	6.25		3.4	
Chloroethane												8.75			13.8	
Chloroform																
cis-1,2-Dichloroethene											30	25.5	23.2		11.8	6.4
Cyclohexane														34.8	2.6	
Methylene chloride	120							300						24.2LC	11LC	9.6LC
Trichloroethene											40	4.25	10.2	39.2	16.6	
Trichlorofluoromethane																
Vinyl chloride		32									50	35.5	35.8	47.2	20.6	16
Total VOCs, µg/l	**1420**	**596**	**1300**	**910**	**1500**	**540**	**1200**	**1300**	**580**	**740**	**1700**	**819.8** w/J s	**125.25** w/J s	**1291.15** w/J s	**587.4** w/J s	**292.4** w/J s

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-7	<= post extraction well rebuild =>																
Volatile Organic Compound	12/18/12	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	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19
Detection limit	25 - 50	10 - 20	10 - 20	5 - 10	5 - 100	2.50 - 100	2.50 - 50	5 - 12	2 - 20	2 - 20	2 - 20	2 - 20	2 - 10	2 - 10	10 - 100	2 - 10	1 - 20
1,1,1-Trichloroethane																1.47	
1,1,2-Trichloro-1,2,2-trifluoroethane				1.9												1.19	
1,1-Dichloroethane	761	1100	472	165	145	122	49.4	405	12.9	68.3	129	88.1		14.0	470	5.46	
1,1-Dichloroethene		5.2															
1,2-Dichloroethane	34.5		24	8.1	8.9	2.4	2.5			2.92	8.12	2.5		1.27	37.3		
Acetone					10.4LC						7.22						22.1LC
Benzene																	
Chloroethane		8.6	15	6.4		2.2				4.78		7.33		3.91			
Chloroform																	
cis-1,2-Dichloroethene	16	27.4	23	5.3	7.3	5.3	1.9	5.03		1.24	7.18	5.8	1.81	1.58	37.0		
Cyclohexane																	
Methylene chloride	22.5LC	4.6			6.50LC	.85LC											
Trichloroethene	12	32	14.8	1.7	3.9	1.5	1.15										
Trichlorofluoromethane																	
Vinyl chloride	22.5	48.4	22.2	7.1	7.7		1.85			2.01	5.53	3.55		2.13	89.3		
Total VOCs, µg/l	**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	**56.8** w/J s	**410.03** w/J s	**12.9** w/J s	**79.25** w/J s	**157.05** w/J s	**107.28** w/J s	**1.81** w/J s	**22.89** w/J s	**633.6** w/J s	**8.12** w/J s	**0**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-7	<= post extraction well rebuild =>			
Volatile Organic Compound	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	4 - 40	1 - 20	1 - 20	
1,1,1-Trichloroethane				
1,1,2-Trichloro-1,2,2-trifluoroethane				
1,1-Dichloroethane	353		3.61	127
1,1-Dichloroethene				1.23
1,2-Dichloroethane	18.3	28.0		8.65
Acetone				
Benzene				
Chloroethane				
Chloroform				
cis-1,2-Dichloroethene	29.3	3.04		11.0
Cyclohexane				
Methylene chloride				
Trichloroethene	2.39			
Trichlorofluoromethane				
Vinyl chloride		2.61		28.2
Total VOCs, µg/l	**402.99**	**33.65**	**3.61**	**176.08**
	w/J s	w/J s	w/J s	w/J s
italic = found in tank contents	field error mislabeled sample?			
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	9/29/06	12/17/06	3/27/07	3/17/08	10/2/08
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	36	31	25	17	28
1,1-Dichloroethene																	
1,2-Dichloroethane					1.13												
Acetone																	
Benzene				4.55										1.6			
Bromomethane			76														
Chlorobenzene																	
Chloroethane																	
Chloromethane																	
cis-1,2-Dichloroethene	110	30	130	33	60.2	72.4	54	35	57	42	4.3	45	21	33	25	26	34
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				1.6	
Vinyl chloride	10			2.31					4.4	2.3		7.6		2.4		2.5	
Total VOCs, µg/l	**249**	**72**	**282**	**74.26**	**137.99**	**141.58** w/ Js	**115**	**63**	**111.5**	**86**	**21.7**	**94.5**	**57**	**68**	**50**	**47.1**	**62**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-8	<= post IRM =>			==> post extraction well rebuild													
Volatile Organic Compound	4/10/09	9/4/09	3/24/10	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	7/24/14	12/4/14	6/7/15	12/17/15
Detection limit					5	5	0.5 - 5	0.5 - 5	0.5 - 1	0.5 - 2	0.5 - 2	25 - 50	1 - 2	1 - 2	1 - 2	1 - 20	1 - 20
1,1,1-Trichloroethane													7.92				
1,1,2-Trichloro-1,2,2-trifluoroethane													2.92				
1,1-Dichloroethane	27	30	30	18	82	11	61.9	43.8	29.2	58.4	80.2	198	32.9	50.9	44.4	48.9	77.4
1,1-Dichloroethene							1.24	0.54		1.71	1.69		0.4	1.28	0.6	1.74	1.26
1,2-Dichloroethane							1.43	0.48	0.49	1.19	1.72			1.02	0.78	0.98	1.52
Acetone																3.00LC	
Benzene	0.86						4.41	0.78	0.17	0.85	2.62		0.58	0.96	1.9	0.3	0.32
Bromomethane																	
Chlorobenzene							0.1										
Chloroethane										0.62	0.39						
Chloromethane													0.82		1.34		
cis-1,2-Dichloroethene	31	38	34	19	75	12	65.7	32.2	30.2	52.6	63.8	120	15.8		34	41.8	45.9
cis-1,3-dichloropropene							0.96							51.5			
Cyclohexane								1.2	0.42	0.65	1.91		1.74	2.54	2.02	0.38	1.04
Methyl tert-butyl ether							0.37	0.19	0.52		0.26						
Methylene chloride				12						0.26LC	0.18LC	21LC		2.88LC	0.94LC	.76LC	
Styrene							0.29										
trans-1,2-Dichloroethene							0.47		0.24	0.47	0.43			0.38		0.38	
Trichloroethene	1						0.69	0.52	0.68	0.62	0.52		0.32	0.56	0.28	0.64	0.56
Vinyl chloride					12	12	8.45	1.18	5.19	17.3	21.1	41	2.8	17.5	6.96	14	17.9
Total VOCs, µg/l	**59.86**	**68**	**64**	**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	**126.64** w/ Js	**92.28** w/ Js	**109.12** w/ Js	**145.9** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-8	<= post extraction well rebuild =>													
Volatile Organic Compound	5/2/16	7/21/16	4/21/17	6/16/17	11/2/17	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	1 - 20	2 - 10	2 - 20	2 - 20	2 - 20	1 - 10	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20	1 - 20	1 - 20
1,1,1-Trichloroethane														
1,1,2-Trichloro-1,2,2-trifluoroethane														
1,1-Dichloroethane	22.7	47.8	31.4	33.5	21.7	15.7	32.5	38.4	32.2	23.8	18.1	6.46	17.2	36.2
1,1-Dichloroethene			1.08											
1,2-Dichloroethane														
Acetone	4.02LC					10.5L			12.3L	20.2				
Benzene	0.5				2			1.02	0.790	2.270	1.230	1.390		0.660
Bromomethane														
Chlorobenzene														
Chloroethane														1.07
Chloromethane														
cis-1,2-Dichloroethene	3.06	33.4	28.3	21.8	14.4	14.1	23.6	28.8	8.24	2.43	10.3	4.73	14.5	25.6
cis-1,3-dichloropropene														
Cyclohexane														
Methyl tert-butyl ether														
Methylene chloride														
Styrene														
trans-1,2-Dichloroethene														
Trichloroethene														
Vinyl chloride		12.5	13.9	5.23	4.1	1.6	11.1	15.0	3.74		4.02	2.54	6.96	17.8
Total VOCs, µg/l	**26.26** w/ Js	**93.7** w/ Js	**74.68** w/ Js	**60.53** w/ Js	**42.2** w/ Js	**31.4** w/ Js	**67.2** w/ Js	**83.22** w/ Js	**44.97** w/ Js	**48.7** w/ Js	**33.65**	**15.12**	**38.66**	**81.33** 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	5/22/05	1/31/06	6/9/06	9/29/06	12/17/06
Detection limit																	
1,1,1-Trichloroethane	11000	1200	2500	1400	3200	1730	4330	1070	1300	470	410	1200		210	950	620	400
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	2500	460	2000	1800	690
1,1-Dichloroethene				110		183										150	
1,2,4-Trimethylbenzene																	
1,2-Dichloroethane				180		27.1											
1,4-Dioxane																	
Acetone																	
Benzene																	
Bromomethane							412										
Chloroethane																	
Chloroform																130	
cis-1,2-Dichloroethene	4300	580	2200	930	1500	3190	4310	1410	2400	410	640	2200	1100	250	1400	1800	860
Cyclohexane																	
Methylene chloride									520					32			
n-Propylbenzene																	
Tetrachloroethene		330															
Toluene																	
trans-1,2-Dichloroethene																	
Trichloroethene	5600		1100	1000	835	312	563	105	670	100	170	490	120	52	230	680	110
Vinyl chloride			390			531	226	60.5	510	56	55	790	260	88	460	880	140
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**	**3980**	**1092**	**5040**	**6060**	**2200**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-9	<= post IRM =>						==> post extraction well rebuild										
Volatile Organic Compound	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	10/18/11	1/31/12	3/22/12	6/30/12	10/2/12	12/18/12	4/5/13
Detection limit									100	10	250-5000	12 - 250	13 - 250	25 - 500	2.5 - 10	25 - 50	10 - 20
1,1,1-Trichloroethane	490	470	1400	1000	810	210	360	210	620	33	830	229	138	189	15.4	106	258
1,1,2-Trichloro-1,2,2-trifluoroethane												3.75		10.2			7
1,1,2-Trichloroethane																	
1,1-Dichloroethane	1100	870	2700	3100	2700	190	390	690	850	76	5860	581	516	690	139	943	365
1,1-Dichloroethene												16.2	24.5	13.2	2.85	22	8.6
1,2,4-Trimethylbenzene							57			7			13	6.25			9.4
1,2-Dichloroethane							510						4	5	2.6		4.8
1,4-Dioxane																	
Acetone														73			
Benzene														8.25	0.55		
Bromomethane																	
Chloroethane										5							
Chloroform																	
cis-1,2-Dichloroethene	350	540	1900	820	1100	270		260	1200	88	960	324	242	211	75.8	398	323
Cyclohexane														6			
Methylene chloride				160	230									28LC	2.47LC	24	5.4
n-Propylbenzene																	
Tetrachloroethene		200										5.25	5		0.75	8	
Toluene													6.5	5.25			6
trans-1,2-Dichloroethene														9	0.6		2.8
Trichloroethene	56	78						90		8	70	92.8	114	56.8	28	241	39.4
Vinyl chloride	160	120	1600	500	750		120	230	240	21	615	143	72.8	192	18.3	118	153
o-Xylene														4.25			4
p-Xylene																	
Total VOCs, µg/l	**2156**	**2278**	**7600**	**5580**	**5590**	**670**	**1437**	**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

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-9	<= 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	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19
Detection limit		5 - 10	5 - 100	2.50 - 50	2.50 - 50	10 - 100	2 - 20	2 - 20	4 - 20	10 - 100	10 - 50	4 - 20	5 - 25	5 - 25	1 - 20
1,1,1-Trichloroethane	170	77.7	47.8	17	30.6	58	6.98	20.3	76	55.3	8.96	46.4	27.2	36.6	9.51
1,1,2-Trichloro-1,2,2-trifluoroethane	8.1	3.9			1.95				4.61	5.33		2.22			
1,1,2-Trichloroethane	1.8														
1,1-Dichloroethane	833	228		84.6	272	520	92.3	231	398	495	102	318	497	332	120
1,1-Dichloroethene	41.8	17.9	15.3	3.05	14.1	12.7		9.8	21.6	25		11.3	7.75	3.75	
1,2,4-Trimethylbenzene	2														
1,2-Dichloroethane	6.6	3.3	3.9		2.7			2.13	3.24			3.14	3.75		
1,4-Dioxane							20.4					34.1			
Acetone					6.15LC				15.4						16.2
Benzene															
Bromomethane															
Chloroethane	20.1	7.2	10.6		6.2		1.96	9.82	17.1	15.5		12.1	13.5	7.32	2.88
Chloroform															
cis-1,2-Dichloroethene	606	157	120	26.9	135	200	34.1	97	210	177	15.7	121	130	34.7	14.8
Cyclohexane															
Methylene chloride		3LC	6.20LC												
n-Propylbenzene	1														
Tetrachloroethene		3.9	1.7	0.5	2.25										
Toluene	1.8														
trans-1,2-Dichloroethene	9.1	3	3.2	0.65	2.3			2.08	5.09	6.08		3.86	6.53	3.13	1.09
Trichloroethene	223	189	89.8	37	192	73.7	16.9	125	161	158	7.98	98.6		20.2	6.98
Vinyl chloride	270	165	138	25.4	60.6	128	3.45	57.2	156	190	9.69	73.0	123	61.8	14.0
o-Xylene	1.2														
p-Xylene															
Total VOCs, µg/l	**2202.8** w/ Js	**857.7** w/ Js	**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	**144.33** w/ Js	**723.72** w/ Js	**808.73** w/ Js	**499.5** w/ Js	**185.46** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-9	<= post extraction well rebuild =>			
Volatile Organic Compound	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	1 - 20	2 - 40	4 - 40	4 - 40
1,1,1-Trichloroethane		99.8	77.1	83.0
1,1,2-Trichloro-1,2,2-trifluoroethane			3.34	
1,1,2-Trichloroethane				
1,1-Dichloroethane	199	322	238	611
1,1-Dichloroethene			2.27	
1,2,4-Trimethylbenzene			2.71	
1,2-Dichloroethane	2.53		3.01	
1,4-Dioxane				
Acetone				
Benzene			2.45	5.35
Bromomethane				
Chloroethane	21.6	7.16	17.5	33.7
Chloroform				
cis-1,2-Dichloroethene	16.2	34.5	26.8	45.0
Cyclohexane				
Methylene chloride				
n-Propylbenzene				
Tetrachloroethene				
Toluene				
trans-1,2-Dichloroethene	2.26			
Trichloroethene	1.20	25.7	13.2	5.19
Vinyl chloride	26.0	66.6	38.3	20.3
o-Xylene				
p-Xylene				
Total VOCs, µg/l	**268.79** w/ Js	**555.76** w/ Js	**424.68** w/ Js	**803.54** 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													
1,1,2-Trichloro-1,2,2-trifluoroethane													
1,1-Dichloroethane													
Acetone													
Benzene													
Chloroform													
Methylene chloride		5.0L											
Toluene													
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

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	12/4/14	6/7/15
Detection limit			0.5 - 10	0.5 - 10	25 - 500	0.5 - 10	0.5 - 10	0.5 - 10	0.5 - 2	0.5 - 2	.50 - 10
1,1,2-Trichloro-1,2,2-trifluoroethane							0.14	0.18			
1,1-Dichloroethane						0.12			0.16		
Acetone			1.04L		3.99L	5.12L	2.69L	2.84L	5.05L	5.21L	23.4L
Benzene						0.17	0.24				
Chloroform										0.58	
Methylene chloride	1.4L				0.21L	0.22L					
Toluene											
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	**0.58**	**nd**

italic = found in tank contents

underlined = found in soil

CMS REMEDIATION SITE MW-10	<== 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	4/24/18	7/3/18	10/3/18	12/28/18
Detection limit	2.5 - 50	.50 - 10	2 - 5	2 - 20	2 - 20	2 - 20	2 - 20	2 - 5	2 - 10	2 - 10	2 - 10
1,1,2-Trichloro-1,2,2-trifluoroethane											
1,1-Dichloroethane											
Acetone	1.97L	1.54L				13.4 L					7.54L
Benzene											
Chloroform											
Methylene chloride											
Toluene			10.3								
Total VOCs, µg/l	**nd**	**nd**	******	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**

italic = found in tank contents

underlined = found in soil

** field mis-ID or contaminated

CMS REMEDIATION SITE MW-10	<== post extraction well rebuild ==>				
Volatile Organic Compound	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	1 - 20	1 - 20	1 - 20	1 - 20	1 - 20
1,1,2-Trichloro-1,2,2-trifluoroethane					
1,1-Dichloroethane					
Acetone	17.8LC				
Benzene					
Chloroform					
Methylene chloride					
Toluene					
Total VOCs, µg/l	**nd**	**nd**	**nd**	**nd**	**nd**

