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GROUNDWATER
CONTINUOUS ACTION PLAN

BRAMLETTW MGP SITE
GREENVILLE, SOUTH CAROLINA

January 2009

Duke Energy
PO Box 1006
Charlotte, NC 28201-1006

A28

Tables

Figures

1.0 INTRODUCTION – SITE DESCRIPTION

The former Bramlette Manufactured Gas Plant (MGP) and CSX/Vaughn landfill site is located in the city of Greenville, North Carolina. The MGP site covers 3.69 acres in the western quadrant of the intersection of Bramlette Road and West Washington Street. The CSX/Vaughn Landfill site covers approximately 7.0 acres and is located approximately 800 feet west of the aforementioned intersection, south of Bramlette Road (**Figure 1**).

Both sites are owned by CSX Transportation (CSXT) and are part of more extensive CSXT property holdings that total approximately 40 acres, consisting of rail lines and an office for crew transfers and scheduling activities. The majority of these properties lie within the floodplain of the Reedy River, located to the west. Land use immediately east of the sites is primarily residential with the exception of the property located in the southern quadrant of the intersection of Bramlette Road and West Washington Street, which contains a school building owned by the Greenville County School District. The property bordering the MGP site to the north is owned by Suburban Propane.

2.0 REPORT OBJECTIVES

The objectives of this report are to: review groundwater contamination; present groundwater assessment data; and propose a long-term groundwater monitoring program for MGP constituents. Soil, sediment, and surface water contamination has been addressed in past reports (see Section 3.0) and will not be addressed in this Groundwater Continuous Action Plan (CAP).

3.0 SITE HISTORY

The Bramlette MGP site was originally developed as a manufactured gas plant by Southern Public Utilities in 1917. The site eventually contained a retort house, three gas holders, a water gas plant, tar and ammonia washer tanks, purifiers, a tar extractor and holder, and an underground heating oil tank. Locations of site structures are indicated on **Figure 2**.

Gas plant ownership and operation transferred to Duke Power Company in 1935. The Piedmont Natural Gas Company purchased the site in 1951 and subsequently demolished the gas plant sometime in the late 1950s. Site ownership transferred to Piedmont and Northern Railway in 1963. Piedmont and Northern Railway became part of Seaboard Coast Line (CSX) in 1967. The site is currently vacant and access is restricted by perimeter fencing.

Texas Oil Company operated a petroleum bulking facility during the same timeframe as the gas plant operation on property immediately north and adjacent to the MGP site. This property is now owned by Suburban Propane and is currently vacant.

The CSX/Vaughn Landfill site is located within the eastern bank floodplain of the Reedy River. The site was developed as an un-permitted landfill by Mr. Robert Vaughn of

Vaughn Construction and Demolition Company in Greenville. Mr. Vaughn attempted to purchase approximately 16 acres from CSXT in 1988 for the purpose of constructing a solid waste landfill. Following payment of a deposit, Mr. Vaughn began un-permitted land filling activities on the property. The property transfer was never finalized; however, Mr. Vaughn continued to operate the landfill. The South Carolina Department of Health and Environmental Control (SC DHEC) advised Mr. Vaughn in 1993 that his land filling activities were improper. In February of 1994, the U.S. Army Corps of Engineers (ACE) notified CSXT that the property on which the landfill is located was considered a wetlands and the land filling operation was a violation of Section 301 of the Clean Water Act. Following notification by the ACE, CSXT ordered Mr. Vaughn to cease land filling activities.

