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DEPARTMENT OF PUBLIC WORKS

Kimberly N. Tisa, Region 1 PCB Coordinator
United State Environmental Protection Agency
5 Post Office Square OSRR07-2
Boston, MA 02109-3912

November 1, 2013

MAILED VIA USPS RETURN
RECEIPT CERTIFIED MAIL

Subject: Annual Groundwater Monitoring Results
Greenwich High School Remedial Investigation Program
Greenwich High School
10 Hillside Road, Greenwich, CT 06830

Dear Ms. Tisa:

Attached, please find information detailing the July 2012 and February, May, and August 2013 groundwater sampling and monitoring results for the Greenwich High School site. The next quarterly groundwater monitoring event will be conducted in November 2013. All groundwater monitoring data has been and will continue to be provided to the US Environmental Protection Agency (EPA), the Connecticut Department of Energy and Environmental Protection (CT DEEP) and the Connecticut Department of Public Health (CT DPH). The community will be informed about groundwater sampling events and the results through public updates. This report and associated public updates will be posted to the Greenwich Public Schools GHS & MISA Environmental Testing & Reporting website ([Greenwich Public Schools: GHS & MISA Environmental Testing](#)) so that it is readily accessible.

There are twenty-nine monitoring wells located on the site and all of the wells are screened across the surface of the groundwater table. Groundwater samples have been collected from each well during each of the last four sampling events unless the well was dry or did not produce enough water to sample. During each of the sampling events summarized in this report, groundwater samples were collected and analyzed for polychlorinated biphenyls (PCBs), extractable total petroleum hydrocarbons (ETPH), volatile organic compounds (VOCs), polyaromatic hydrocarbons (PAHs), and metals. Analytical methods are the same as those described in the Remedial Investigation Report (RI), Greenwich High School (AECOM, February 2013).

Chemical analyses performed on groundwater samples during the sampling events summarized in this report were selected based upon chemicals of concern (COCs) in soil and historical groundwater sampling results. As described in the RI, chemicals were determined to be COCs in soil or groundwater if determined concentrations exceeded conservative screening criteria established in federal and state regulations. For groundwater these screening criteria are the Groundwater Protection Criteria (GWPC), Surface Water Protection Criteria (SWPC) and Residential Groundwater Volatilization Criteria (RGWVC) developed by CT DEEP.

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In groundwater monitoring performed prior to the sampling events described in this report, groundwater samples were collected and analyzed for pesticides, herbicides, cyanide and semivolatile volatile organic compounds (SVOCs) and these results are presented in the RI. Herbicides and cyanide were not determined to be COCs in soil and were not detected in groundwater so these analyses were not included in subsequent groundwater sampling events. Pesticides are a COC in soil within limited areas of the site but were not detected in groundwater. Analyses for pesticides were not performed during the latest rounds of groundwater monitoring because they are not a COC in groundwater. However, groundwater samples will be collected and analyzed for pesticides within selected monitoring wells post-remediation to comply with the requirements of the CT DEEP. For SVOCs, only PAHs were determined to be COCs in soil and groundwater. Thus, in subsequent groundwater monitoring events, analysis for PAHs in groundwater samples has continued.

Analytical data for the last four rounds of groundwater sampling are provided in Table 1 which is attached to this report. The data are compared to the GWPC, SWPC, and RGWVC in the table and analytical results or reporting limits when analytes are not detected that exceed these criteria are highlighted. Analytical results that exceed the screening criteria used to evaluate the groundwater data are highlighted on Figures 1 through 4 (one figure for each sampling event) which are also attached to this report. Laboratory analytical data reports for all of the analyses described in this report are provided electronically. The data from these four sampling events, grouped by analysis method, are discussed below.

PCBs

Total PCBs have only been reported at concentrations above the screening criteria (0.5 µg/L for all criteria) in groundwater samples collected from monitoring wells MW-AH16, MW-AA12, MW-AJ13, and MW-Y15. Total PCBs have exceeded the screening criteria during each of the last four sampling rounds at all four locations. These monitoring wells are located within AOC 1 in an area where the highest PCB impacts to soil have been identified. The highest concentrations of PCBs are detected at MW-AH16 and PCB concentrations determined at this location have ranged from 54.4 µg/L to 105 µg/L over the last four sampling events. PCB concentrations at the other three locations are much less and range from 1.92 µg/L to 15.3 µg/L over the same timeframe.

PCBs were detected in other monitoring wells at the site during the July 2012 and August 2013 monitoring events only and at concentrations less than the screening criteria. In July 2012, PCBs were detected at six other monitoring wells; MW-AA19 (0.00649 µg/L), MW-S15 (0.0203 µg/L), MW-T23 (0.0204 µg/L), MW-V12 (0.0353 µg/L), MW-V16 (0.00531 µg/L), and MW-28 (0.00678 µg/L). PCBs were detected in these wells during the July event only and were non-detect for PCBs in all of the other samples collected. In August 2013, PCBs were detected in only MW-AG10 (0.0202 µg/L) and this is the only detection for PCBs at this location. These other detections for PCBs at the site are one-time occurrences at each of the monitoring wells and the measured concentrations are ten to one hundred times less than the screening criteria.

Thus, PCBs are detected in groundwater routinely at four locations within AOC-1 and these detections exceed screening criteria during each of the sampling events. However, all other monitoring wells are typically non-detect for PCBs with only sporadic single detections at other monitoring locations. From the data collected to date, PCB impacts to groundwater are very limited in

Extractable Total Petroleum Hydrocarbons

For these four monitoring events, ETPH was reported at concentrations above screening criteria in groundwater samples from MW-AA12 (July 2012), MW-AH16 (February 2013) and MW-Y15 (August 2012). These are three of the four monitoring wells where PCBs are commonly detected and all are located within an area of high soil impacts in AOC 1. However, ETPH was only detected in each monitoring well one time each and was not detected in any of the other monitoring wells at the site. ETPH impacts at the site are not significant and there is no evidence for migration of ETPH impacts offsite.