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-11	<= post IRM =>													=> post extraction well rebuild			
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	10/2/08	4/10/09	4/13/10	4/15/11	10/18/11	3/22/12
Detection limit															1	0.5 - 10	0.5 - 11
1,1,1-Trichloroethane																	
1,1,2-Trichloro-1,2,2-trifluoroethane																	
1,1-Dichloroethane																	
1,1-Dichloroethene																	
1,2,4-Trimethylbenzene																	0.47
1,3,5-Trimethylbenzene																	0.36
Acetone																1.13LC	
Carbon disulfide																	
Chloroethane																	
cis-1,2-Dichloroethene																	
Cyclohexane																	0.46
Methylene chloride																	
n-Propylbenzene														1.4LC			
Tetrachloroethene																	
Trichloroethene																	
Total VOCs	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**1.29** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-11	<= post extraction well rebuild =>																
Volatile Organic Compounds	6/30/12	10/2/12	12/18/12	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	4/24/18	7/3/18	10/3/18
Detection limit	10	0.5 - 10	0.5 - 2.5	0.5	0.5	0.5	.50 - 10	.50 - 10	.50 - 10	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20	2 - 10	2 - 10	2 - 10
1,1,1-Trichloroethane				17.7													
1,1,2-Trichloro-1,2,2-trifluoroethane				14.3													
1,1-Dichloroethane				19.3	0.54	0.48		0.35									
1,1-Dichloroethene				0.41													
1,2,4-Trimethylbenzene																	
1,3,5-Trimethylbenzene																	
Acetone	2.74LC	2.57LC	2.02LC	2.25LC				2.37LC	1.53LC						10.6 LC		
Carbon disulfide			0.13														
Chloroethane						0.11											
cis-1,2-Dichloroethene				0.41													
Cyclohexane	0.26	0.35	0.2		0.25			0.46									
Methylene chloride	.29LC	.18LC															
n-Propylbenzene																	
Tetrachloroethene				0.41													
Trichloroethene				0.1													
Total VOCs	**0.26** w/ Js	**0.35** w/ Js	**0.33** w/ Js	****** w/ Js	**0.79** w/ Js	**0.59** w/ Js	**nd**	**0.81** w/ Js	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**

italic = found in tank contents
underlined = found in soil
** field mis-ID or contaminated

CMS REMEDIATION SITE MW-11	<= post extraction well rebuild =>					
Volatile Organic Compounds	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	2 - 10	1 - 20	1 - 20	1 - 20	1 - 20	1 - 20
1,1,1-Trichloroethane						
1,1,2-Trichloro-1,2,2-trifluoroethane						
1,1-Dichloroethane						
1,1-Dichloroethene						
1,2,4-Trimethylbenzene						
1,3,5-Trimethylbenzene						
Acetone						
Carbon disulfide						
Chloroethane						
cis-1,2-Dichloroethene						
Cyclohexane						
Methylene chloride						
n-Propylbenzene						
Tetrachloroethene						
Trichloroethene						
Total VOCs	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**

italic = found in tank contents
underlined = found in soil

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	4/5/13	7/24/14	12/4/14	6/7/15	12/17/15
Detection limit	100	5	10	50	20	6 - 125	5 - 100	5 - 100	1 - 10	2.5 - 10	2.5 - 5	2.5 - 5	2.5	1 - 2	1 - 20	1 - 20
1,1-Dichloroethane	120	90	190	270	140	178	175	168	66	134	160	74.4	24.5	81.8	74.4	99.3
1,2-Dichloroethane			4			5	4.1	4.2	3.35	4.1	4.65	3.4	1.7	4	2.08	2.78
1,4-Dioxane																
Acetone									14						3.54LC	
Benzene						1.5										
Chloroethane	16		4			37.6	19.4	32	90.8	21.6	29.2	48.8	8.5	9.48	3.4	
Chloromethane																6.06
cis-1,2-Dichloroethene		9.4	26	30	10	9.38	20.3	23.5	9.05	15.9	20.6	9.35	2.05	18.9	12.1	9.6
Cyclohexane						2.38		2.2	1.7			1.4	0.75	0.36	0.22	0.76
Methylene chloride								11.8LC	4.5LC	2.25LC	2.65LC	0.95LC		1.34LC	.80LC	.38LC
Trichloroethene											0.75					
Vinyl chloride		27	88	260	47	43.2	119	128	53.6	71.4	107	77	26.4	109	58.3	64.6
Total VOCs, µg/l	**136**	**126.4**	**312**	**560**	**197**	**277.06**	**337.8**	**357.9**	**238.5**	**247**	**322.2**	**214.35**	**63.9**	**224.14**	**150.5**	**183.1**
	w/ Js		w/ Js		w/ Js	w/ Js	w/ Js	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-12	<= 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	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	.50 - 10	2 - 10	2 - 10	2 - 20	2 - 20	2 - 20	2 - 10	2 - 10	2 - 10	2 - 10	1 - 20	1 - 20	1 - 10	1 - 20	2 - 20
1,1-Dichloroethane	31.4	79.9	15.7	72.3	87	29.2	88	36.1	47.5	25.0	77.5	40.7	39.4	39.4	37.9
1,2-Dichloroethane	2.09	2.2		1.37	2.02		1.79		1.27		1.48				
1,4-Dioxane			10.5			12.2		23.3	29.0				29.7		
Acetone					11.8		**14.4 LC**				20.9LC				
Benzene															
Chloroethane	6.06	4.32		2.43	5.93		4.12	1.42	3.3		2.63	1.47		1.82	1.72
Chloromethane															
cis-1,2-Dichloroethene	8.41	6.83	1.87	8.78	5.21	2.57	6.96	2.00	3.68	1.5		2.22	2.36	1.79	1.19
Cyclohexane											5.02				
Methylene chloride															
Trichloroethene															
Vinyl chloride	70.8	64.6	11.7	80	76.8	10.8	90.7	6.39	21.0	4.87	112.0	20.7	23.4	38.50	14.20
Total VOCs, µg/l	**118.76** w/ Js	**157.85** w/ Js	**39.77** w/ Js	**164.88** w/ Js	**188.76** w/ Js	**54.77** w/ Js	**191.57** w/ Js	**69.21** w/ Js	**105.75** w/ Js	**31.37** w/ Js	**198.63** w/ Js	**65.09** w/ Js	**94.86**	**81.51** w/ Js	**55.01** 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	4/5/13	7/24/14	12/4/14	6/7/15	12/17/15	5/2/16
Detection limit	100	1	1	1	1	0.5 - 10	0.5 - 10	0.5 - 10	25 - 500	0.5 - 2	0.5 - 2	0.5 - 1	0.5	0.5	.50 - 5	.50 - 10	.50 - 10
1,1,2-Trichloroethane										1.94							
1,1-Dichloroethane			4	0.2			0.19		0.22	0.29	0.23	0.19	0.2	0.16	0.16	0.23	0.1
1,2,4-Trimethylbenzene			0.4	0.6	4.5	16.2		1.4	0.48	0.18		1.18	0.13				
1,3,5-Trimethylbenzene	5.3	1.7	0.5	0.6	5.6	13.2		1.56	0.33	0.61	0.22	0.17					
(p) 4-Isopropyltoluene					0.4	0.59		0.58									
Acetone							1.85LC		4.57LC								1.27LC
Benzene		1.1		0.3		0.3				0.22							
Carbon disulfide						0.89			1.58								
Chloromethane		2.6															
cis-1,2-Dichloroethene																0.6	
Cyclohexane						34.50	0.13	2.6	0.89	2.31	0.37	0.27	0.15	0.35			
Ethylbenzene					0.6	2.61						0.17					
Isopropylbenzene				0.6	0.6	1.70						0.48					
Methylcyclohexane																	
Methylene chloride								1.5	0.27LC	0.2LC							
Naphthalene					1.2	1.64											
n-Propylbenzene				0.5	0.7	2.39						0.64					
sec-Butylbenzene				0.5	0.3	0.66						0.3					
Styrene					0.4	0.57											
Tetrachloroethene					0.2												
Toluene					0.3	0.48											
m,p-Xylene					1.0	7.6		1.34	0.58			0.37					
o-Xylene					0.5	2.6		1.42	0.11	0.22	0.1						
Total VOCs, µg/l	**5.3** w/ Js	**5.4**	**#NAME?** 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	**3.77** w/ Js	**0.48** w/ Js	**0.51** w/ Js	**0.16** w/ Js	**0.83** w/ Js	**0.1** w/ Js

italic = found in tank contents
underlined = found in soil

CMS REMEDIATION SITE MW-13	<= post extraction well rebuild =>													
Volatile Organic Compound	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20	2 - 20	1 - 20	1 - 20	1 - 20	1 - 20	1 - 10
1,1,2-Trichloroethane														
1,1-Dichloroethane														
1,2,4-Trimethylbenzene														
1,3,5-Trimethylbenzene														
(p) 4-Isopropyltoluene														
Acetone				5.42 LC		25.1 LC				15.8LC				
Benzene														
Carbon disulfide														
Chloromethane														
cis-1,2-Dichloroethene														
Cyclohexane														
Ethylbenzene														
Isopropylbenzene														
Methylcyclohexane				1.61										
Methylene chloride														7.37LC
Naphthalene														
n-Propylbenzene														
sec-Butylbenzene														
Styrene														
Tetrachloroethene														
Toluene														
m,p-Xylene														
o-Xylene														
Total VOCs, µg/l	**nd**	**nd**	**nd**	**1.61** w/ Js	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**nd**	**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	7/24/14	12/4/14	6/7/15	12/17/15	5/2/16	7/21/16	12/21/16
Detection limit	100	1000	500	100-2000	50-1000	100-2000	100-2000	50 - 200		25 - 50	0.5 - 5.0	25 - 50	50-1000	50-1000	50-1000	100-1000	100 - 250
1,1,1-Trichloroethane	1700	2100	540	1970	3390	4190	3380	5660	1920	1860	15.7	3500	3840	1790	4400	1830	1010
1,1,2-Trichloro-1,2,2-trifluoroethane				644	2580		618	2030	725	1330	12.5	1220			1540		
1,1-Dichloroethane	3400	1400	1300	2390	1970	3100	2610	3900	2010	1650	23.8	2670	3570	2340	2640	1880	2530
1,1-Dichloroethene	50			62	74	170	66	119	46	55.5	0.72	59	89	34	62		
1,2,4-Trimethylbenzene				32				17		33.5	0.85						
1,3,5-Trimethylbenzene	50									11.5	0.26	5.5					
Acetone				1040			530						110L		275L		
Benzene	30			38	16		20	19	10	15	0.64	26.5	12				38.3
Carbon disulfide							234										
Chloroethane												36					84.1
Chloroform		500															
cis-1,2-Dichloroethene	40			60	114	206	134	236	75	81	0.89	134		99	113		
Cyclohexane				90	71	56	56	105	29	91.5	2.54	118	31	44			
Ethylbenzene	40									7.5	0.28	8.5					
Methylcyclohexane																	88.5
Methylene chloride		500	1800			146	176LC	53LC	43LC	11			68.0L	26.0L			
Naphthalene																	
n-Butylbenzine																	
n-Propylbenzene																	
sec-Butylbenzene																	
Styrene																	
Tetrachloroethene				30			114	375	82	61.5	0.95	132	82	17	60		
Toluene	40			68	31	54	32	29	20	21	0.36	21	10	13			
Trichloroethene								22		5.5	0.18	17	76	56	121		
Vinyl chloride					33							35.5			33		50
m,p-Xylene				52	29			25		35.5	0.53	11					
m-Xylene	30																
o-Xylene				22				11		13	0.5	11.5		41			
Total VOCs, µg/l	**5380**	**4500**	**3640**	**6498**	**8308**	**7922**	**7794**	**12548**	**4955**	**5308**	**60.7**	**8005.5**	**7710**	**4704**	**8969**	**3710**	**3800.9**
	w/ J	w/ Js		w/ Js	w/ Js	w/ Js	w/ Js	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-14	<= post extraction well modifications =>											
Volatile Organic Compound	4/21/17	6/16/17	11/2/17	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	20 - 200	20 - 200	20 - 200	50 - 125	50 - 250	50 - 250	50 - 250	50 - 500	50 - 500	25 - 500	50 - 500	50 - 500
1,1,1-Trichloroethane	1040	1690	1600	2030	1500	1380	1160	1280	635	2100	1210	1390
1,1,2-Trichloro-1,2,2-trifluoroethane	470	439	512	1650	1070	917	820	885	642	637	593	1520
1,1-Dichloroethane	1120	2610	2680	4910	3280	3950	2250	1680	2270	3160	2080	4300
1,1-Dichloroethene	19.7	42.4	42.2	151	62.9	69.2	25.7		41.7	66.5		87.8
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Acetone												
Benzene	8.74	14	19.9	17.4	21.4	28.4			19.3			30.1
Carbon disulfide												
Chloroethane	10		53.8		46.7	43.5	29.2	29.2	35.1			42.5
Chloroform												
cis-1,2-Dichloroethene	51	57	91.3	52.9	58.5	86.4	50.8	47.0	51.0	100	66.3	66.7
Cyclohexane												
Ethylbenzene												
Methylcyclohexane	25		47.6	43.9	55.3	62.1			67.7		53.8	57.6
Methylene chloride												
Naphthalene												
n-Butylbenzine												
n-Propylbenzene												
sec-Butylbenzene												
Styrene												
Tetrachloroethene	13.4			29.9	40.3			27.4		87.1	31.2	
Toluene						35.4						
Trichloroethene	40	50	51.6	32.2		27.6	30.6	46.10				44.5
Vinyl chloride			44		34.0	60.7	**41.5**					31
m,p-Xylene												
m-Xylene												
o-Xylene												
Total VOCs, µg/l	**2797.84** w/ Js	**4902.4** w/ Js	**5142.4** w/ Js	**8917.3** w/ Js	**6169.1** w/ Js	**6660.3**	**4407.8** w/ Js	**3994.7** w/ Js	**3761.8** w/ Js	**6150.6**	**4034.3**	**7570.2** w/ Js