Past site investigations can be further researched in the following reports:

- March 1995: *Site Investigation; Soil, Sediment and Groundwater Sampling; Vaughn Landfill, CSX Real Property,* by Applied Engineering and Science (AES) of Atlanta, Georgia
- September 1996: *Site Investigation Phase II, Vaughn Landfill/Duke Power Sites, CSXT Real Properties, Bramlette Road, Greenville, South Carolina,* by AES
- April 1999: *Wetland Delineation Report, CSX Bramlette Road Property, Greenville, South Carolina* by AES
- June 2000 *CSX/Vaughn Landfill and Bramlette Road MGP Sites Phase III Investigation and Site Assessment Report* by Duke Power Company
- September 2000 *CSX/Vaughn Landfill and Bramlette Road MGP Sites Remedial Action Plan* by Duke Power Company
- January 2003 *CSX/Vaughn Landfill and Bramlette Road MGP Groundwater Monitoring Report, December 2002 Sampling* by Duke Power Company
- June 2003 *CSX/Vaughn Landfill and Bramlette Road MGP Sites Remedial Action Plan Final Report* by Duke Power Company
- Semi-annual groundwater reports from 2002 to present by Duke Power Company and Duke Energy.

4.0 SITE CHARACTERIZATION

Extensive site characterization has been performed at the Bramlette MGP Site and CSX/Vaughn Landfill. The results of the investigations have been presented to SC DHEC in the aforementioned reports. Information presented in these and other reports relevant to implementation of this CAP proposal is summarized in the following sections.

4.1 Site Geology

Borings for soil sampling and well installations on the MGP site prior to soil excavation indicated highly disturbed soils intermixed with MGP debris generally between 2 and 6 feet deep. Generally six feet of contaminated material was removed; backfill material consisted of thermally treated soil and clean backfill (see *Remedial Action Plan Final Report, June 2003*). Virgin soil types beneath the MGP debris tended to be silty clays and clayey sands extending to depths between 7 and 16 feet below ground surface. Silty sands typically occurred below the clayey soils, eventually grading into saprolite with depth.

Borings for soil sampling and well installations on the Vaughn Landfill site indicated between 7 and 14 feet of demolition-type landfill debris and soil backfill. A 2 to 6 feet thick layer of clay or clayey soils was typically encountered below the landfill debris, followed by sands and silty sands. The sandy soils typically graded into stiffer saprolite material at 17 to 19 feet below the landfill surface. The lithologic units (clays, silty sands, and sands) across the Landfill site vary in thickness, location and in transition (gradual to abrupt) from one unit to another, indicative of alluvial deposits that might be found within a floodplain environment. Free coal tars were encountered at both the top of the clay layer immediately below the landfill debris and near the sandy soil-saprolite interface. Geologic cross sections of the Vaughn Landfill area, obtained from the *Phase III Investigation and Site Assessment Report, June 2000*, are included as **Figures 3 through 5**.

4.2 Groundwater Movement

Prior to soil excavation on the MGP site, 11 monitoring wells were installed. Currently only two monitoring wells remain; the other nine wells were properly abandoned prior to soil excavation. Hydraulic gradients across the MGP site ranges between 1.5% and 2.0%. Groundwater in the northern part of the site flows in a west-southwesterly direction towards the Reedy River while groundwater in the southern areas of the site turns to the south, towards the Landfill/wetlands area.

Fifteen monitoring wells are located on the Vaughn Landfill site and the wetlands beyond. Groundwater beneath the northern areas of the Landfill appears to flow to the west-southwest with a 2.0% gradient. Beneath the southern area of the Vaughn Landfill, groundwater appears to flow to the south-southwest with a gradient of 0.7% to 1.0%.

Groundwater elevations have fluctuated slightly since sampling began in June of 1999, as shown in **Table 1**.

Groundwater elevations and contaminant concentrations for the well pairs are shown in **Figures 6 through 8**. The downward gradient between shallow well MW-6/6A and deep well MW-21 and the upward gradient between deep well MW-23 and shallow well MW-24 suggests that there may be some groundwater contamination movement between the groundwater regions in this area.

The groundwater elevation differences in the MW-3&3D, MW 15&16, MW5&22 and MW-1&19 wells pairs are small enough, tenths of a foot, that no definitive conclusion can be reached concerning the movement of contaminants between the geostratigraphic layers in the area of these wells.