Volatile Organic Chemicals

VOCs have been detected at the site but only methyl ethyl ketone (MEK) was ever reported at a concentration above screening criteria. MEK exceeded the GWPC in one sample collected from MW-AA12 in July 2012. MEK was not detected in subsequent groundwater samples collected at this location and reporting limits were less than the screening criteria.

VOCs have not been detected in eighteen of the site monitoring wells including all of those located in the southeast corner where groundwater discharges from the site. In seven other monitoring wells, one VOC was detected during one of the four sampling events and all other VOCs were not detected. The only consistent detection of any VOC is methyl tert-butyl ether (MTBE) at monitoring well MW-BB34. MTBE was detected in all four monitoring events at concentrations less than the screening criteria. However, MW-BB34 is located in the northeast corner of the site where groundwater flows onto the property and the impacts measured at this location are likely due to offsite sources. VOC impacts at the site are not significant as even detections are sporadic and there is no evidence for migration of VOC impacts offsite.

Polyaromatic Hydrocarbons

PAHs have not been detected in nineteen of the twenty-nine monitoring wells sampled at the site and have only been detected at concentrations less than the screening criteria in three other wells. All of the monitoring wells where PAHs have been detected are located within AOC 1 except for MW-T23 and MW-AP28.

PAHs have been reported at concentrations above screening criteria in groundwater samples collected from MW-AA12, MW-AG10, MW-AJ13, MW-AJ19, MW-AM21, MW-T23 and MW-Y15 during one or more of the sampling events. Phenanthrene was detected at concentrations exceeding screening criteria in all of these wells but only exceeds the criteria in more than two sampling events at monitoring well MW-AA12 where detected concentrations of phenanthrene exceeded screening criteria in all four sampling events. Benz(a)anthracene exceeded screening criteria once in monitoring wells MW-AA12 and MW-T23 and benzo(b)fluoranthene exceeded screening criteria once in monitoring well MW-AA12. All of the monitoring wells where screening criteria were exceeded on at least one occasion are located within AOC 1 except for MW-T23.

PAH impacts to the site are mostly limited to within AOC 1 and, except for phenanthrene at MW-AA12, these measured impacts are sporadic and inconsistent. PAHs have never been detected in any groundwater samples collected from the downgradient (southeast corner) at the site. From the data collected to date, PAH impacts to groundwater are very limited in extent and are not consistently

measured. There is no evidence for migration of these impacts beyond the limited area of impacts or offsite.

Metals

At least one metal has been reported at a concentration above screening criteria in eighteen of the twenty-nine monitoring wells at the site. However, metals results reported to date do not indicate a consistent pattern of groundwater impacts. The following generally consistent patterns were noted in the metals analytical results:

- Arsenic has been reported at concentrations above screening criteria in samples from MW-S15 during each of the last four sampling rounds. Arsenic is not commonly detected in groundwater at the site (27 detections in 149 total samples or 18%). However, when detected the concentrations exceed the screening criteria. Other than the sample results from MW-S15, there are no locations where arsenic has been detected more than twice in the last four sampling events and there is no consistent pattern indicating migration of arsenic impacts from the site.
- Barium has been reported at concentrations above screening criteria in samples from MW-AA19 and MW-X17 during each of the last four sampling rounds. Barium is commonly detected in groundwater at the site (149 detections in 149 total samples or 100%). However, detected concentrations exceeding the screening criteria have only been found in three other monitoring wells at the site during only one of the four sample events. There is no consistent pattern indicating migration of barium impacts from the site.
- Various metals, including arsenic, barium, chromium, copper, lead, vanadium and/or zinc have been reported at concentrations above screening criteria in samples from MW-T23 during each of the last four sampling rounds. This well is installed within bedrock and typically has higher turbidity than other monitoring wells at the site when sampled. Both filtered and unfiltered samples for analysis of metals will be submitted for analysis from this well during the November sampling event. The results will be reviewed to determine if the well needs to be redeveloped or replaced.

Screening Criteria Exceedance Summary

Figures 1 through 4 depict the well locations and where exceedances of groundwater screening criteria were reported during the last four sampling rounds.

For organics, PCBs and PAHs are more commonly reported at concentrations that exceed screening criteria but these impacts are generally limited to within AOC 1. The area of highest impacts to soil within AOC 1 is roughly defined by monitoring wells MW-AH16, MW-AJ13, MW-Y15 and MW-AA12. PCBs have not been detected at concentrations exceeding the screening criteria outside of these four monitoring wells. PAHs have been reported at concentrations above screening criteria in two samples collected from MW-T23, phenanthrene in July 2012 and benzo(a)anthracene in August 2013, located southeast of AOC 1. However, these sporadic detections do not indicate migration of impacted groundwater. These findings have generally been consistent throughout the quarterly groundwater monitoring program and that organic groundwater impacts are not migrating from the site.

Metals data collected to date do not indicate a consistent pattern of groundwater impacts exceeding screening criteria. Barium has consistently been found at levels exceeding the screening criteria at MW-

X17 and MW-AA19 and arsenic has consistently exceeded the criteria at MW-S15. However, other metals impacts at the site have been sporadic and inconsistent. Data continue to indicate metals impacts to groundwater do not appear to be migrating from the site at concentrations above screening criteria.

Groundwater Elevation Contours

Groundwater elevation contours plans for the last four monitoring events are shown on Figures 5 through 8. The groundwater contours indicate that groundwater flows onto the site from the east and the north and that there is a groundwater mound located beneath Field 3. Groundwater flows off the site in the southeast corner. Groundwater flow contours and the direction of groundwater flow have been consistent throughout the last year of monitoring activities.

AECOM performed an evaluation to investigate the geostatistical nature of groundwater elevation measurements at the Site. The investigation was performed for the purpose of providing additional insight into the distribution of groundwater contours and to evaluate the presence of the groundwater mound commonly measured on the western portion of the site beneath Field 3. Previous groundwater contour figures have been generated for the site using linear interpolation between groups of three wells. The linear interpolation method is commonly used but does not account for potential variance in groundwater elevation measurements that may be present and quantifiable. The geostatistical method employed to evaluate groundwater elevation measurements and summarized here quantifies this measurement variance to provide additional insight into the distribution of groundwater contours and the presence of the groundwater mound.