italic = found in tank contents
underlined = found in soil

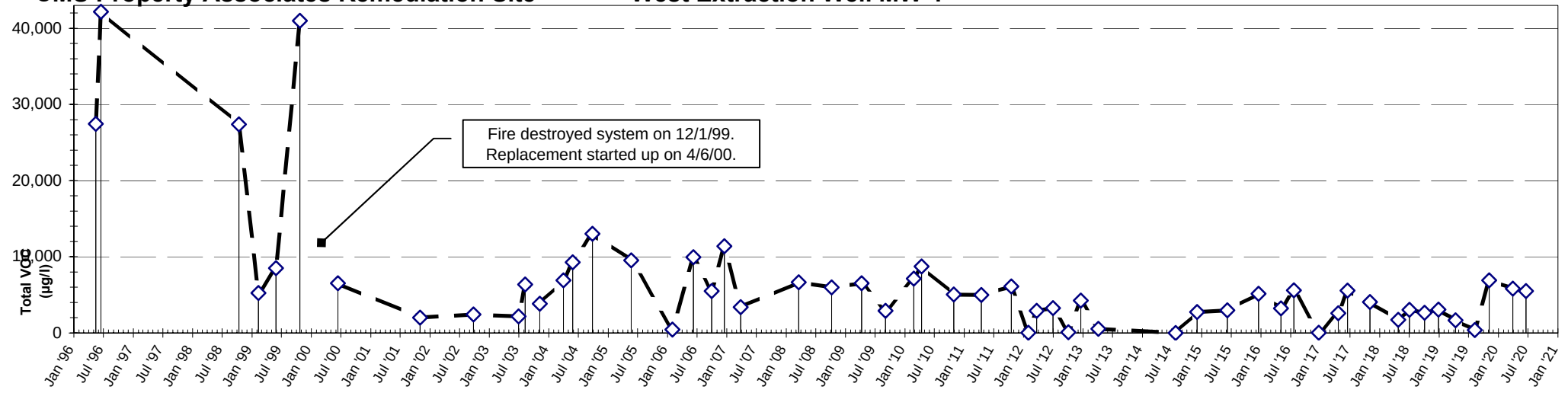
CMS REMEDIATION SITE MW-15	<= post extraction well rebuild =>														
Volatile Organic Compound	5/2/16	7/21/16	12/21/16	4/21/17	6/16/17	11/2/17	4/24/18	7/3/18	10/3/18	12/28/18	4/12/19	8/8/19	11/5/19	3/29/20	6/19/20
Detection limit	*25 - 500*	*10 - 100*	*10 - 100*	*10 - 100*	*10 - 100*	*10 - 100*	2 - 50	10 - 50	5 - 25	4 - 20	4 - 40	2 - 40	10 - 200	4 - 20	4 - 20
1,1,1-Trichloroethane		103	84.3	88.1	46.3	40.1	16.7	11.5	35.4	26.2	46.3	57.9	62.9	10.4	34.9
1,1,2-Trichloro-1,2,2-trifluoroethane	27.5	10.6	15.3	39.4	21.6	8.09	20.6	17.4	18.3	18.2	39.3	50.8	24.5	17.0	44.4
1,1-Dichloroethane	798	535	707	612	445	484	408	316	376	326	351	392	619	241	263
1,1-Dichloroethene															
1,2,4-Trimethylbenzene			21.7		6.04										
Acetone					30.9						13.4LC				
Benzene		6.06	12.8	2.84	4.8		3.55	10.3	3.85	4.41	1.51			6.33	5.42
Chloroethane				8.78	47.3		24.2	76.4	31.8	78.6	42.4	7.69		152	231
cis-1,2-Dichloroethene	12.5	6.66	7.1	6.31		5.83			4.17	3.67	3.66	4.25		5.77	6.07
Cyclohexane			58.9		63.9					12.2				18.6	18.9
Methylene chloride															18.1
Methylcyclohexane		9.15	64.6	5.89	104		13.6	8.2	3.79	4.24				9.91	6.02
Toluene			9.5												
Trichloroethene												2.08			
m,p-Xylene			5.94												
o-Xylene			12.2												
Total VOCs	**838**	**670.47**	**999.34**	**763.32**	**769.84**	**538.02**	**486.65**	**439.8**	**473.31**	**473.52**	**484.17**	**514.72**	**706.4**	**461.01**	**627.81**
	w/ Js		w/ Js	w/ Js	w/ Js	w/ Js	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

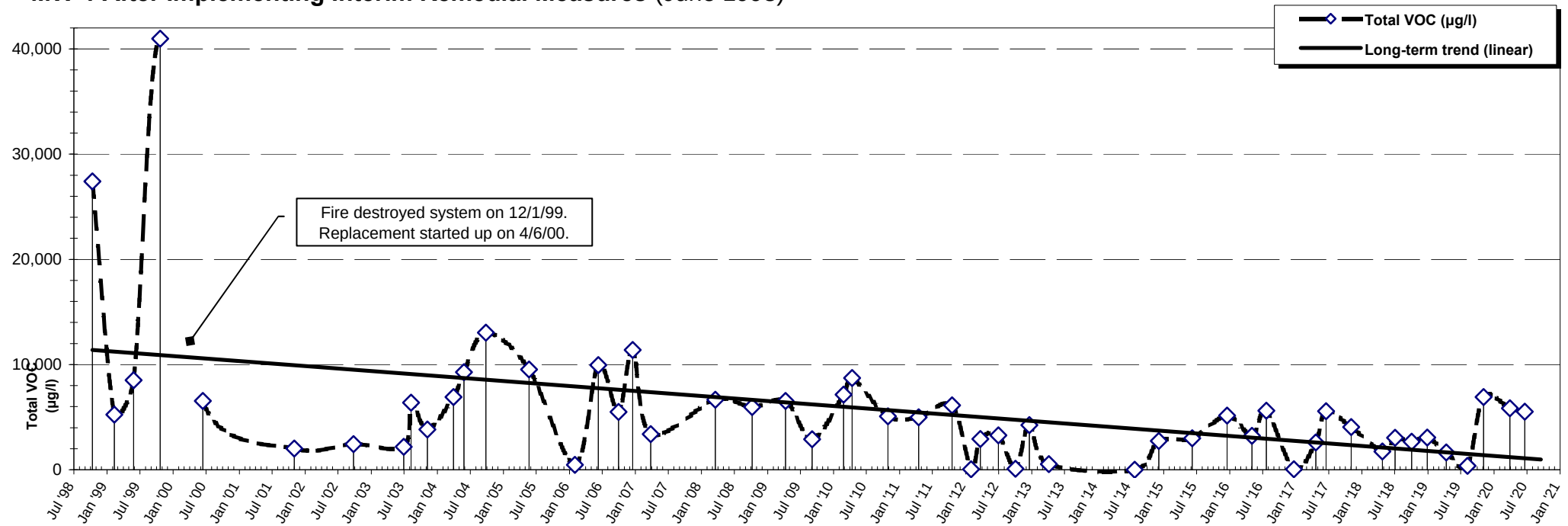
APPENDIX B

Graphical Presentation of Groundwater Quality Monitoring through 2020

CMS Property Associates Remediation Site West Extraction Well MW-1



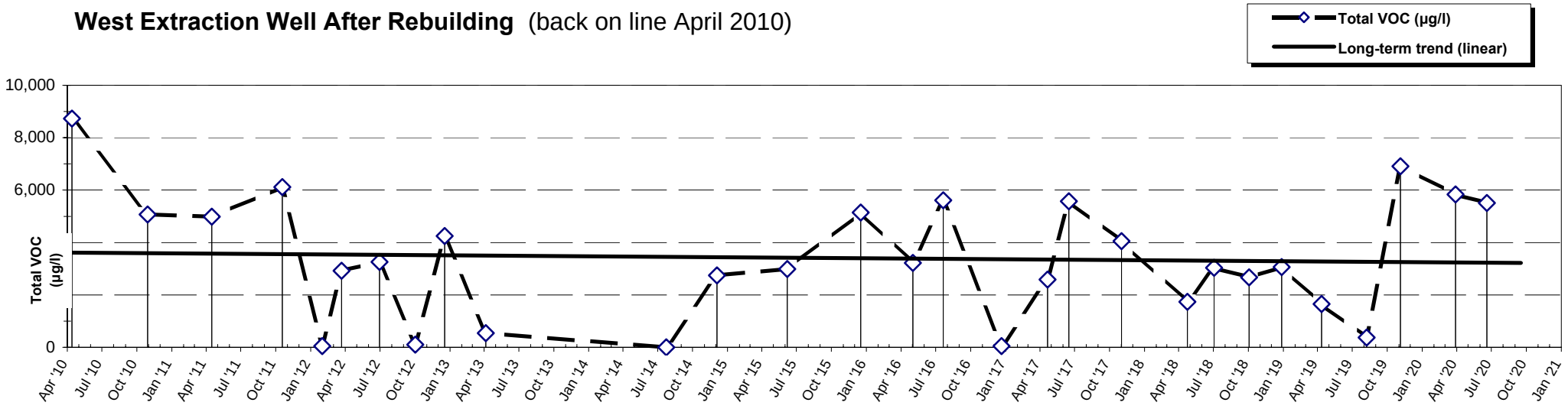
MW-1 After Implementing Interim Remedial Measures (June 1998)



Date	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	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20	
TVOCs	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	1,733	3,031	2,669	3,067	1,654	377	6,910	5,836	5,513	

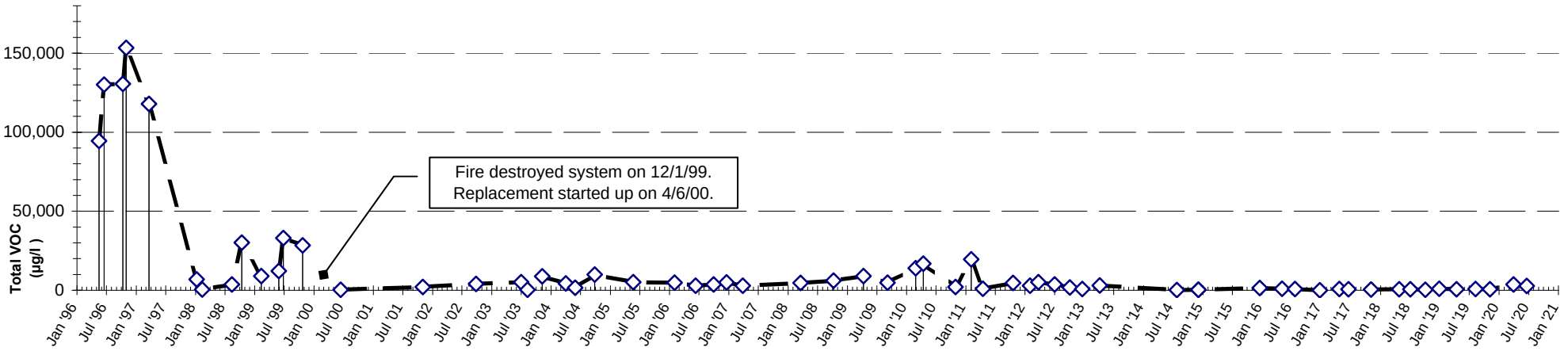
MW-1

West Extraction Well After Rebuilding (back on line April 2010)

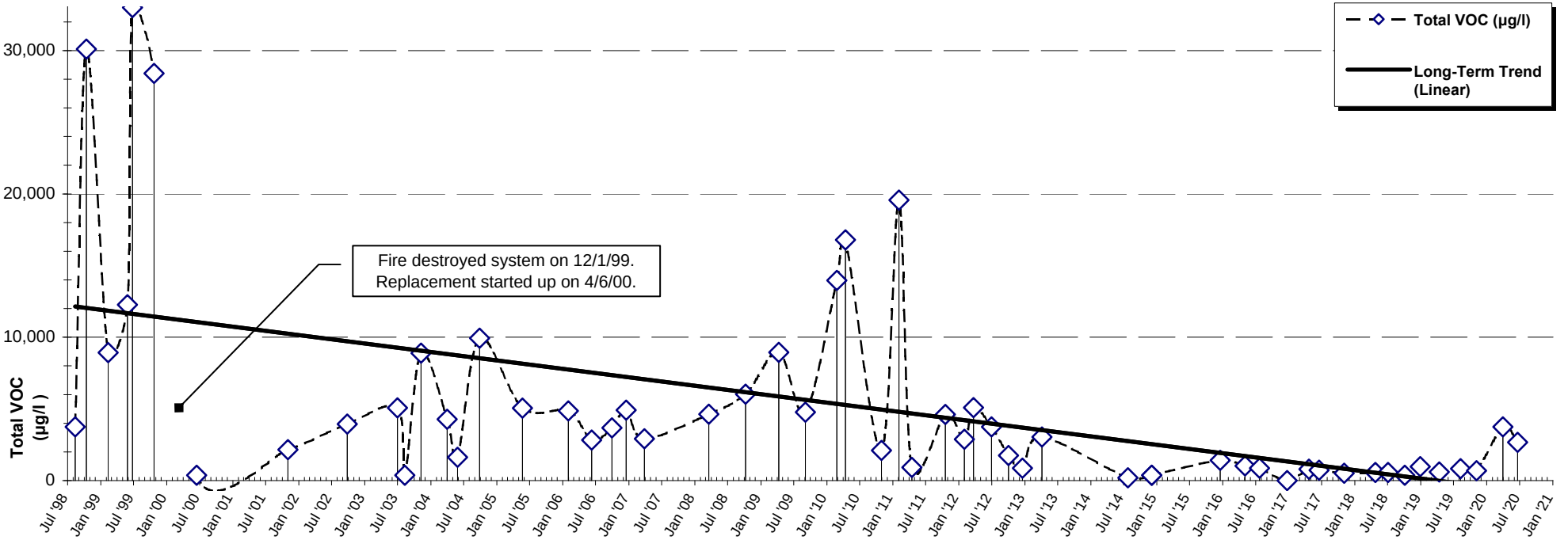


Date	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	4,990	6,118	43	2,927	3,262	101	4,245	543	nd	2,746	2,988	5,146	3,226	5,615	45	2,587	5,577	4,055	1,733	3,031	2,669	3,067	1,654	377	6,910	5,836	5,513

CMS Associates Remediation Site South Extraction Well MW-2



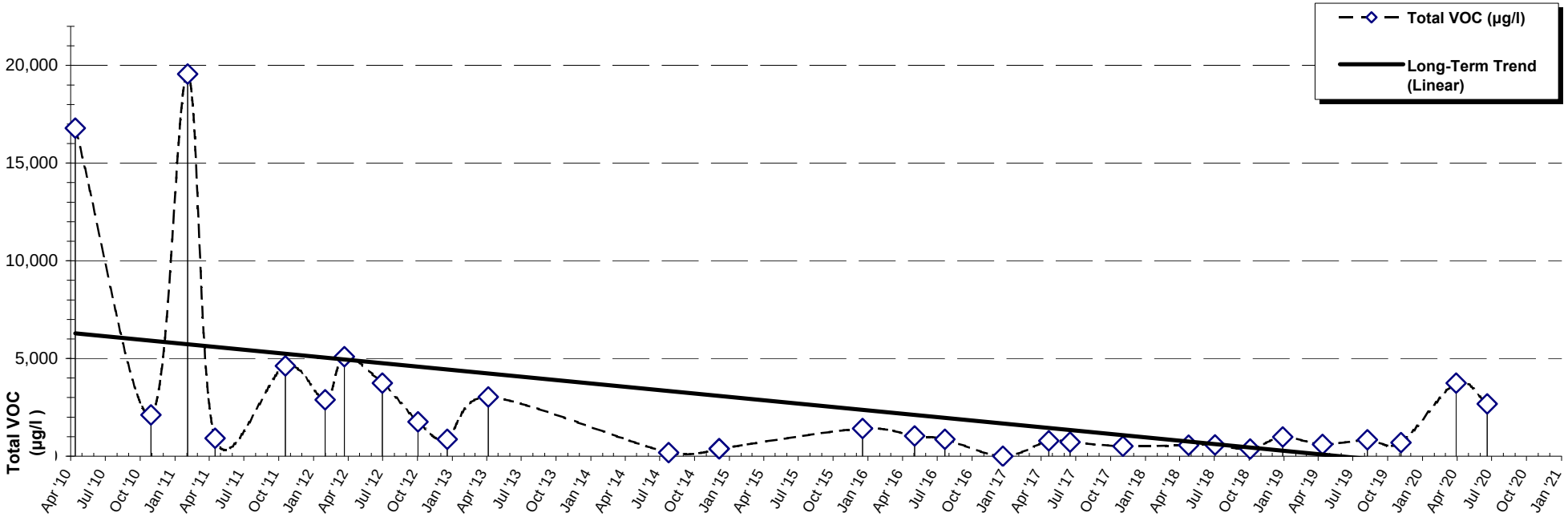
MW-2 After Implementing Interim Remedial Measures (June 1998)