4.3 Risk Characterization

The characterization of risk from the exposure, or potential exposure, to MGP related contaminants involves an assessment of the chemicals of concern, potential exposure pathways, and an exposure pathway analysis. The chemicals of concern include volatile and semi-volatile organic compounds and certain inorganics. The primary pathways for exposure are through inhalation of contaminants in air, ingestions of contaminants absorbed onto soils, ingestion of contaminated water, and through direct dermal contact with contaminated materials.

The risk of inhalation through volatilization of organics (volatile organic compounds or VOCs), polycyclic aromatic hydrocarbons (PAHs) absorbed onto dust, or inorganics absorbed onto dust does not present a current significant risk at the sites. The majority of the contaminated material located on the MGP Site has been removed. Organics beneath the Vaughn Landfill are not available to be considered an inhalation risk.

A risk of ingestion implies ready access to contaminated surface soils at the sites. The surface soils at the MGP site have been removed and site access is restricted by perimeter fencing. Exposure to the contaminated soils at the Vaughn Landfill site is highly improbable since they are located under the landfill debris.

The surrounding area is served by the local municipal water supply system, therefore there are no risks associated with ingesting groundwater through drinking or inhalation of groundwater vapor particles through showering.

Dermal contact with the free tars under the Vaughn Landfill debris is unlikely and access to the MGP is restricted. Dermal contact with the surface soil at the MGP Site is not a concern since contaminated surface soil was removed and access to the site is restricted.

The exposure pathway analysis concludes that the current human risks on the site are minimal.

Also, as stated in a February 26, 2001 letter from Ms. Jennifer Boynton, GW Quality Section of SC DHEC to Mr. Fred Veal of US Army Corps of Engineers, "Biological and geotechnical assessments of the site have demonstrated that the coal tar constituents are not significantly impacting flora and fauna in the wetland area." Also, "Activities associated with physical removal of the fill would likely result in mobilization of the coal tars and destruction of the existing, unaltered wetlands."

4.4 Groundwater Contamination

Groundwater has been sampled semi-annually in 17 wells since June 1999. The groundwater data has been compiled in **Table 2**. Samples were analyzed by EPA Methods 8260 and 8270. The benzene and naphthalene results, as well as the groundwater elevations from the November 2008 sampling event are on **Figures 9**

through 11. The data collected to date allows a thorough review of the groundwater conditions at the site.

The groundwater analytical results have been assessed based on the SC DHEC Human Healthy Criterion for Consumption of Water and Organisms (W/O) standards and the US EPA Maximum Contaminant Levels (MCL), as shown in **Table 2**.

Starting in May 2006, a reduced sampling schedule was approved by SC DHEC; all wells would be sampled annually in November and key indicator wells would be sampled in May. As such, the November 2008 sampling results, the last sampling event where all wells were sampled, will be used in the discussion below.

The wells remaining on the MGP site, MW-15 and MW-16, have historically had non-detectable concentrations of both PAHs and VOCs. During soil excavation, material was unable to be excavated in the area to the west of the MGP site due to the presence of landfill debris. Source material may still be present in the area to the west of the MGP site, north of Bramlette Road.

The majority of the known source material is located beneath the landfill debris on the CSX/Vaughn Landfill. The wells located within the landfill have historically exhibited the highest contaminant concentrations. The historical benzene and naphthalene trends for shallow wells MW-1, MW-2 and MW-3, and for deep wells MW-3D, MW-19, MW-20 and MW-21, are shown in **Figures 12 through 15**. The benzene and naphthalene contaminant concentrations have remained relatively stable or have a slight decreasing trend since sampling began in 1999. Contaminant concentrations have decreased significantly in a number of wells since the source material at the MGP site was removed in 2002: in shallow wells MW-1, benzene decreased 39%, from 73 ppb to 44.6 ppb, and naphthalene decreased 24%, from 1500 ppb to 1140 ppb, and in deep well MW-3D benzene decreased 13%, from 850 ppb to 740 ppb, and naphthalene decreased 20%, from 5800 ppb to 4630 ppb between December 2002 and present. Seasonal fluctuations are also apparent in a number of the wells.

The remaining wells located in the wetlands area, downstream of the landfill and source area, have historically had non-detectable contaminant concentrations.