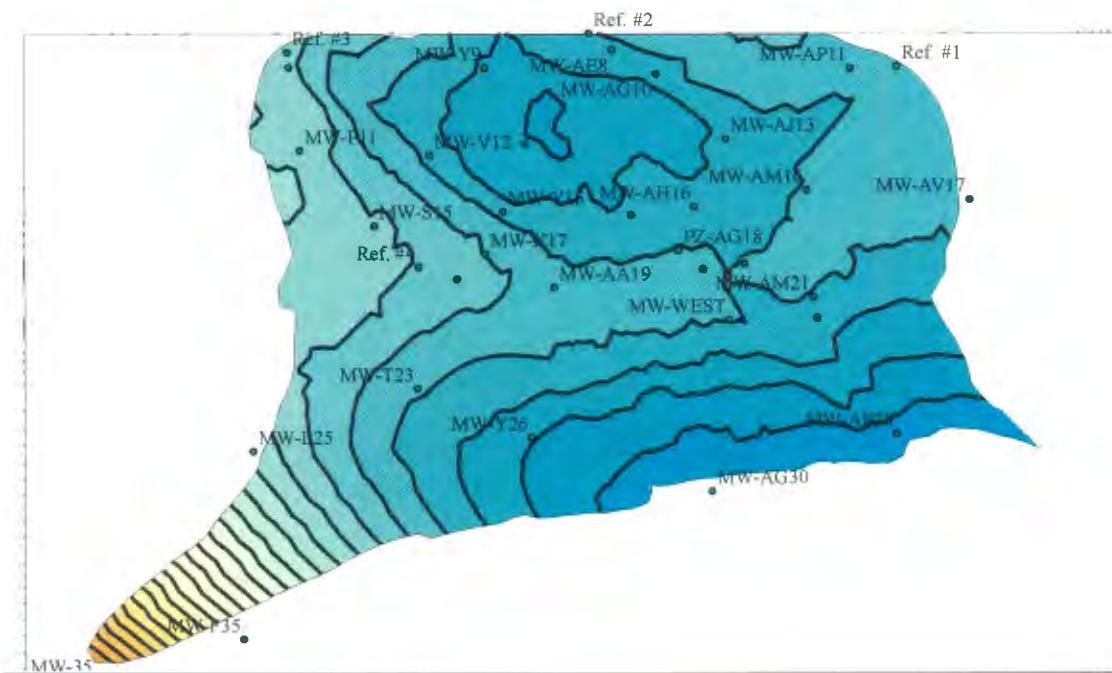
A semivariogram cloud and surface was calculated for groundwater measurements collected in August 2013 using ArcGIS Geostatistical Analyst. The semivariogram cloud is a cross plot of semivariance versus lag distance. A distinct bimodal nature in the geostatistical properties of measurements from the Site was observed, with the fill material and natural materials showing different geostatistical natures. Further, measurement variance from the Site is highly anisotropic, with the major axis of the variance ellipsoid running from southwest to northeast.

Groundwater contours were modeled using the ordinary kriging method (Matheron, 1963), which assumes a stationary but unknown mean for the data (i.e. no trend). The method calculates a best linear unbiased estimator of groundwater contours for a given data set and model semivariogram. The kriging method has several advantages to other methods of groundwater contouring, in that it provides quantitative, unbiased, and smooth contours that may be modeled to the variance properties of the Site data set.

To investigate the distribution of groundwater contours and the groundwater mound commonly observed on the western portion of the Site, a series of groundwater contours were generated based on the calculated semivariance observed in site data. Two semivariogram models were prepared for the evaluation, based on the lower and higher variance distributions calculated using the Site data. Each model was used to generate a separate set of groundwater contours.

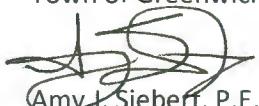
Both sets of groundwater contours (higher variance model shown below) clearly display the presence of the groundwater mound on the western portion of the Site and display the same distribution of contours as previous evaluations generated from interpolation of site groundwater measurements. Based on this evaluation, interpolation of site measurements is an accurate method and provides results that are consistent with the geostatistical nature of groundwater measurements at the Site. Figure 9 shows the contours developed using the higher variance model.

Figure 9 - Kriging Contours – Higher Variance Model



If you have any questions, comments, or concerns you may contact me via phone at (203) 622-7740 or via email at asiebert@greenwichct.org or Malcolm Beeler via phone at (860) 263-5806 or via email at malcolm.beeler@aecom.com.

Very Truly Yours,
Town of Greenwich



Amy J. Siebert, P.E.