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	

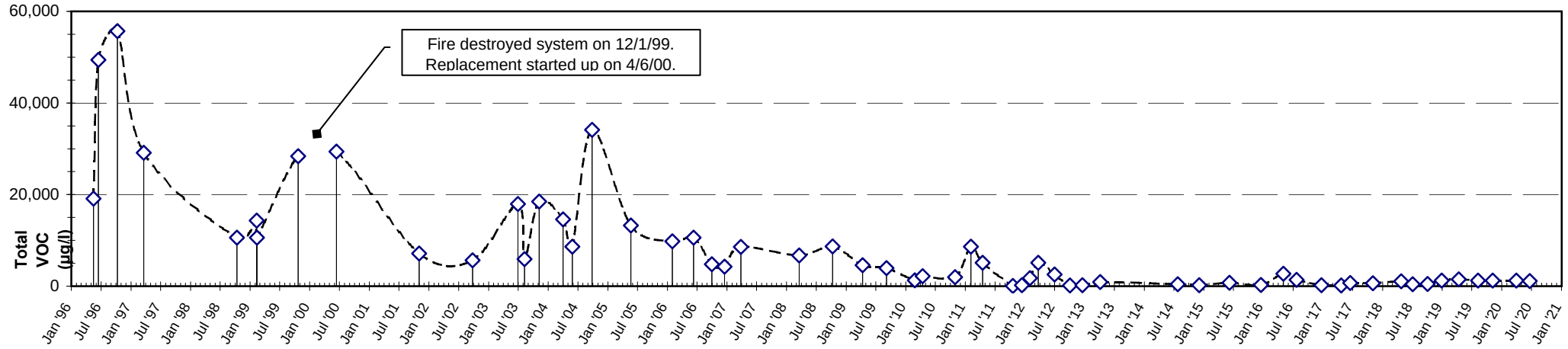
MW-2

South Extraction Well After Rebuilding (back on line April 2010)

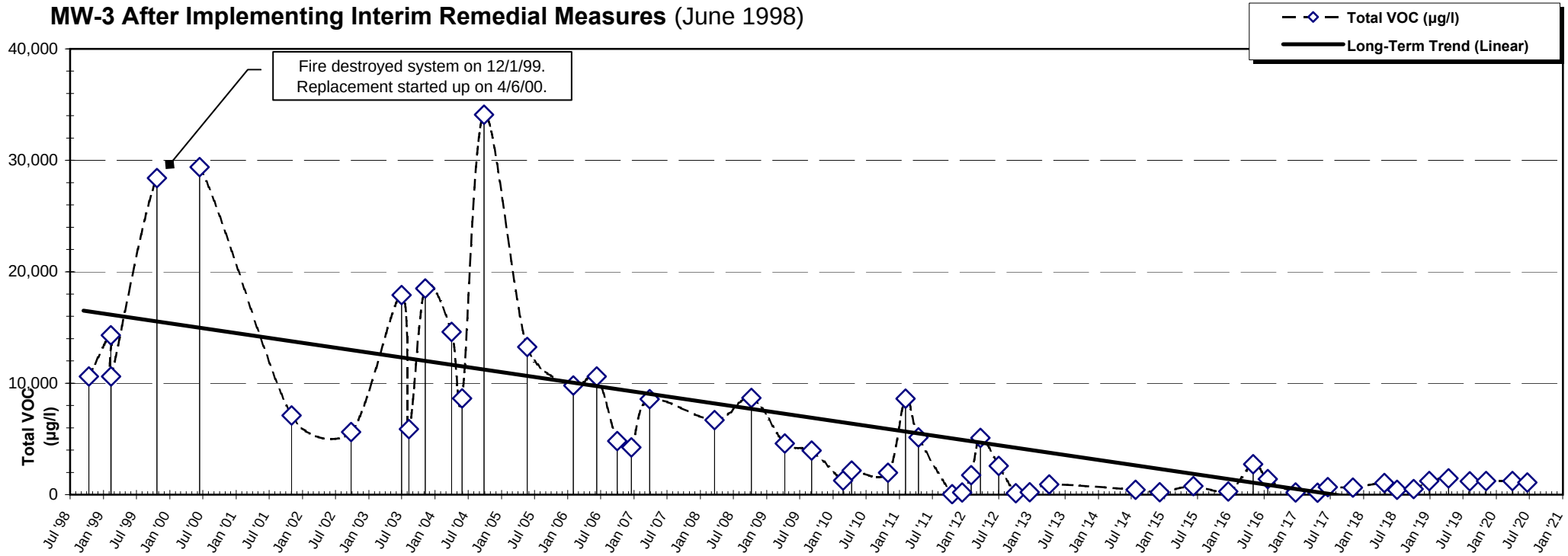


Date	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Dec '14	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	4615	2886	5096	3742	1758	865	3032	186	376	376	1415	1031	863	nd	792	721	518	569	573	364	980	599	839	697	3744	2672

CMS Property Associates Remediation Site Center Extraction Well MW-3



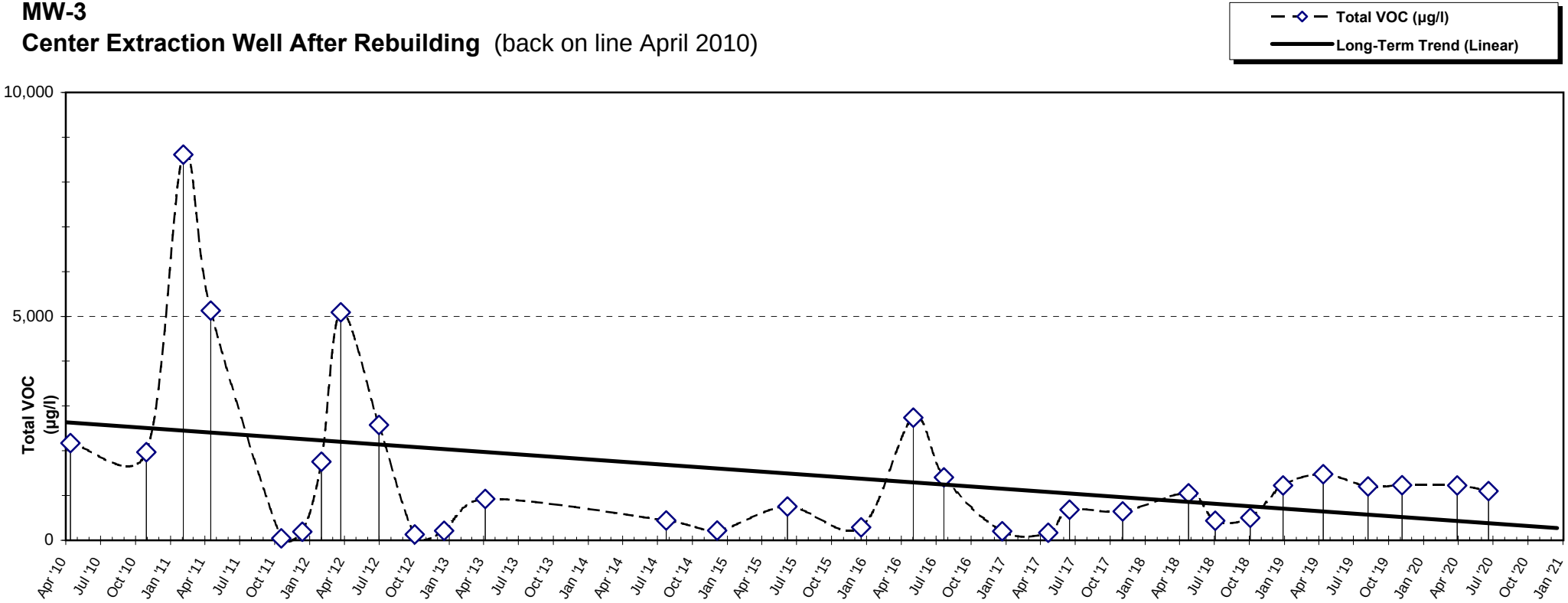
MW-3 After Implementing Interim Remedial Measures (June 1998)



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

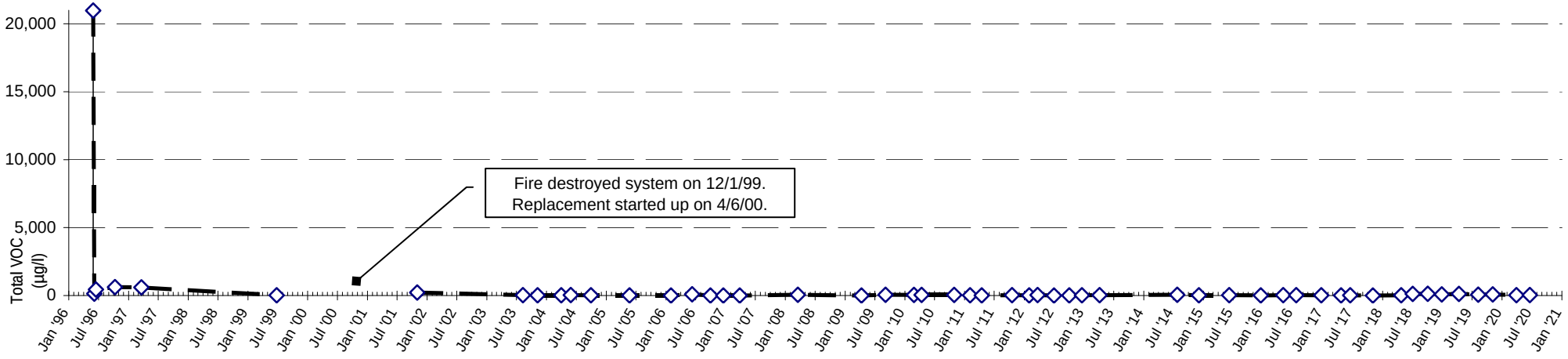
MW-3

Center Extraction Well After Rebuilding (back on line April 2010)

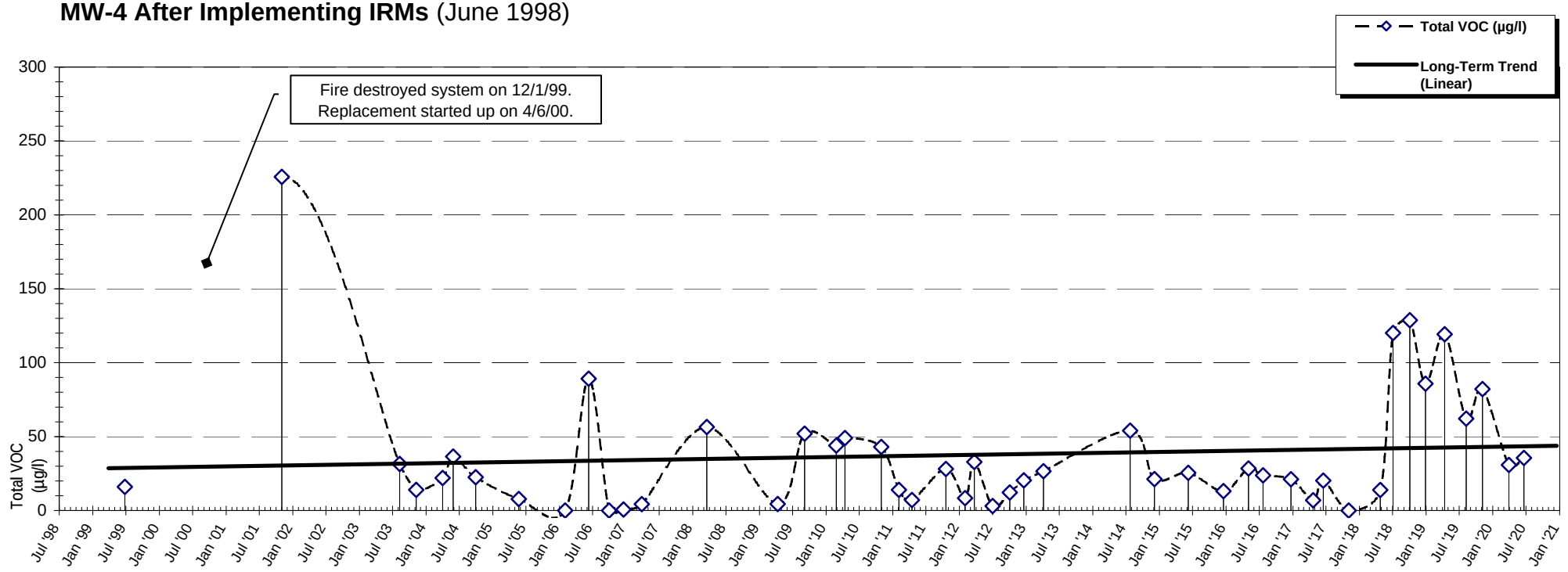


Date	Oct '11	Dec '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	46	193	1,753	5,088	2,577	133	214	922	445	220	755	289	2,738	1,408	204	169	682	644	1,051	436	505	1,227	1,475	1,203	1,228	1,224	1,101

CMS Associates Remediation Site — West Perimeter Monitoring Well MW-4

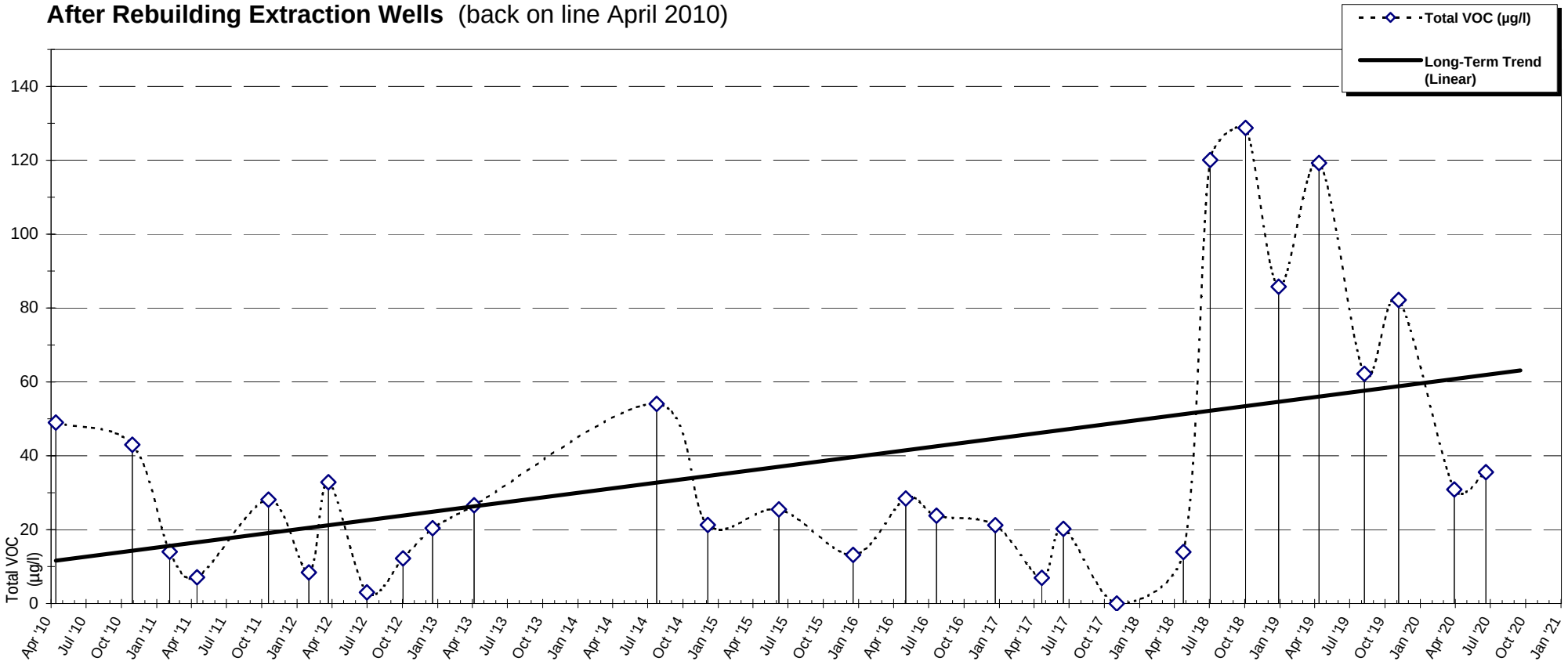


MW-4 After Implementing IRMs (June 1998)