5.0 GROUNDWATER REMEDIAL ACTION TECHNOLOGY

The choice of remedial action is based on site-specific factors, including but not limited to the type and amount of contamination, the hydrogeology of the site, and the potential risk to humans and the environment. The coal tar located under the landfill debris is the main source of groundwater contamination. The groundwater plume has been relatively stable since 1996, downstream surface water has not been impacted, groundwater outside of the landfill area has not been impacted, and there are no drinking water wells within ½ mile of the site. The coal tar cannot be removed without removing the landfill debris. Removal of the debris would likely result in destruction of the wetlands and the mobilization of the coal tar.

Natural attenuation processes affect the rate and transport of organic compounds in all hydrologic systems. Natural attenuation is defined as the reduction in mass or concentration of a chemical of concern over time or distance from the source of a chemical of concern due to naturally occurring physical, chemical and biological processes, such as biodegradation, dispersion, dilution, adsorption, and volatilization.

Monitored Natural Attenuation (MNA) is defined as the use of natural attenuation within the context of a carefully controlled and monitored response action to achieve protective concentration levels at the point of exposure. Constituent levels need to be monitored at regular intervals to ensure the viability of the chosen technology. To maintain the integrity of the wetlands, MNA is the groundwater remedial action technology of choice.

According to the EPA (1998) there are three types of environmental monitoring required to implement and validate a MNA program:

1. Site Characterization (i.e. baseline monitoring) to describe the disposition of contamination and predict its future behavior;

2. Validation monitoring to determine if predictions based on site characterization are accurate; and

3. Long-term monitoring to ensure that the behavior of the contaminant plume does not change.

The site characterization was presented in Section 4.0. Validation monitoring has been collected in all of the wells since 1996. The data collected is used in the section below to determine if the site characterizations favor MNA. The long-term monitoring schedule is presented in Section 7.0.

5.1 MNA Demonstration Approach

A demonstration that MNA is an effective remedy can be made using a lines of evidence (LOE) approach. There are three lines of evidence (TNRCC, 2001) that can be used:

1. Primary lines of evidence (PLOE) relies on use of historical groundwater data that demonstrate a clear trend of stable or decreasing contaminants of concern (COC) concentrations over time and with distance away from the source at appropriate monitoring or sampling points.

2. Secondary lines of evidence (SLOE) uses geochemical indicators to document certain geochemical signatures or "footprints" in the groundwater that demonstrate (indirectly) the type of natural attenuation process(es) occurring at the affected property and the destruction of COCs or uses distance-based / time based biodegradation rate calculations to demonstrate attenuation.

3. Other lines of evidence (OLOE) most often consists of predictive modeling studies and other lab/field studies that demonstrate an understanding of the natural attenuation process(es) occurring at the affected property and their effectiveness in controlling protective concentration limit exceedence zone migration and decreasing COC concentrations. These approaches are recommended in cases where predictive modeling may be used to demonstrate plume stability if PLOE data collected over four consecutive quarters fails to provide a clear trend of stable or decreasing COC concentrations.

5.1.1 Primary Lines of Evidence (PLOE)

The historic groundwater elevations, **Table 1**, show that groundwater has remained relatively constant. **Figures 12 through 15** contain the benzene and naphthalene trends for key indicator wells. **Figures 9 through 11** show the November 2008 naphthalene and benzene concentrations, as well as the groundwater elevations.

With the exception of MW-6/6A and MW-4, all of the monitoring wells have been sampled at least 13 times beginning in 1999; MW-6 has not been sampled due to tar being present in the well and MW-4 has been inaccessible during many sampling events due to high water, but was sampled in May and November of 2008. The data indicates that the contaminant plume is relatively stable (see Section 4.4). The results meet the intent of the reviewed guidance (EPA, 1999; EPRI, 2002; TNRCC, 2001) regarding MNA: the contaminant concentrations are either stable or decreasing.