Commissioner, Department of Public Works

cc: G. Trombly, CT DEEP
L. Saliby, CT DEEP
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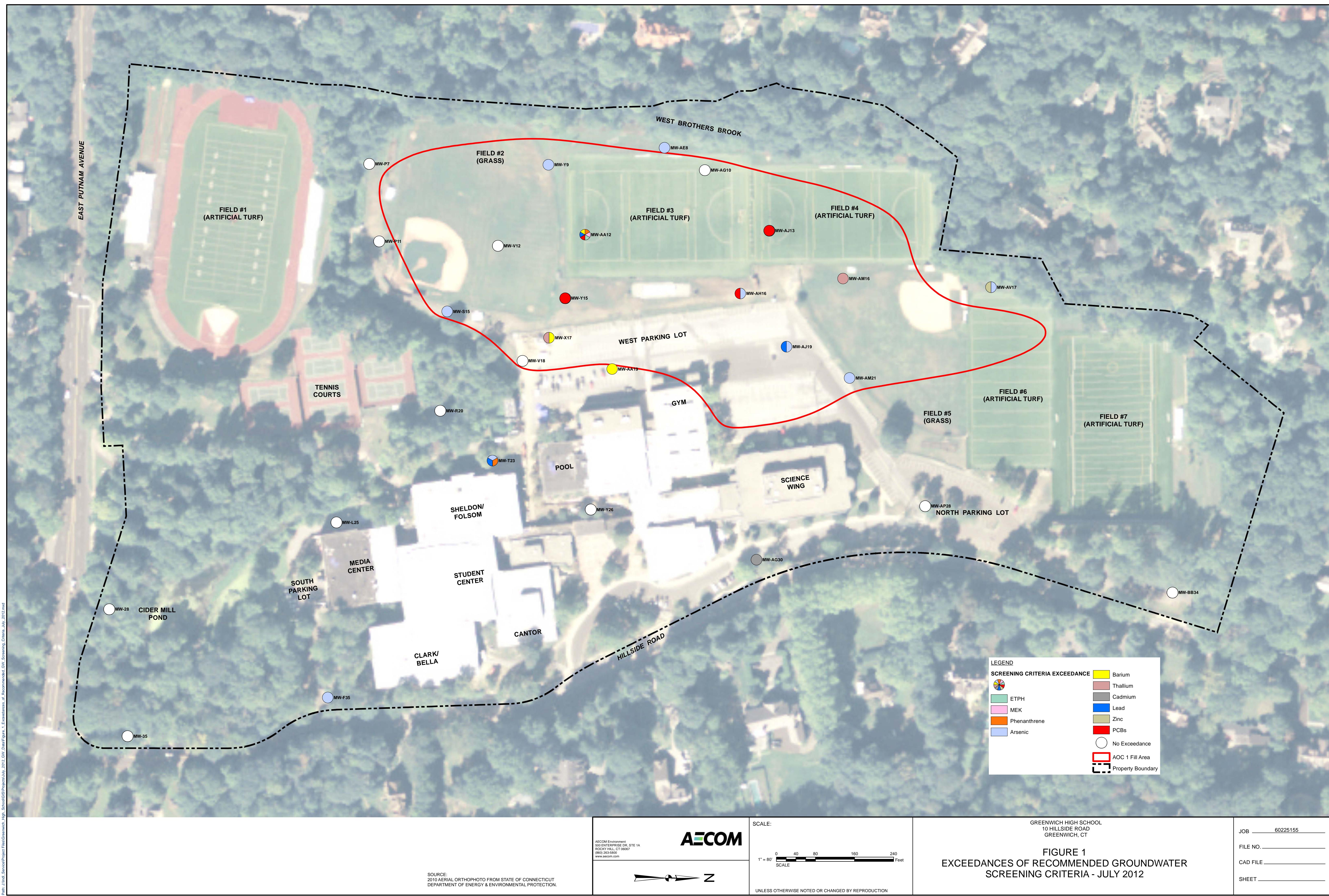
Attachments

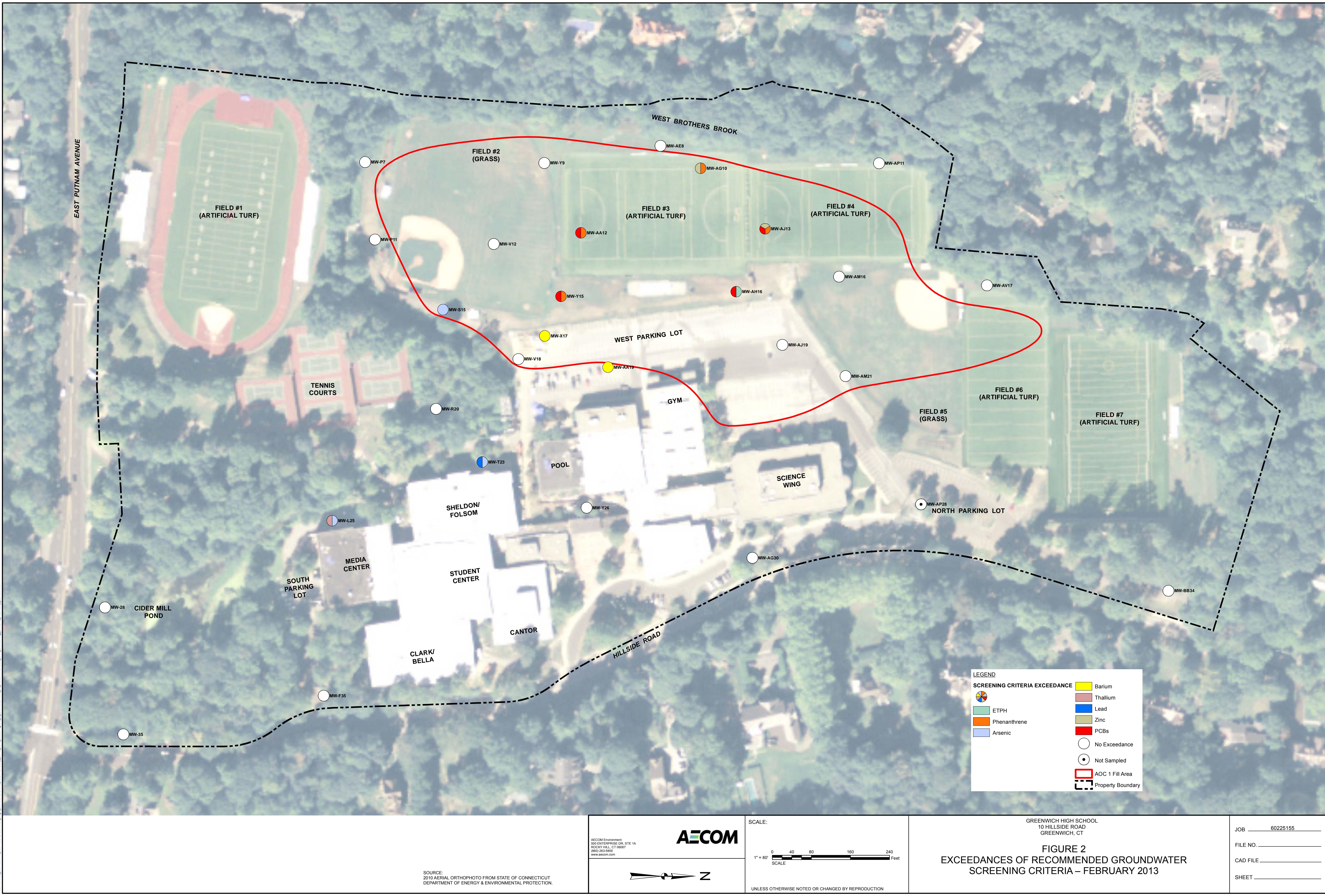
Table 1
Historical Groundwater Analytical Data