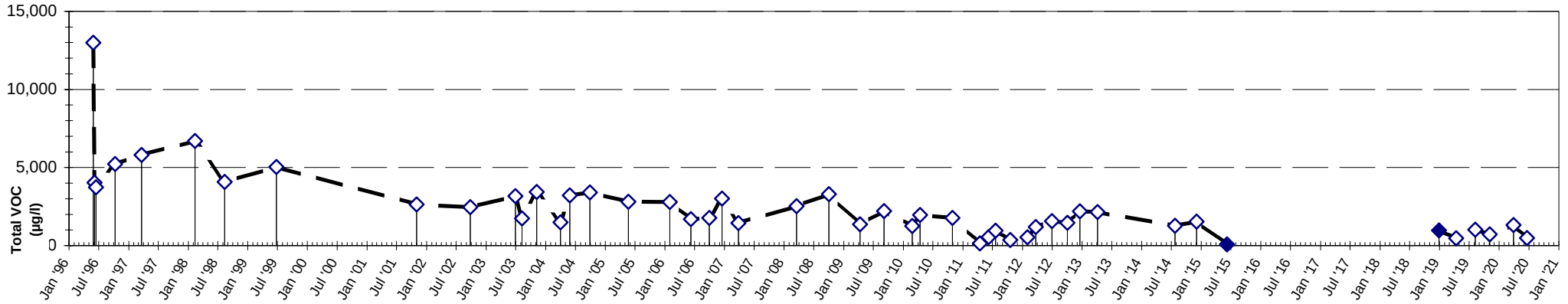
Date	May '96	Jun '96	Jun '96	Oct '96	Mar '97	Jun '99	Nov '01	Aug '03	Nov '03	Mar '04	May '04	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Apr '09	Sep '09	Feb '10	Apr '10
TVOCs	20,970	138	443	620	600	16	226	32	14	22	37	23	8	nd	89	nd	1	4	57	4	52	44	49

West Perimeter Monitoring Well MW-4
After Rebuilding Extraction Wells (back on line April 2010)

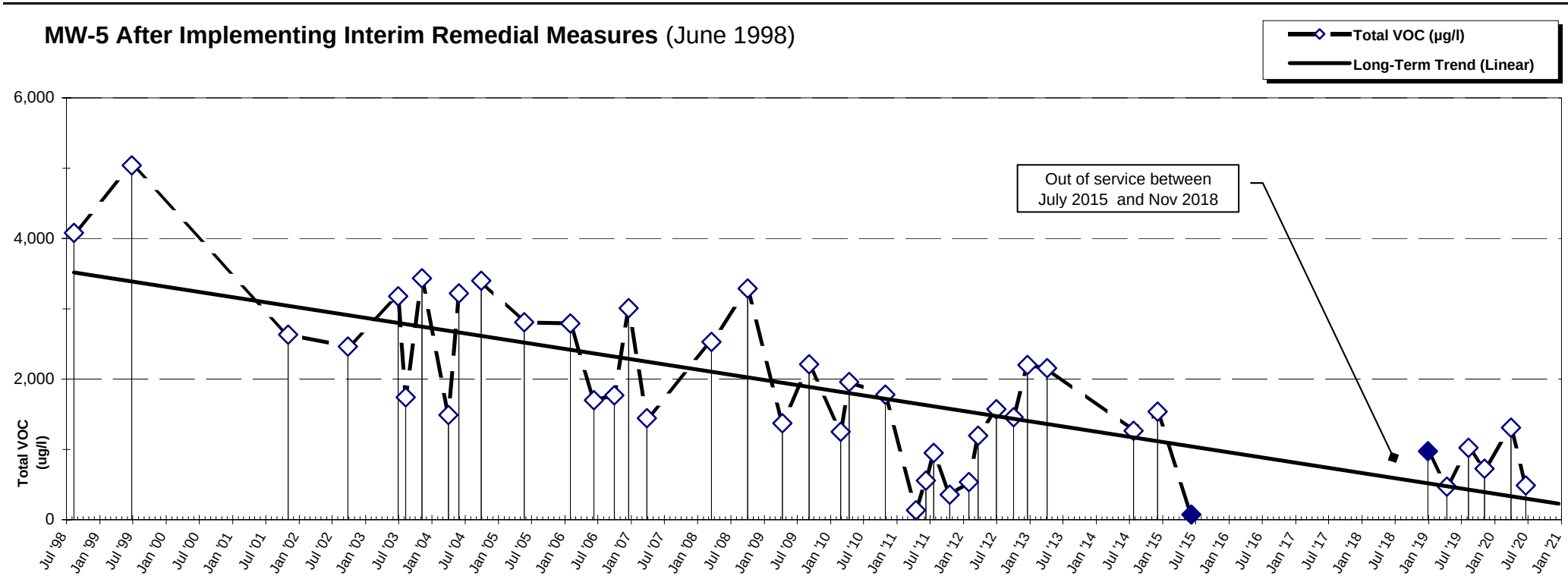


Date	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	28	8	33	3	12	20	27	54	21	25	13	28	24	21	7	20	nd	14	120	129	86	119	62	82	31	36

CMS Associates Remediation Site Northwest Perimeter Monitoring Well MW-5

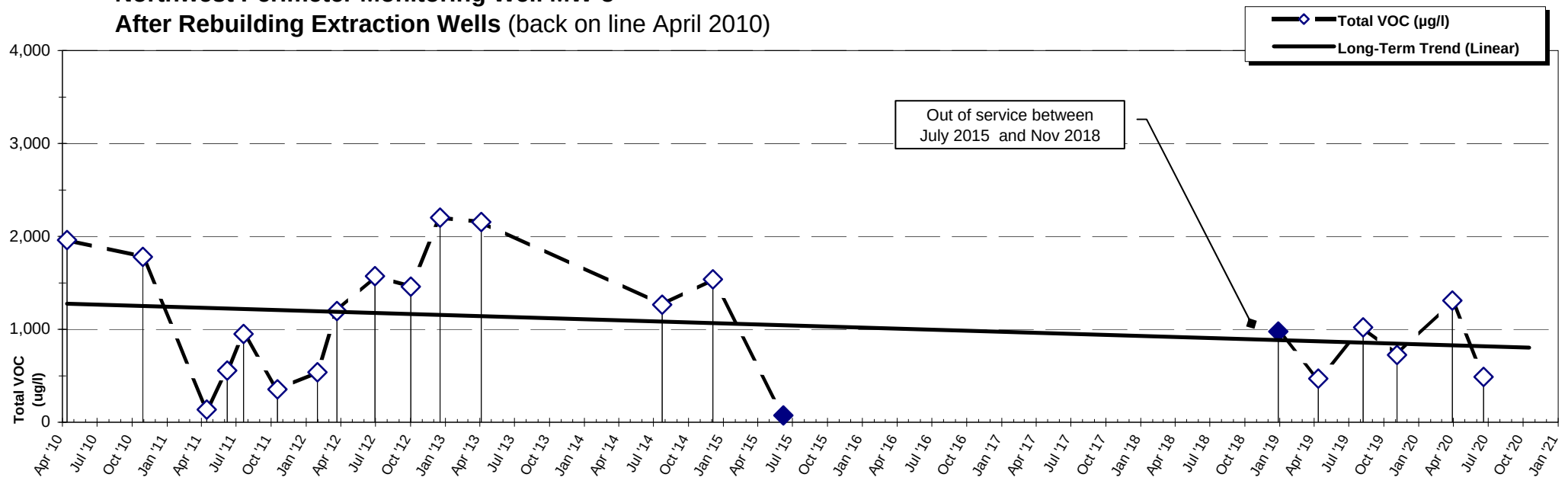


MW-5 After Implementing Interim Remedial Measures (June 1998)



Date	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10	Oct '10	Apr '11	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 '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	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	975	471	1,021	724	1,311	488

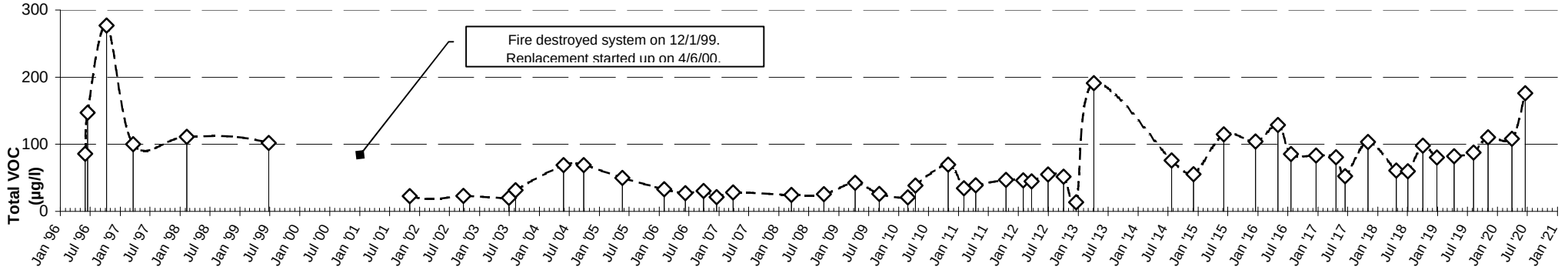
Northwest Perimeter Monitoring Well MW-5
After Rebuilding Extraction Wells (back on line April 2010)



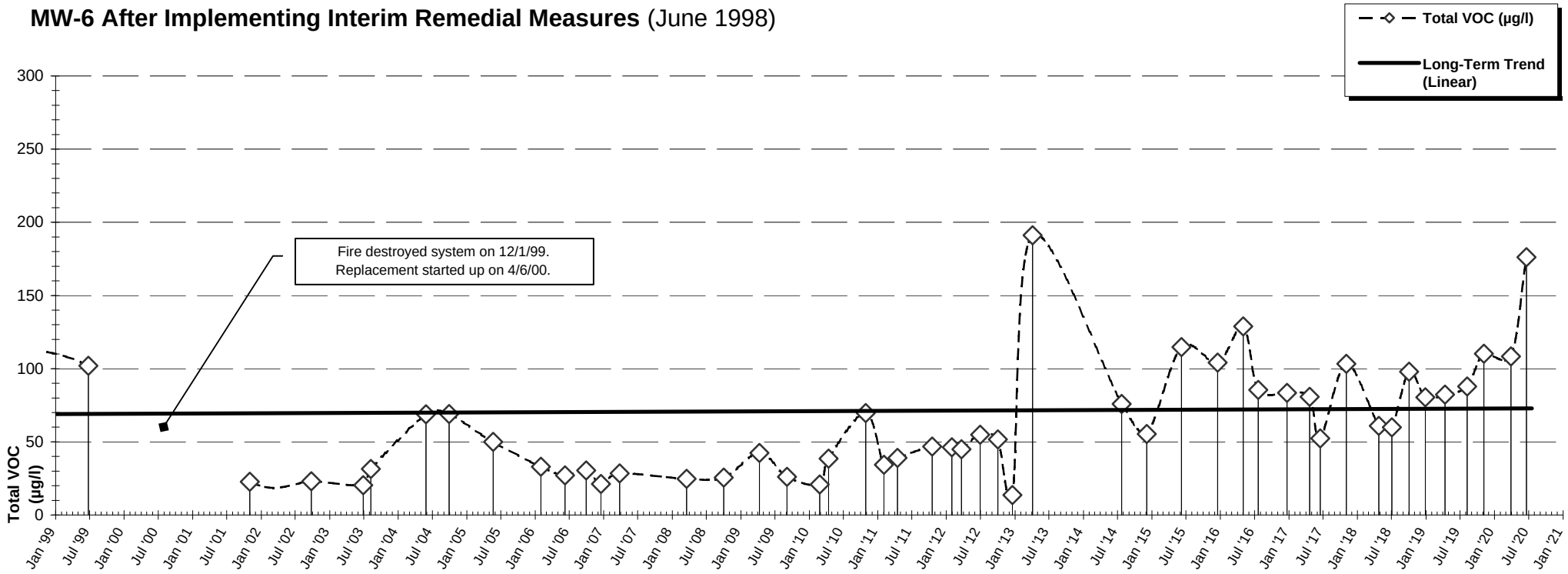
Date	Apr '10	Oct '10	Apr '11	Jun '11	Jul '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	1,960	1,780	136	556	950	355	537	1,196	1,573	1,458	2,202	2,154	1,265	1,537	73	975	471	1,021	724	1,311	488

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

After Implementing Interim Remedial Measures (June 1998)

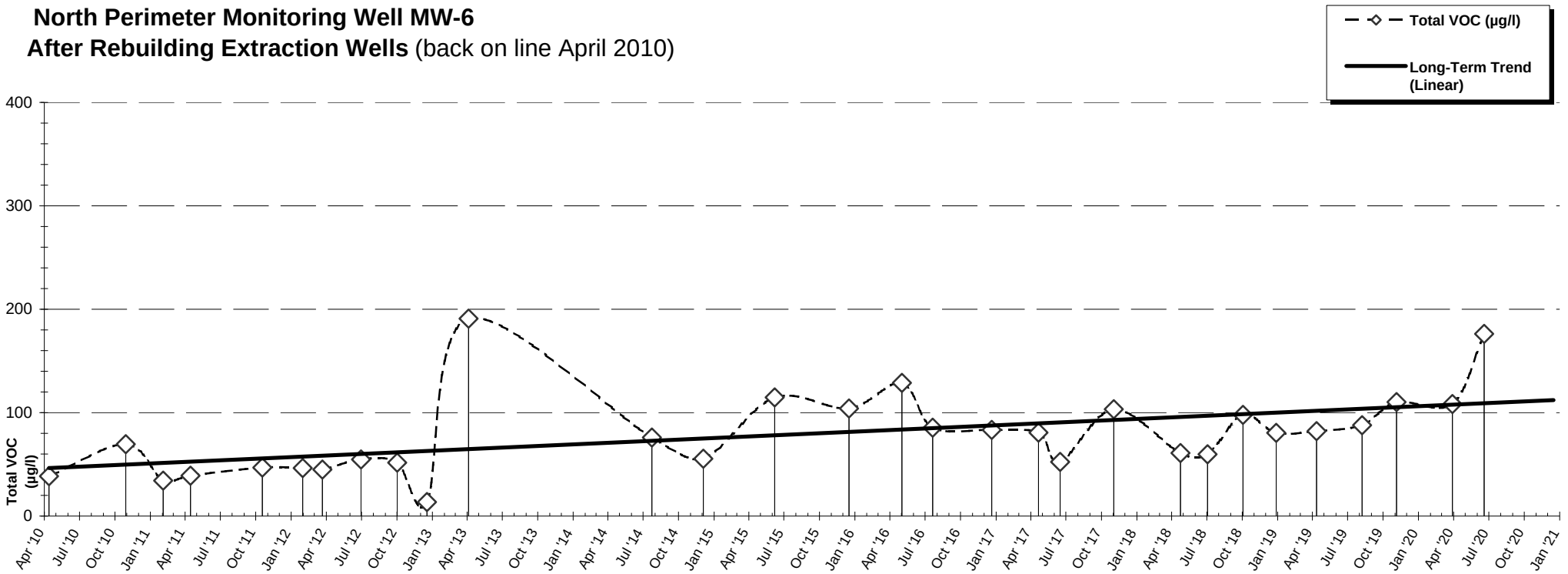


MW-6 After Implementing Interim Remedial Measures (June 1998)