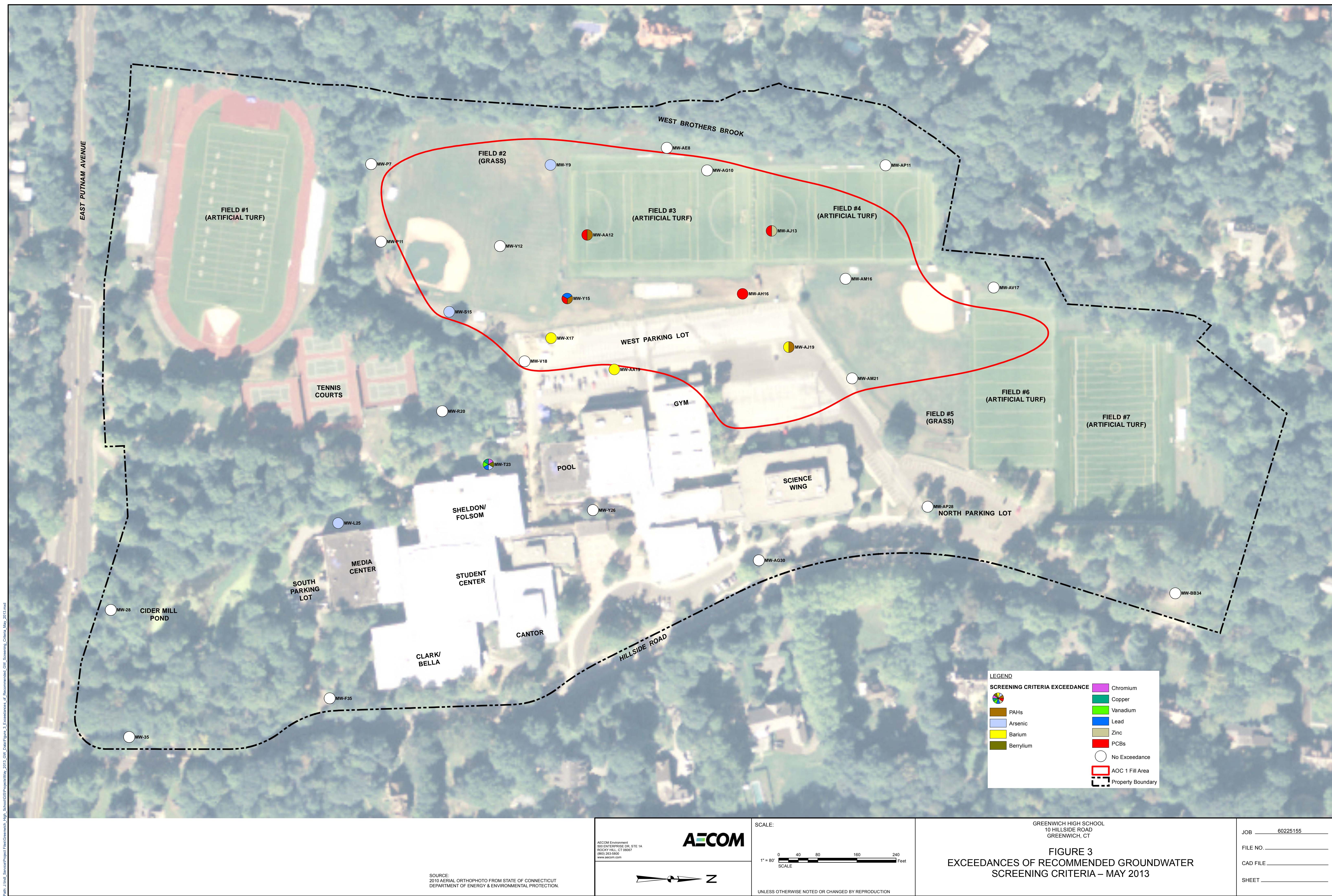
Location ID	Sample ID	GWPC	1996 RES GWVC	SWPC	MW-AJ13	MW-AJ19	MW-AJ19	MW-AJ19	MW-AM16	MW-AM16	MW-AM21	MW-AM21	MW-AM21	MW-AV17	MW-AV17	MW-BB34	MW-BB34	MW-BB34	MW-F35	MW-F35	MW-L25	MW-L25									
Soil Date	SDG				MW-AJ13-021413-1	MW-AJ13-021413-2	MW-AJ13-021413-1	MW-AJ13-021413-2	MW-AJ13-021413-1	MW-AJ13-021413-2	MW-AJ13-021413-1	MW-AJ19-0212013-1	MW-AJ19-0212013-2	MW-AJ19-0212013-1	MW-AJ19-0212013-2	MW-AJ19-0212013-1	MW-AJ19-0212013-2	MW-AM16-0212013-1	MW-AM16-0212013-2	MW-AM21-0212013-1	MW-AM21-0212013-2	MW-AM21-0212013-1	MW-AV17-0212013-1	MW-AV17-0212013-2	MW-BB34-0212013-1	MW-BB34-0212013-2	MW-BB34-0212013-1	MW-F35-0212013-1	MW-F35-0212013-2	MW-F35	MW-L25
					7/29/2012	7/29/2012	5/16/2013	5/16/2013	5/16/2013	5/16/2013	5/16/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	
CT ETPH (mg/L)					S653469	S664588	S669757	S675329	S684419	S689757	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	S695379	
C ₆ -C ₁₀ Aliphatic Hydrocarbons (ETPH)	0.25	NE	NE	<0.1 U	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1 U	<0.2	<0.2	<0.1 U	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
VOC (ug/L)																															
1,2-Dibromoethane	0.05	4	NE	<0.50 U	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50 U	<0.50	<0.50	<0.50 U	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2-Butanone (MEK)	400	60000	NE	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Acetone	700	50000	NE	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Deuterium	8	100	U	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0			
Chloromethane	1	NE	NE	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00		
1,2-Dichloroethene	70	NE	NE	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
m,p-Xylenes	530	21300	NE	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
Methyl Isobutyl Ketone	350	50000	NE	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0			
Methyl Tert Butyl Ether (MTBE)	70 (1)	50000	NE	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
Naphthalene	280	NE	NE	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
Tetrahydrofuran	1000	35000	400000	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
Toluene	1000	2000	NE	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00			
Total PAHs	5	219	2340	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00			
PAH-SIMS (ug/L)			</																												

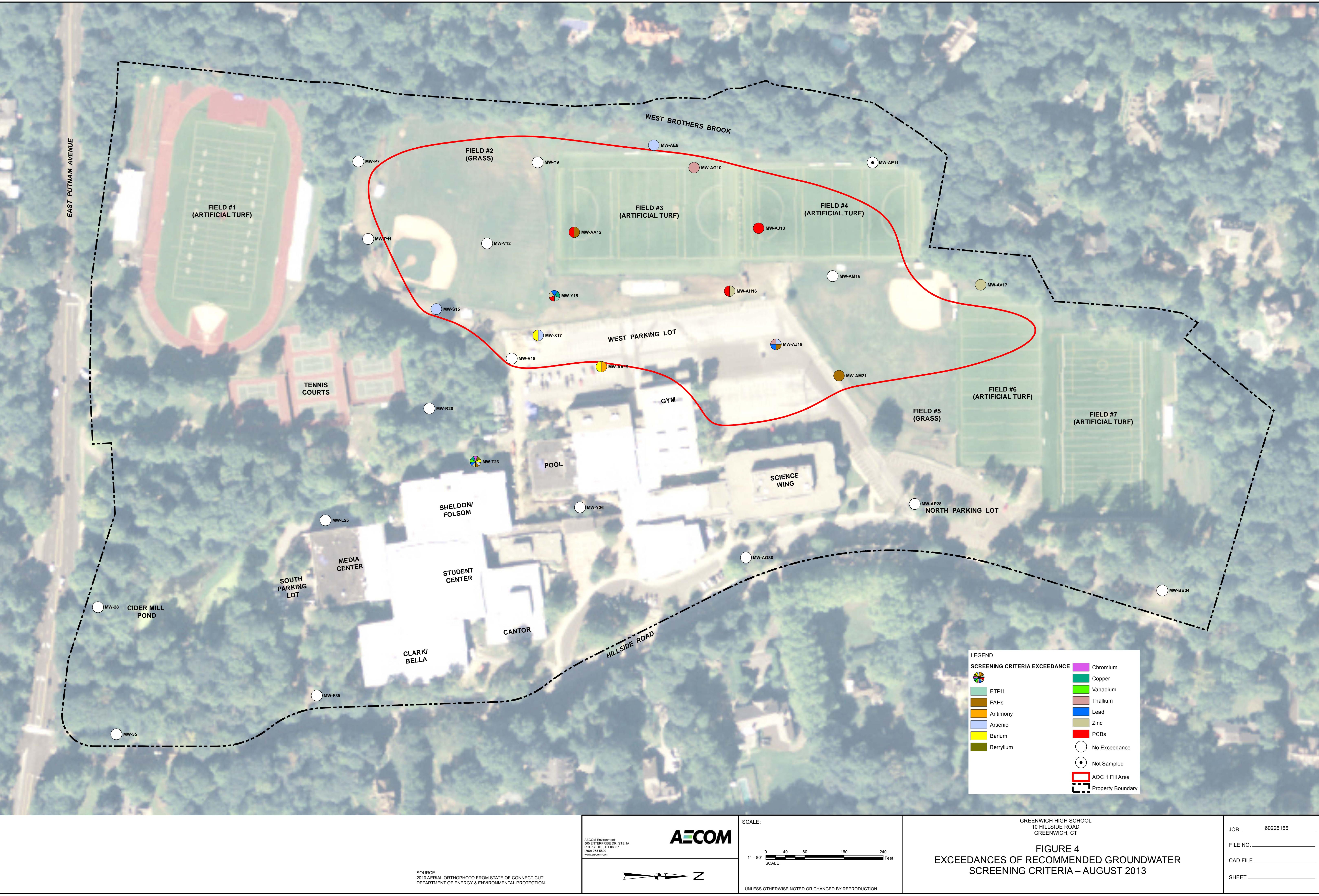
Table 1
Historical Groundwater Analytical Data