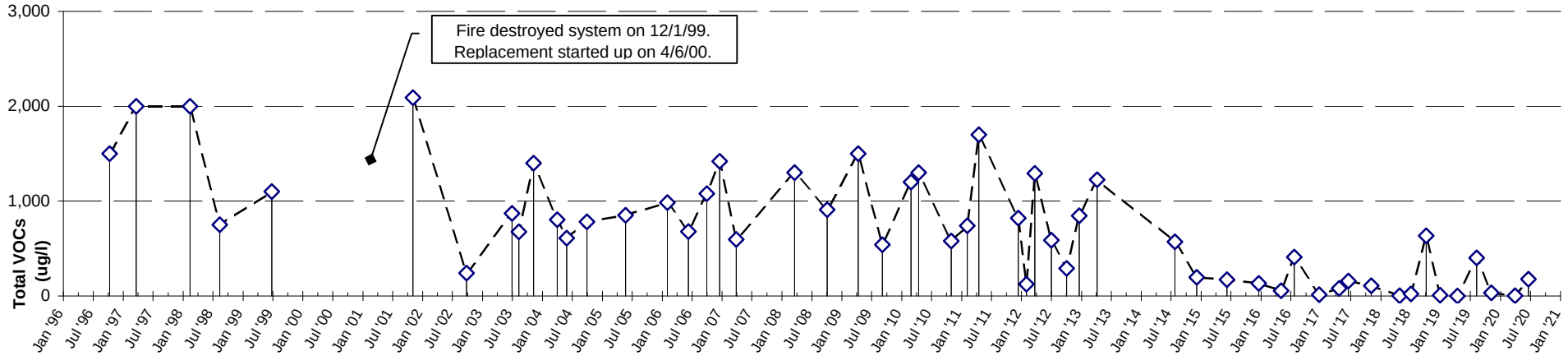
Date	Feb '11	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	34	39	47	46	45	55	52	14	191	76	55	115	104	129	85	83	81	52	103	61	60	98	80	82	88	110	108	176

North Perimeter Monitoring Well MW-6
After Rebuilding Extraction Wells (back on line April 2010)

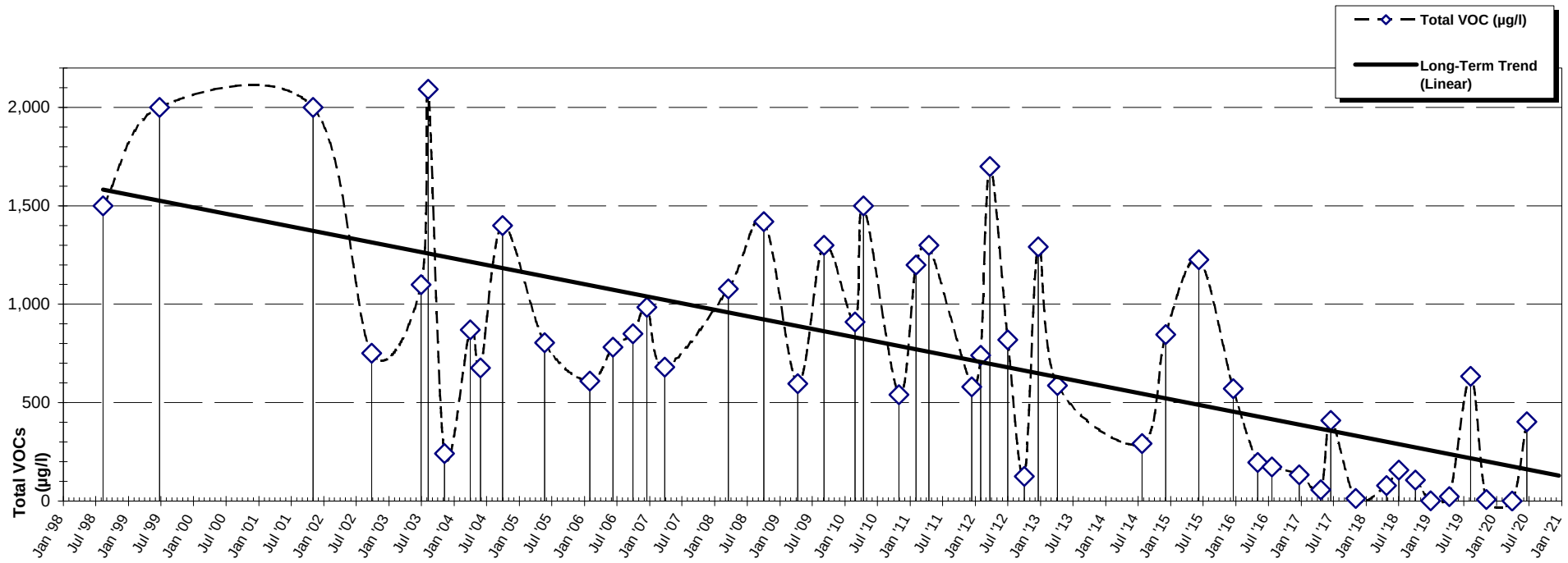


Date	Oct '10	Feb '11	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Jun '20
TVOCs	70	34	39	47	46	45	55	52	14	191	76	55	115	104	129	85	83	81	52	103	61	60	98	80	82	88	110	176

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

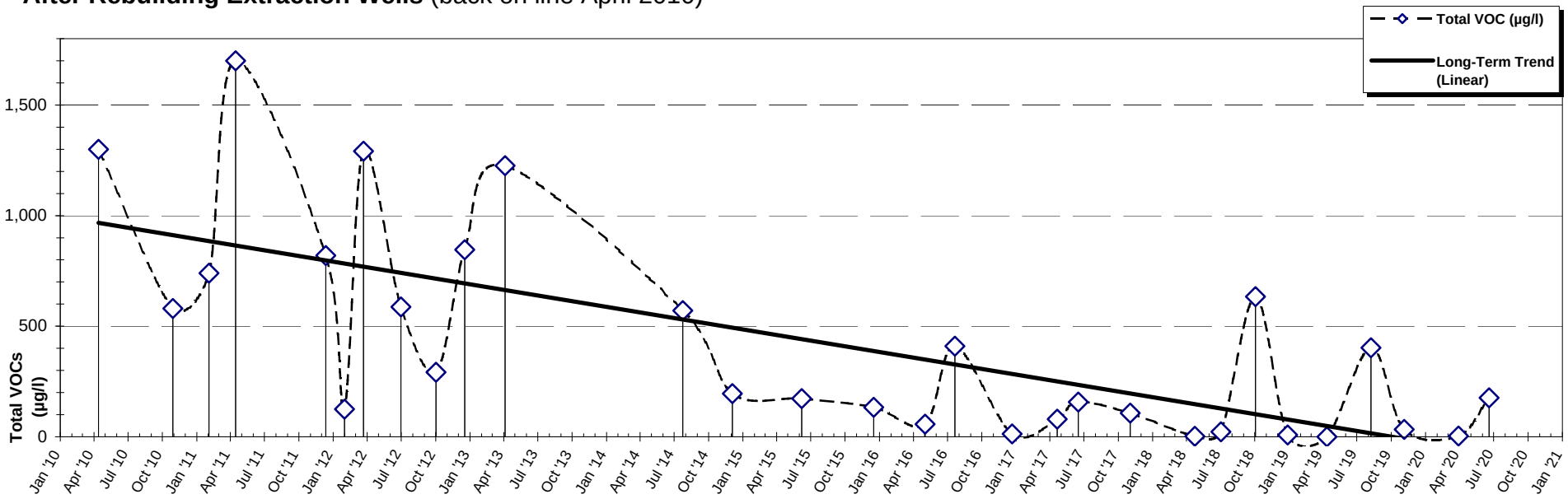


MW-7 After Implementing Interim Remedial Measures (June 1998)



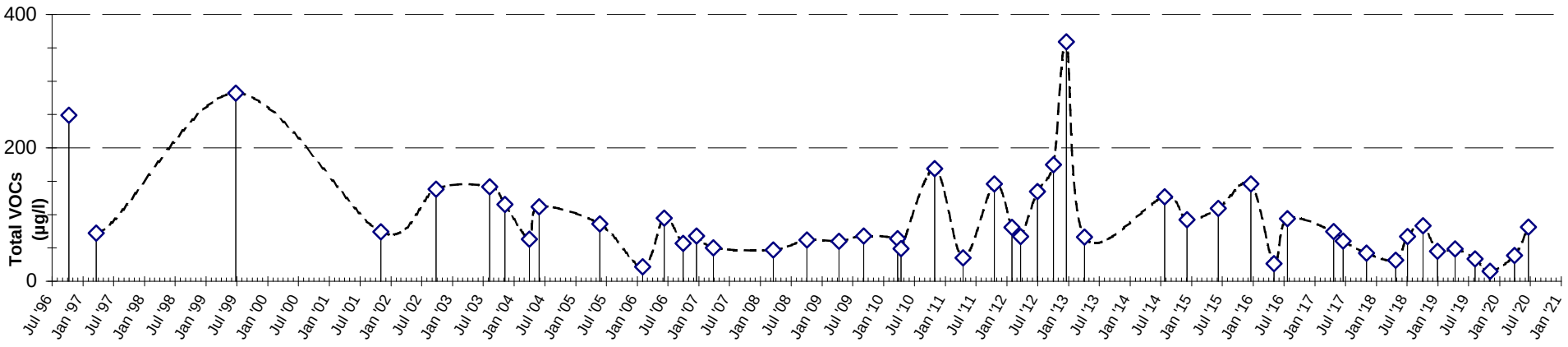
Date	Oct '96	Mar '97	Feb '98	Aug '98	Jun '99	Nov '01	Sep '02	Jun '03	Aug '03	Nov '03	Mar '04	May '04	Sep '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Feb '10	Apr '10
TVOCs	1,500	2,000	2,000	751	1,100	2,092	241	870	676	1,400	804	610	782	850	984	680	1,078	1,420	596	1,300	910	1,500	540	1,200	1,300

East Perimeter Monitoring Well MW-7
After Rebuilding Extraction Wells (back on line April 2010)

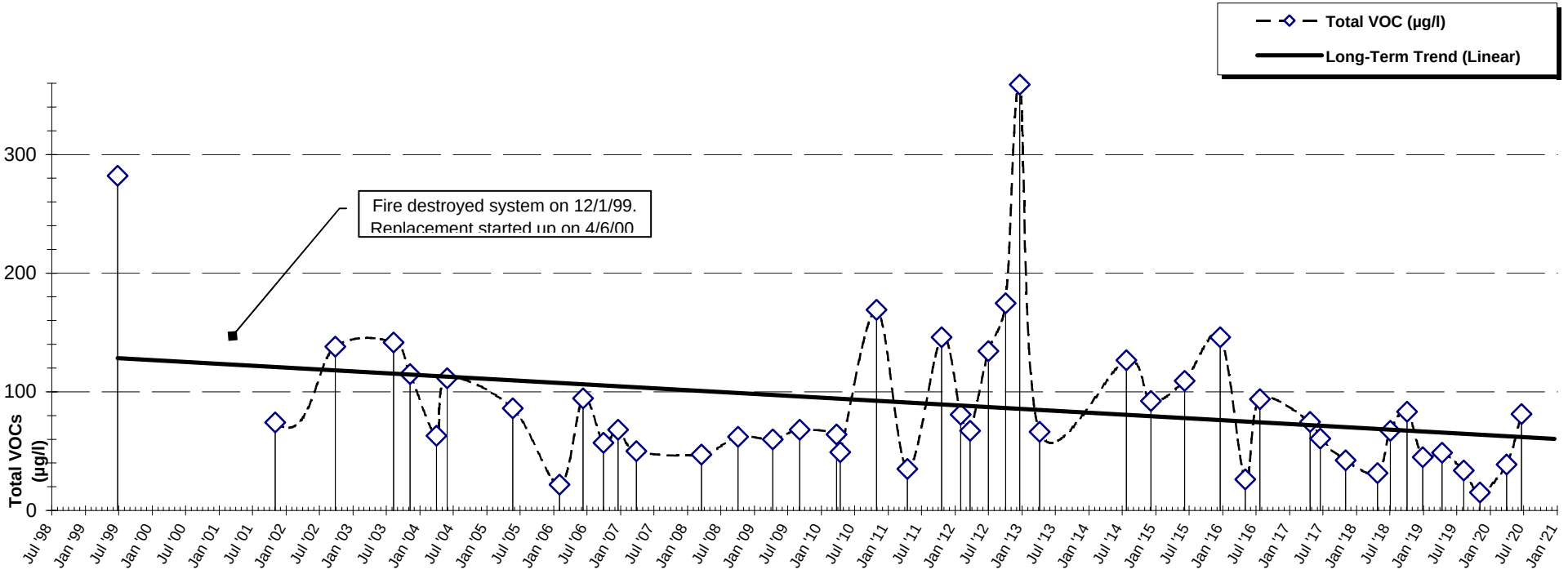


Date	Oct '10	Feb '11	Apr '11	Dec '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Mar '20	Jun '20
TVOCs	580	740	1,700	820	125	1,291	587	292	846	1,226	571	196	173	133	57	410	13	79	157	107	2	23	634	8	0	403	4	176

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

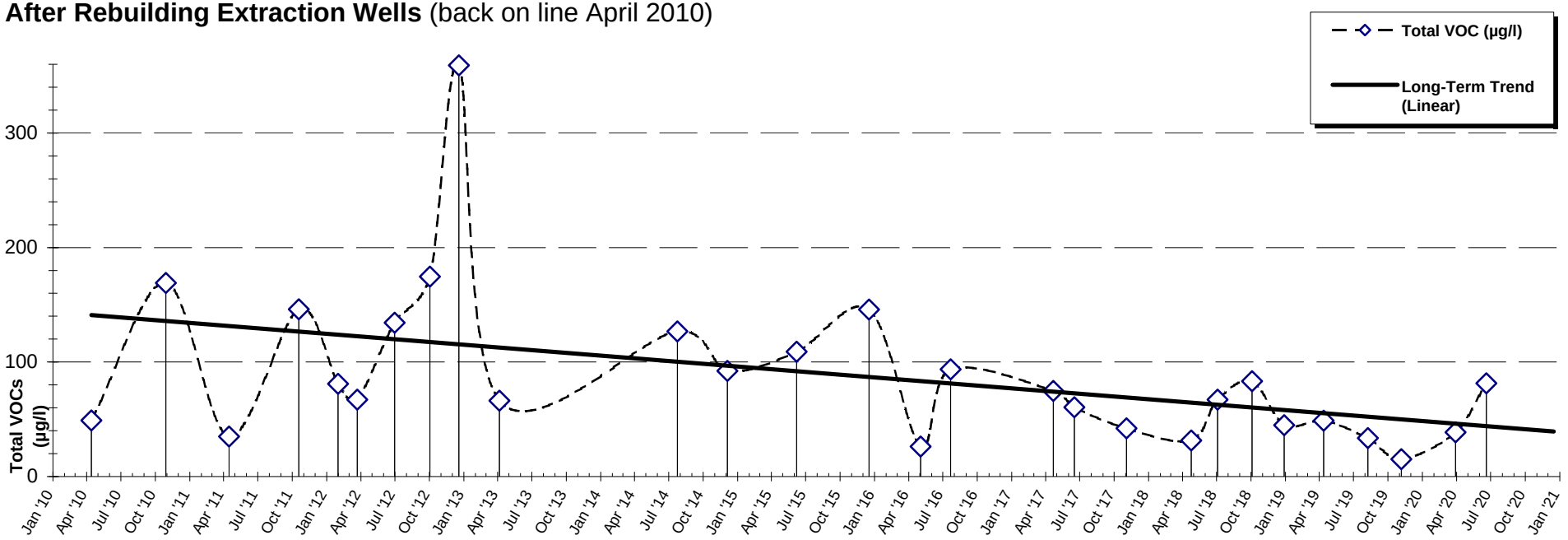


MW-8 After Installing Groundwater Recovery & Treatment System (June 1998)