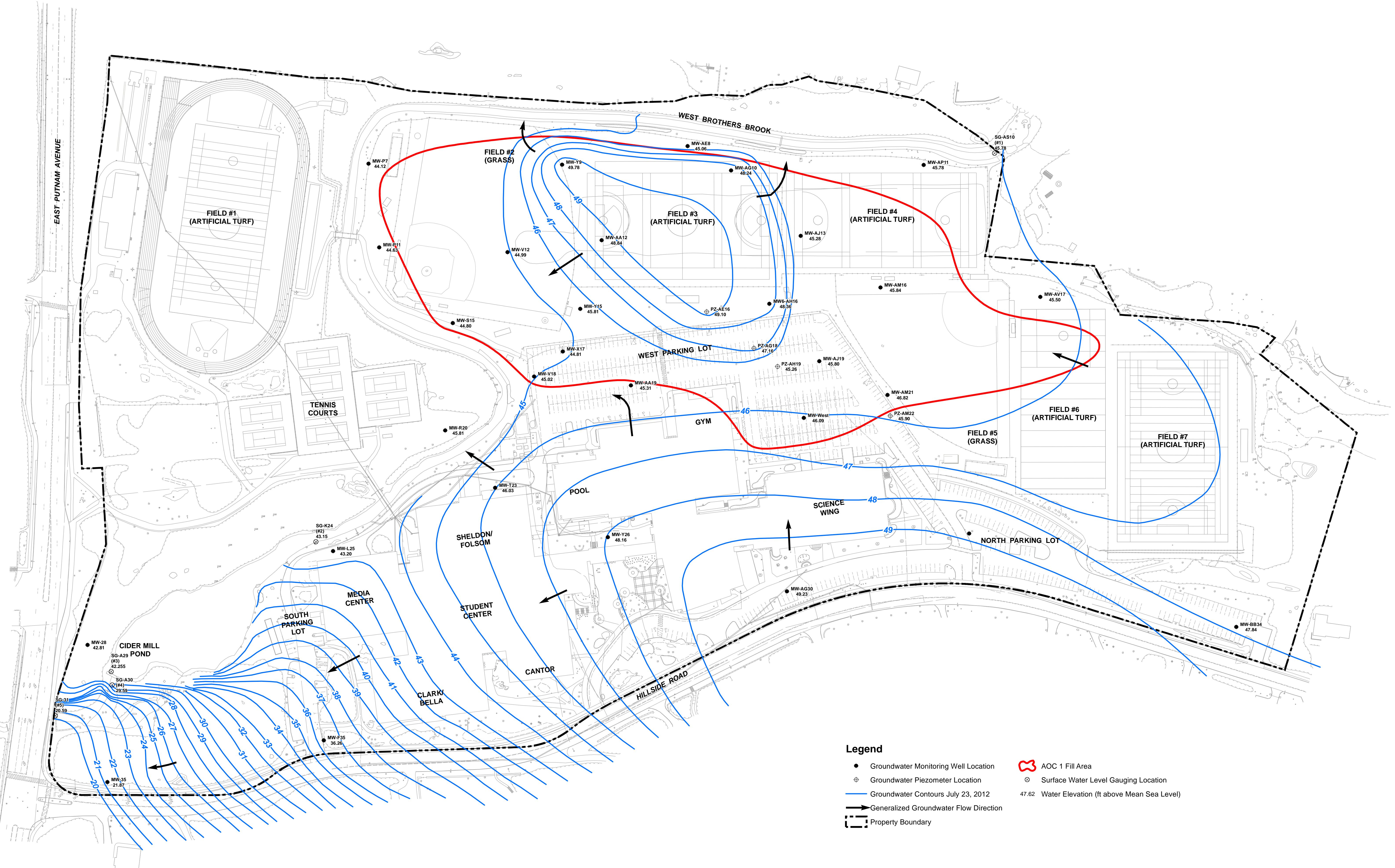
Location ID Sample ID Sample Date SDC	GWPC	1996 RES GWVC	SWPC	MW-V12 MW-V12-051513-1 5/15/2013 \$869668	MW-V12 MW-V12-06202013-1 8/20/2013 \$875322	MW-V12 MW-V12-072512-1 7/25/2012 \$864419	MW-V18 MW-V18-051413-1 5/14/2013 \$865640	MW-V18 MW-V18-06202013-1 2/20/2013 \$875322	MW-V18 MW-V18-072512-1 7/25/2012 \$865559	MW-X17 MW-X17-051513-1 5/15/2013 \$869668	MW-X17 MW-X17-06202013-1 2/20/2013 \$875322	MW-X17 MW-X17-072512-1 7/25/2012 \$865348	MW-Y15 MW-Y15-051513-1 5/15/2013 \$869668	MW-Y15 MW-Y15-06202013-1 2/20/2013 \$875322	MW-Y15 MW-Y15-072512-1 7/25/2012 \$865468	MW-Y15 MW-Y15-08202013-1 8/20/2013 \$869668	MW-Y26 MW-Y26-051513-1 5/15/2013 \$869668	MW-Y26 MW-Y26-06202013-1 2/20/2013 \$875322	MW-Y26 MW-Y26-072512-1 7/25/2012 \$865446	MW-Y9 MW-Y9-051513-1 5/15/2013 \$869668	MW-Y9 MW-Y9-06202013-1 2/20/2013 \$875322	MW-Y9 MW-Y9-072512-1 7/25/2012 \$865469
CT ETPH (mg/L)																						
C ₁ -C ₆ Aliphatic Hydrocarbons (ETPH)	0.25	NE	NE	<0.2	<0.2	<0.1 U	<0.2	<0.2	<0.1 U	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.1 U	<0.2	<0.2	<0.1 U	<0.2	<0.2	
VOC (ug/L)																						
1,2-Dibromoethane	0.05	4	NE	<0.50	<0.50	<0.50 U	<0.50	<0.50	<0.50 U	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50 U	<0.50	<0.50	<0.50 U	<0.50	<0.50	
2-Butanone (MEK)	400	50000	NE	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0		
Acetone	700	50000	NE	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0		
Chloroform	0	200	1000	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0		
Chlorobenzene	NE	NE	NE	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00		
cis-1,2-Dichloroethylene	70	NE	NE	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00		
m,p-Xylenes	530	21300	NE	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00		
Methyl Isobutyl Ketone	350	50000	NE	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 U	<10.0	<10.0	<10.0 U	<10.0	<10.0		
Methyl Tert Butyl Ether (MTBE)	70 (1)	50000	NE	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00		
Naphthalene	280	NE	NE	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00		
Tetrahydrofuran	NE	NE	NE	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00 U	<2.00	<2.00	<2.00 U	<2.00	<2.00		
Toluene	1000	23500	4000000	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00		
Trichloroethylene	5	219	2340	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 U	<1.00	<1.00	<1.00 U	<1.00	<1.00		
PAH-SIMS (ug/L)																						
1-Methylnaphthalene	NE	NE	NE	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090	<0.090	<0.090	0.232	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	
2-Methylnaphthalene	NE	NE	NE	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090	<0.090	<0.090	0.116	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	
Acenaphthene	NE	NE	NE	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090	<0.090	<0.090	0.318	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	0.053	
Acenaphthylene	420	NE	0.3	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090	<0.090	<0.090	0.484	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	
Anthracene	2000	NE	1100000	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090	<0.090	<0.090	0.071	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	
Benz(a)anthracene	0.06	NE	0.3	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090	<0.090	<0.090	0.292	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	
Benz(a)anthracene	0.2	NE	0.3	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	<0.090	<0.090	<0.090	0.433	<0.090 U	<0.090	<0.090	<0.090 U	<0.090	<0.090	
Benzol(h)anthracene	0.08	NE	0.3	<0.090	<0.090	<0.090 U	<0.090	<0.090	&													