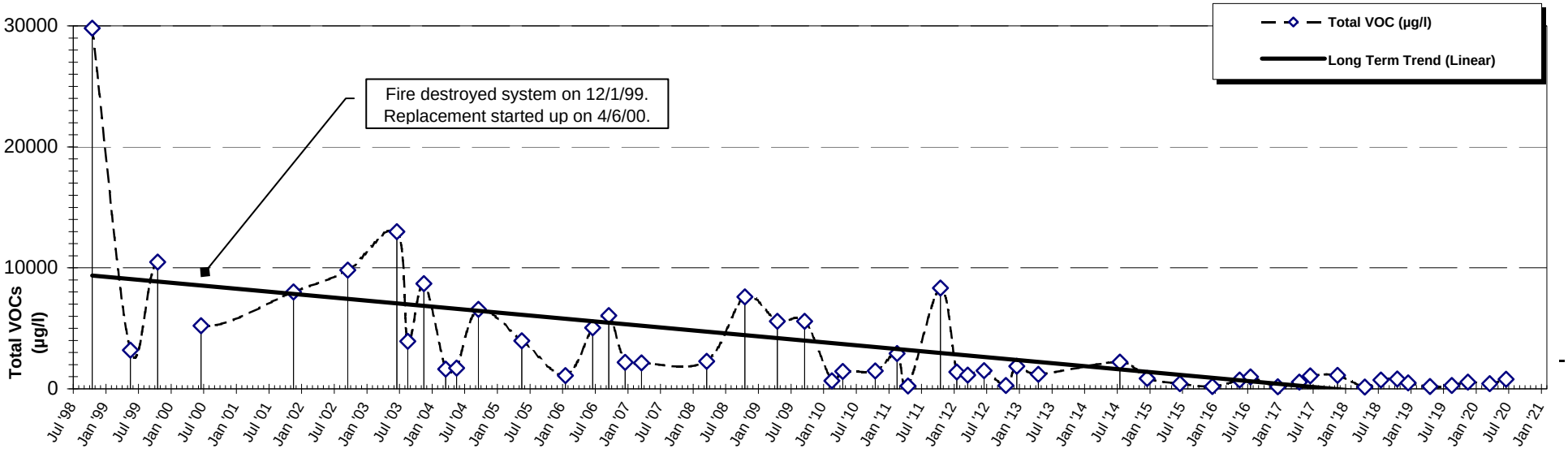
Date	Jun '99	Nov '01	Sep '02	Aug '03	Nov '03	Mar '04	May '04	May '05	Jan '06	Jun '06	Sep '06	Dec '06	Mar '07	Mar '08	Oct '08	Apr '09	Sep '09	Mar '10	Apr '10
VOCs	282	74	138	142	115	63	112	86	22	95	57	68	50	47	62	60	68	64	49

South-Center Perimeter Monitoring Well MW-8
After Rebuilding Extraction Wells (back on line April 2010)



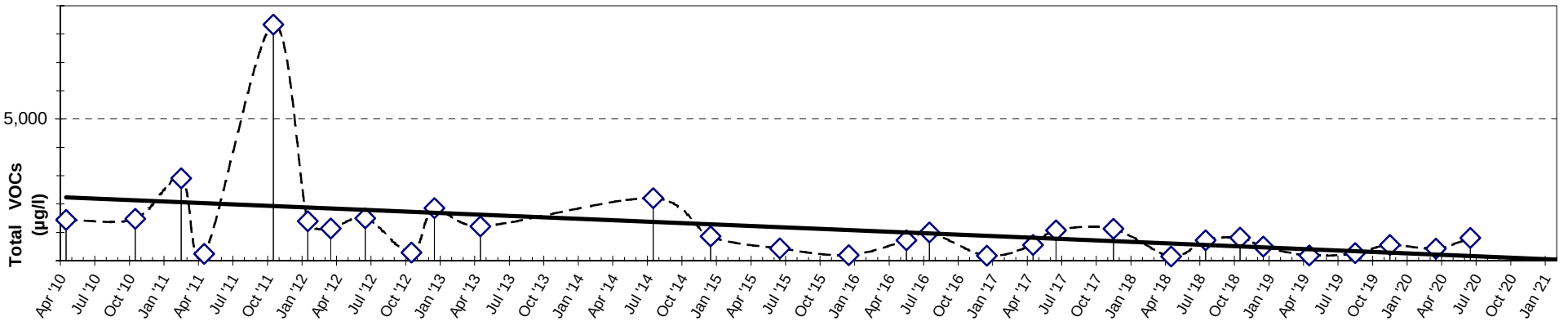
Date	Oct '10	Apr '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
VOCs	169	35	146	81	67	134	175	359	66	127	92	109	146	26	94	75	61	42	31	67	83	45	49	34	15	39	81

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
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

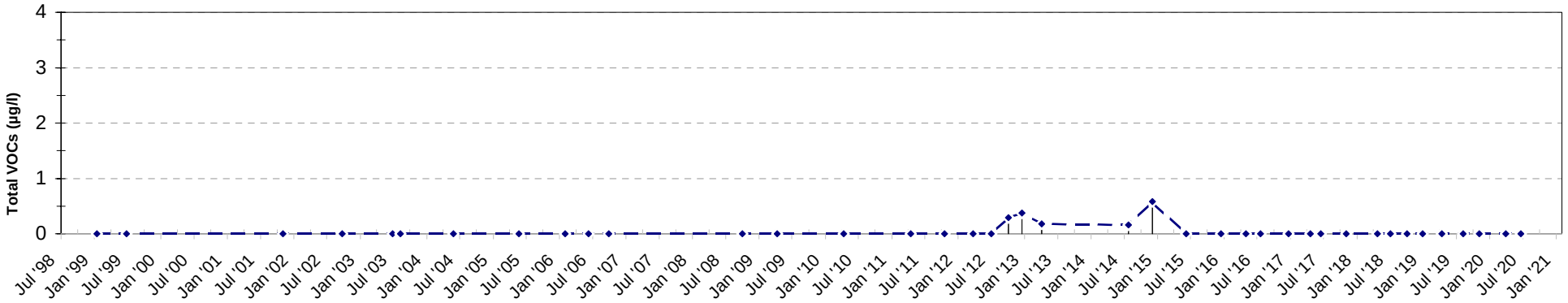
MW-9 North Extraction Well After Rebuilding (back on line April 2010)



Date	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	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Jun '20
TVOCs	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	144	724	809	500	185	269	556	804

CMS Property Associates Remediation Site — Northeast Off-site Monitoring Well MW-10

After Implementing Interim Remedial Measures (Well installed Nov 1998)



Date	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	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	nd	nd	nd	nd	0.29	0.38	0.18	0.16	0.58	nd	nd	nd	**	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

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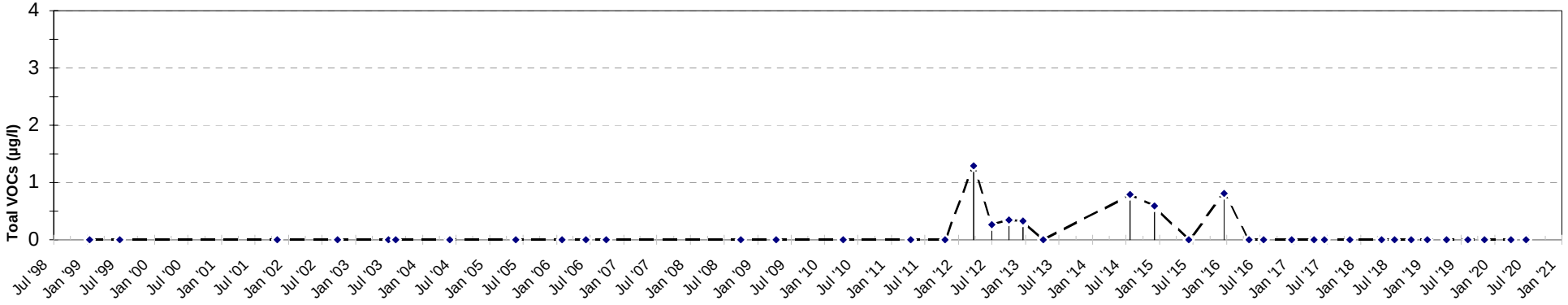
CMS Property Associates Remediation Site — North Off-site Monitoring Well MW-11

After Implementing Interim Remedial Measures (Well Installed Nov 1998)

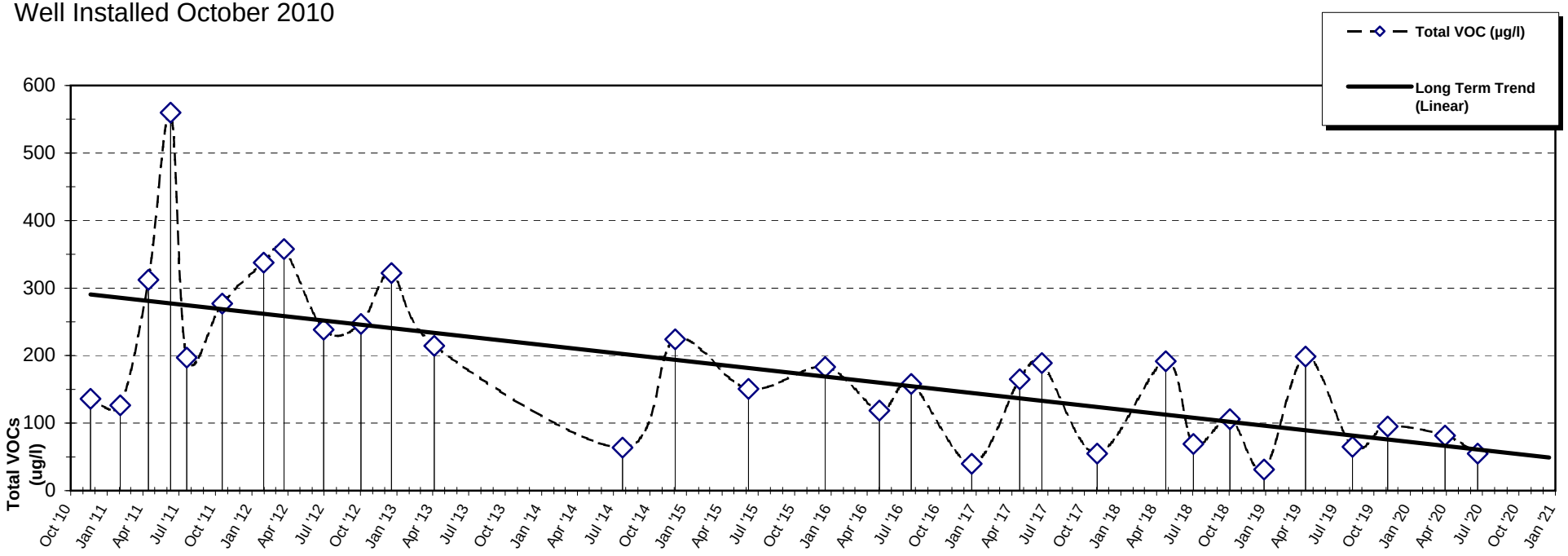


Date	Apr '11	Oct '11	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	nd	nd	1.29	0.26	0.35	0.33	**	0.79	0.59	nd	0.81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

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

After Implementing Interim Remedial Measures (June 1998)
and Rebuilding Extraction Wells (back on line April 2010)

Well Installed October 2010

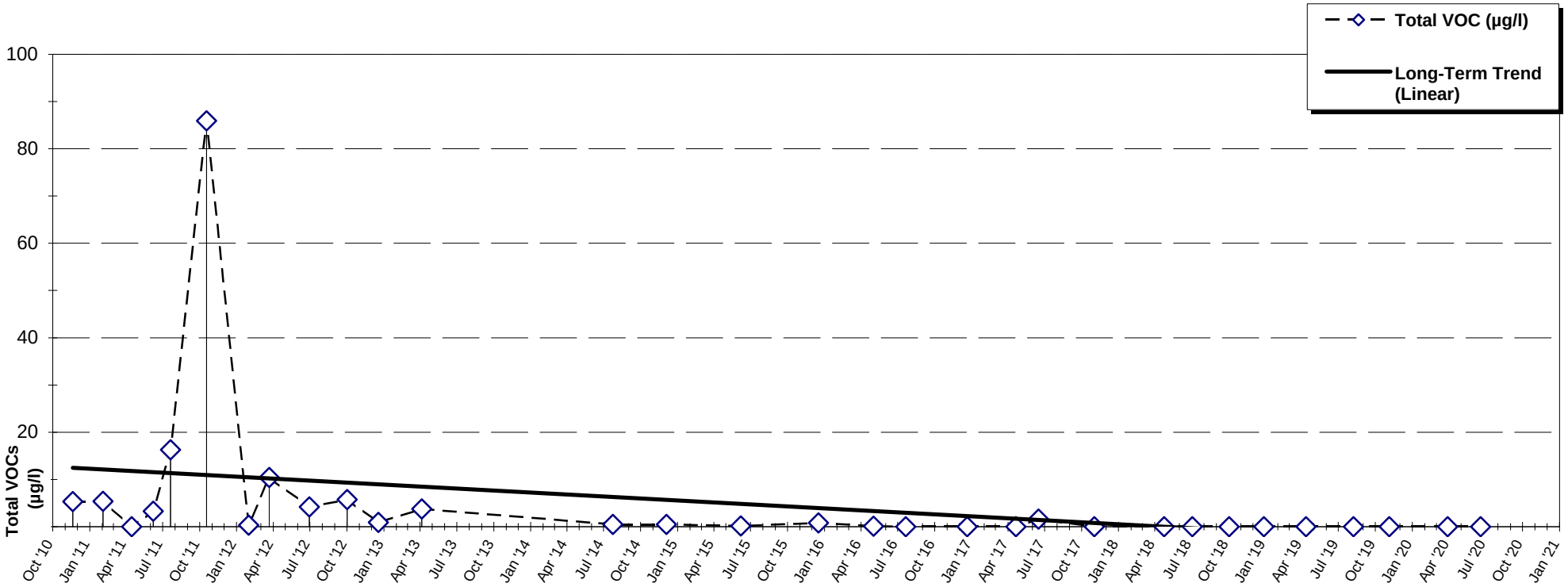


Date	Jul '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Jun '20
TVOCs	197	277	338	358	239	247	322	214	64	224	151	183	119	158	40	165	189	55	192	69	106	31	199	65	95	55

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

After Implementing Interim Remedial Measures (June 1998) and
Extraction Well Modifications (back on line April 2010)

Well Installed October 2010

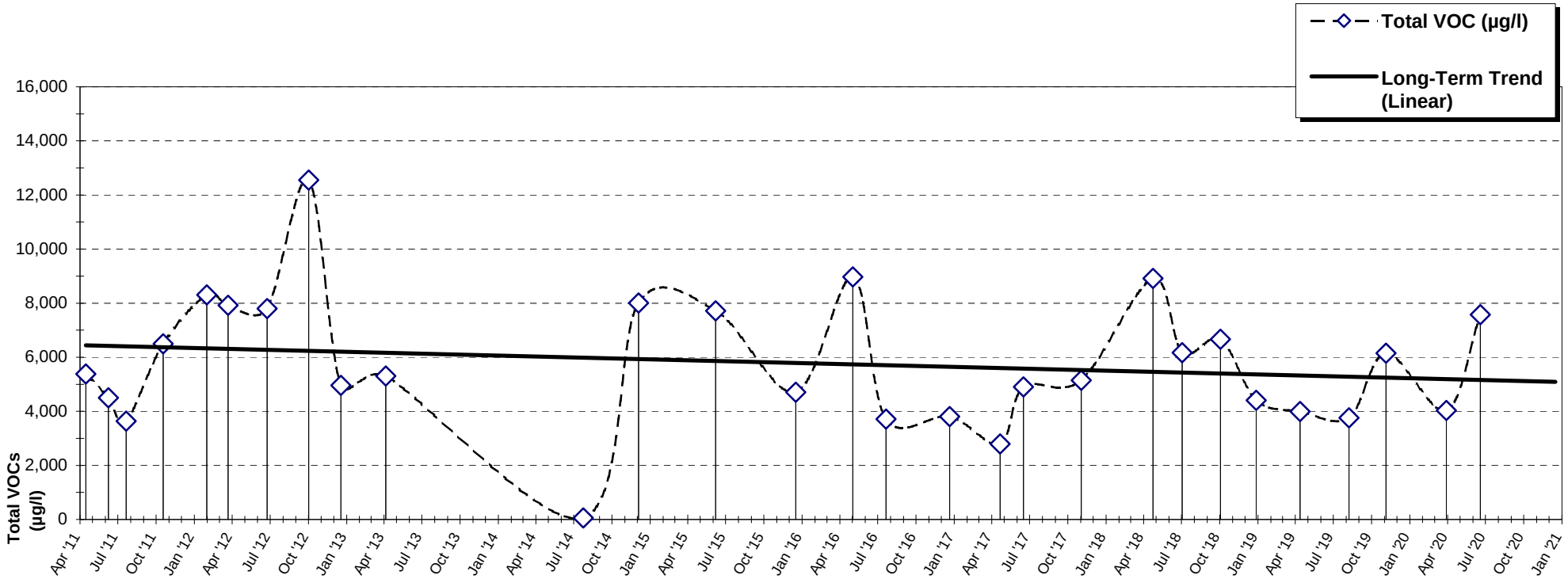


Date	Jul '11	Oct '11	Jan '12	Mar '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Jun '20
TVOCs	16.3	85.92	0.32	10.4	4.19	5.77	0.92	3.77	0.48	0.51	0.16	0.83	0.1	nd	nd	nd	1.61	nd	nd	nd	nd	nd	nd	nd	nd	nd

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

After Implementing Interim Remedial Measures (June 1998) and
Extraction Well Modifications (back on line April 2010)

Well Installed April 2011

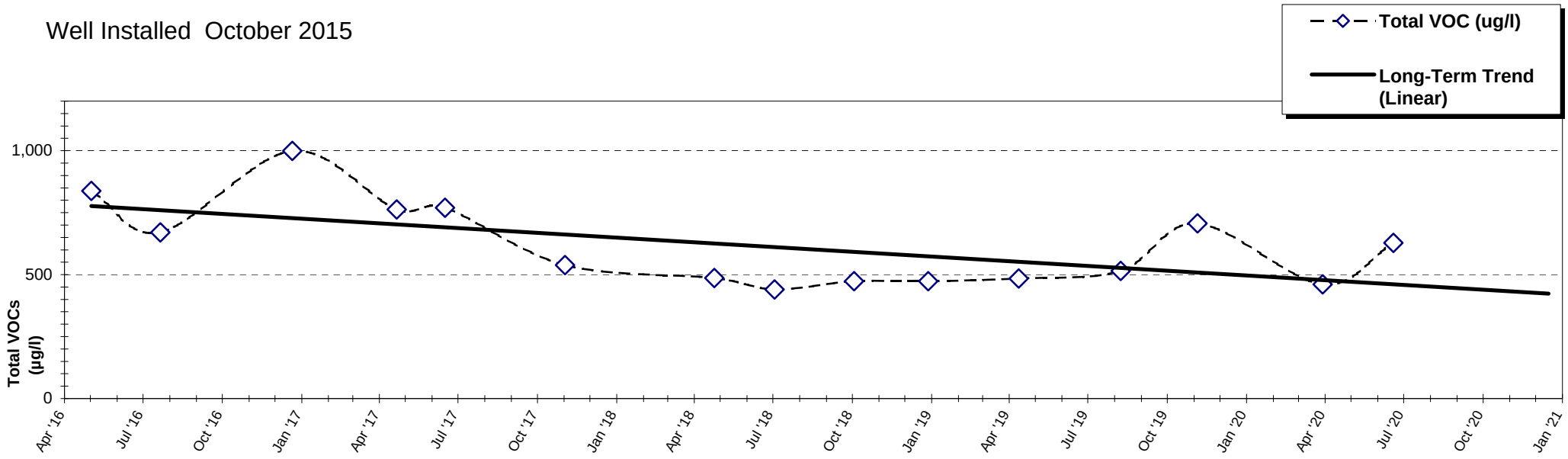


Date	Jul '11	Oct '11	Jan '12	Jun '12	Oct '12	Dec '12	Apr '13	Jul '14	Dec '14	Jun '15	Dec '15	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	3,640	6,498	8,308	7,794	12,548	4,955	5,308	61	8,006	7,710	4,704	8,969	3,710	3,801	2,798	4,902	5,142	8,917	6,169	6,660	4,408	3,995	3,762	6,151	4,034	7,570

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

After Implementing Interim Remedial Measures (June 1998) and
Extraction Well Modifications (back on line April 2010)

Well Installed October 2015



Date	May '16	Jul '16	Dec '16	Apr '17	Jun '17	Nov '17	Apr '18	Jul '18	Oct '18	Dec '18	Apr '19	Aug '19	Nov '19	Mar '20	Jun '20
TVOCs	838	670	999	763	770	538	487	440	473	474	484	515	706	461	628

APPENDIX C

List of COCs and 8260 Analyte list with Groundwater SGCs

CMS REMEDIATION SITE

Volatile Organic Compounds Tested For - EPA Method 8260

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

CAS No.	Analyte		NYS 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	1,2,3,4,5,6,9,14	UST, soil
79-34-5	**1,1,2,2-Tetrachloroethane**		5	1,2	
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane**	Freon 113 (pes)	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
123-91-1	**1,4-dioxane**	added pes 2017		0	
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	--	

CMS REMEDIATION SITE

Volatile Organic Compounds Tested For - EPA Method 8260

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

CAS No.	Analyte		NYS Groundwater SCG (µg/l)	Observed in MW-	And
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	
56-23-5	**Carbon tetrachloride**		5	2	
108-90-7	**Chlorobenzene**		5	8	
75-00-3	Chlorodibromomethane		5	--	
67-66-3	**Chloroethane**		7	1,2,3,5,6,7,9,12	
74-87-3	**Chloroform**	Methyl chloride	5	1,2,3,4,5,6,7,9,14	
107-30-2	**Chloromethane**		5	2,6,13,14	
126-99-8	Chloromethyl methyl ether		5	--	
156-59-2	Chloroprene		5	--	soil
10061-01-5	**cis-1,2-Dichloroethene**		0.4	1,2,3,4,5,6,7,8,9,12,14	
110-82-7	**cis-1,3-dichloropropene**		--	8	
124-48-1	**Cyclohexane**		50	1,2,3,4,5,6,7,12,13,14	
74-95-3	Dibromochloromethane		5	--	
75-71-8	Dibromomethane		5	--	
106-89-8	Dichlorodifluoromethane	Epichlorohydrin	--	--	
100-41-4	Epichlorhydrin		5	--	soil
87-68-3	**Ethylbenzene**		0.5	1,2,3,4,5,6,13,14	
98-82-8	Hexachlorobutadiene		5	--	
1634-04-4	**Isopropylbenzene**		10	2,3,4,6,13	
108-87-2	**Methyl tert-butyl ether**	added 2017 (pes)		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	
104-51-8	**n-Butylbenzene**	added 2019 (pes)	5	1	
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	

CMS REMEDIATION SITE

Volatile Organic Compounds Tested For - EPA Method 8260

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

CAS No.	Analyte		NYS Groundwater SCG (µg/l)	Observed in MW-	And
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
108-38-3	**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 – 1996 to 2018

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	634.1	
Groundwater Surface Elevations																
Jun 7, 2010	620.9	625.5	623.9	608.7	617.1	614.1	620.7	622.7	622.9	620.1	621.4	GWE/TS up - retrofits completed				
Aug 19, 2010	624.6	623.5	624.0	615.5	617.7	616.8	617.4	621.3	623.4	616.3	618.0					
Oct 26, 2010	621.3	623.7	621.9	621.1	618.3	617.8	617.3	621.4	623.6	616.9	618.5	619.6	623.0			
Jan 31, 2011		623.0	623.8	611.0		616.3	618.2	**627.2**	624.0	618.5	621.1	618.2	624.9	Snow piles, ice, frozen wells		
Apr 14, 2011			624.2	610.1	619.6	618.0	620.4	623.2		620.2	621.5	617.6	625.3	617.1	GWE/TS pumping regularly, readings w/ pump running >2 hrs.	
Jun 7, 2011	614.3	618.7	615.7	608.3	616.8	617.6	621.4	623.0	619.6	618.2	616.7	616.5	624.4	623.1	Wilden found w/ no vacuum. Corrected, checked again, ok.	
Jul 20, 2011	622.6	622.9	622.6	610.4	616.6	617.5	617.3	621.1	621.7	618.3	617.8	616.6	622.6	622.9		
Jul 21, 2011					616.6							616.4	622.5	619.5	GWE/TS pumping regularly, readings w/ pump running >2 hrs.	
Aug 17, 2011	614.8	615.9	622.2	611.8	617.3	617.4	617.1	621.2	617.2	615.3	618.0	616.7	622.5	621.6	Readings after GWE/TS shut down 24 hours.	
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 GWE/TS 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	GWE/TS 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	GWE/TS 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	GWE/TS down; mw-3 was/left loose; mw-8 was tight/left loose, under slight pressure.	

	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	
Aug 1, 2012		623.8	623.2	607.4		610.1		621.3	622.7							day after rain; GWE/TS 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";
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		GWE/TS 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		GWE/TS @ 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;

	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 17, 2015			626.2	607.2	Out of service				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; mw-15 developed 5x 1.5l
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 to top' mw-9 mh full
Jul 20, 2016	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/ GWE/TS 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	623.4	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	623.4	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	623.3	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	623.1	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	622.4	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	622.0	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	622.2	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	622.2	621.0	mw-2 disconnected;
Oct 6, 2017	614.0	######	620.1	606.1		617.1	616.1	620.8	617.6	616.2	618.4	617.0	623.1	623.0	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	623.3	621.2	mw-2 disconnected
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	623.5	621.9	mw-2 disconnected;
Feb 20, 2018	622.5	625.1	618.3	607.7		619.2	621.4	623.4	617.5	624.7		619.4	625.0	624.0	621.0	mw-11 under water; -2 disconnected;
Apr 12, 2018	612.8	624.9	612.5	609.0			621.8	622.6	605.5	620.3	618.5	617.5	624.3	623.7	621.2	mw-2 disconnected;
May 5, 2018	612.3	625.1	625.2	605.0		618.6	620.8	622.5	624.2	619.9	621.3	618.0	624.0	623.3	615.8	mw-2 disconnected;
May 29, 2018	611.9	623.9	613.8	605.2		617.8	619.4	622.3	608.0	618.5	618.2	617.0	623.8	622.9	618.5	mw-2 disconnected;
Jul 3, 2018	617.4	624.5	613.7	605.4		617.5	618.5	622.2	606.6	618.1	617.9	616.8	623.9	623.0	619.9	mw-2 disconnected;
Jul 30, 2018	615.2	624.1	613.6	604.5		617.2	617.8	621.6	616.9	617.3	617.9	616.8	623.4	622.6	616.3	mw-2 disconnected;
Oct 3, 2018	624.0	625.0	625.3	604.6	Back in service	617.9	618.7	621.9	624.1	617.8	618.5	622.0	624.5	623.3	619.6	mw-2 disconnected;

	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	
Nov 15, 2018	612.0	623.7	615.2	605.2	617.3	617.9	618.1	620.8	608.6	618.4	618.8	617.2	624.5	623.7	620.8	mw-2 disconnected;
Dec 28, 2018	622.1	625.3	622.4	605.3	617.7	618.1	619.7	621.7	619.7	619.1	620.6	617.2	624.5	623.6	620.6	mw-2 disconnected;
Apr 12, 2019	618.7	624.5	618.7	606.6	618.3	618.9	621.7	622.5	607.1	619.9	618.7	617.4	624.2	623.7	620.1	mw-2 disconnected;
May 23, 2019	622.6	625.4	622.4		620.1	618.0	620.0	622.5	624.0	618.4	618.4	617.2	624.1	623.1	620.4	GWE/TS off; mw-4 under car; mw-2 disconnected
Jun 27, 2019	624.0	625.4	624.7		620.0	618.0	619.5	622.1	624.2	618.5	618.0	617.1	624.3	623.3	620.3	GWE/TS off; mw-2 disconnected
Jul 15, 2019	624.0	625.1	624.4	611.4	619.7	617.4	618.8	622.5	624.0	616.0	617.9	616.5	623.6	623.1	619.6	GWE/TS off; mw-2 disconnected
Sep 24, 2019	624.7	625.4	624.7	614.6	618.4	617.7	619.0	622.8	624.0	616.4	618.0	617.4	624.5	623.7	620.0	GWE/TS off; mw-2 disconnected
Nov 4, 2019	**625.8**	**627.0**	**626.5**	618.9	617.3	618.3	620.5	622.7	**625.5**	616.5	621.4	617.6	624.7	624.0	622.2	GWE/TS off; mw-2 disconnected
Jan 30, 2020	624.3	625.3			617.7	618.7	619.4	622.5		620.1	619.8	617.5	624.4	623.8	621.4	GWE/TS off; mw-2 disconnected
Mar 29, 2020	624.6	626.0	624.9	609.4	619.3	618.8	621.8	623.1	624.8	620.5	622.1	618.4	624.9	623.7	620.8	GWE/TS off; mw-4 under pressure; mw-2 disconnected
Jun 19, 2020	622.7	625.1	624.4	610.8	617.0	617.6	619.8	623.5	624.8	618.5	617.3	616.9	623.8	622.7	619.8	GWE/TS off; mw-2 disconnected
Jul 27, 2020	623.8	625.3	626.2	609.6	617.1	617.9	619.0	622.4	623.8	619.0	617.6	616.7	624.3	623.3	620.4	GWE/TS off; mw-1 full H2O; mw-2 disconnected
Aug 26, 2020	623.4	624.7	624.2	610.5	616.9	617.4	617.6	621.4	623.6	617.9	617.9	616.9	623.2	623.2	619.5	GWE/TS off; mw-2 disconnected
Sep 30, 2020	624.8	624.7	622.9	611.4	617.1	617.5	617.5	621.6	623.7	617.0	617.3	616.7	623.0	623.0	619.7	GWE/TS off; mw-2 disconnected
Oct 21, 2020	625.2	625.2	624.4	612.8	617.6	618.0	619.4	623.4	624.6	618.3	618.1	617.7	625.2	623.4	620.1	GWE/TS off; mw-1 full H2O; mw-2 disconnected
Nov 18, 2020		624.7	625.2	614.0	616.7	617.5	620.5	621.8	624.5	618.6	618.5	616.9	624.3	623.2	620.5	GWE/TS off; mw-2 disconnected
Dec 21, 2020		625.7	625.3		617.4	618.2	621.2	622.2	624.6	618.9	620.2	618.0	624.7	624.4	622.0	GWE/TS off; mw-4 under pressure; mw-2 disconnected