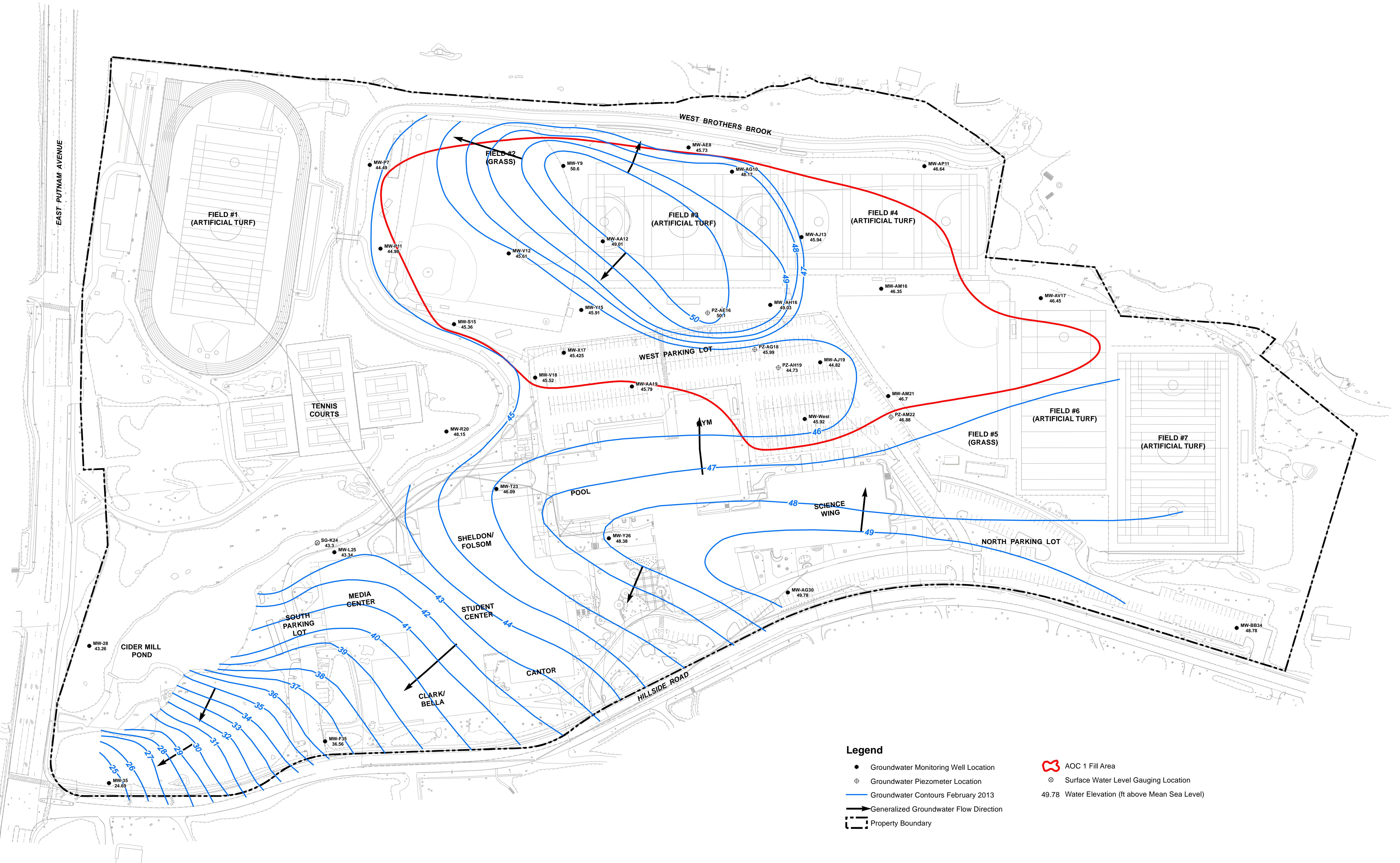


Legend

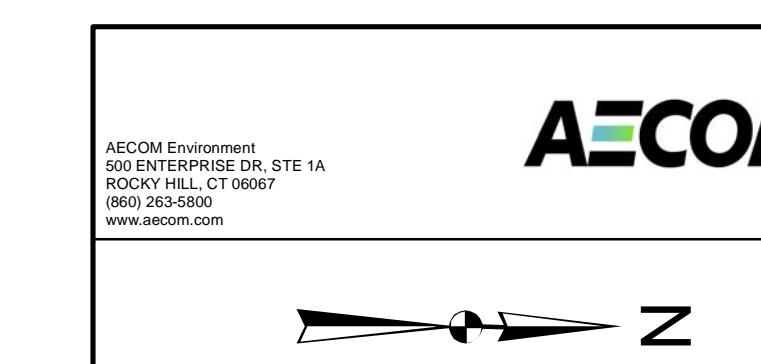
- Groundwater Monitoring Well Location
- ⊕ Groundwater Piezometer Location
- Groundwater Contours July 23, 2012
- Generalized Groundwater Flow Direction
- [- -] Property Boundary

GREENWICH HIGH SCHOOL
10 HILLSIDE ROAD
GREENWICH, CT

FIGURE 5
GROUNDWATER ELEVATION CONTOURS - JULY 2012



Path: J:\ndl\Service\Project_Elles\Greenwich_High_School\GIS\Projects\Groundwater Elevation Contours February 2013\Figure 6 Groundwater Elevation Contours February 2013.mxd



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**GREENWICH HIGH SCHOOL
10 HILLSIDE ROAD
GREENWICH, CT**

FIGURE 6 ELEVATION CONTOURS - FEBRUARY 2013

JOB 60225155

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CAD FILE _____

FIGURE 6 GROUNDWATER ELEVATION CONTOURS - FEBRUARY 2013