5.1.2 Secondary Lines of Evidence (SLOE)

The geochemical indicator parameters included in **Table 3** were reviewed to evaluate the potential effectiveness of natural attenuation processes at the site. The figures referenced in the bulleted section below show the trends in the specified parameter along an inferred straight line "contamination pathway" starting at MW-1 for the shallow wells and MW-19 for the deep wells, moving to the south-southeast. Naphthalene was used as the contaminant of concern in the figures since it is present at higher concentrations than benzene. The naphthalene data is from the November 2008 sampling event.

In the figures, the naphthalene concentration in each well is represented by a triangle, with the concentration scale on the left y-axis. The indicator parameter concentration is represented by a star, with the concentration scale on the right y-axis. Each region is a different color. For example, in **Figure 17**, for shallow wells MW-2, the values are in blue, the naphthalene concentration is 1110 ppm and the iron concentration is 19.6 mg/l.

Observations from the site data related to naturally occurring biodegradation are summarized below:

- pH – Since aerobic and anaerobic processes are pH-sensitive, the near neutral pH values in the wells near the source of contamination indicate that the site conditions are suitable for growth of indigenous microorganisms capable of degrading benzene and naphthalene (**Figure 16**).

- Iron – An increase in the iron (III) concentration is an indicator of microbial degradation of organic compounds. The iron values in the deep non-impacted wells range from 1.28-15.60 mg/l; the range in the deep impacted wells is from 11.80-43.10mg/l. **Figure 17** shows that iron values are typically lower outside of the landfill boundary, in the non-impacted wells.

- Sulfate – A decrease in the sulfate concentration is an indicator of microbial degradation of organic compounds. As shown in **Figure 18**, the sulfate concentrations in the landfill wells, both shallow and deep, were significantly lower than the concentration in the wells downstream of the landfill. The sulfate values for the shallow landfill wells were non-detect to 1.36 mg/l and for the deep wells were non-detect to 1.05 mg/l, compared to values of 59 mg/l to 344 mg/l and 2.48 mg/l to 55.60 mg/l, respectively, for the wells outside of the landfill.

No additional geochemical data collection for the site is proposed because of the effective demonstration using the data collected to date.

5.1.3 Other Lines of Evidence (OLOE)

Predictive modeling may be used to demonstrate plume stability if PLOE data collected over four consecutive quarters fails to provide a clear trend of stable or decreasing COC concentrations. However, due to the effectiveness of the primary and secondary lines of evidence, no modeling efforts are planned for the site.

5.2 MNA Justification

Due to the location of the site, the current activities surrounding the site resulting from CSXT operations, the presence of at least 8 feet of landfill material above the source material in the wetlands, and the presence of the wetlands themselves, MNA is a cost effective and environmental friendly remedy. Any effort to remove the landfill material in order to remove the source material on the wetlands poses a high likelihood that the wetlands would be destroyed or severely damaged and that the coal tar would be mobilized.

Although the constituent concentrations are above the SC GB water standards, the contaminate plume is relatively stable. The surrounding properties are also connected to the municipal water supply and therefore will not use groundwater as drinking water.

6.0 SUMMARY OF CURRENT STATE EVALUATION

Several quarters of groundwater data allow for a good analysis of the site contamination. Several key conclusions are evident from review of the available data:

- The constituent concentrations of the wells down-gradient of the landfill have historically been non-detectable.
- The constituent concentrations in the source wells are relatively stable.
- The geochemical parameters provide information regarding secondary indicators and indicate that effective bioremediation is occurring at the site.
- No modeling is necessary based on the effectiveness of the primary and secondary indicators.
- Periodic groundwater sampling is necessary to verify that site groundwater conditions do not change significantly.

7.0 PROPOSAL FOR LONG TERM MONITORING

In order to verify that site groundwater conditions do not change significantly at the site, Duke Energy proposes the implementation of a long-term groundwater monitoring program.

7.1 Proposed Groundwater Sampling

It is recommended that groundwater continue to be sampled on an annual basis every May until 2014 or such time that SC DHEC decrees that sampling can be either scaled back or terminated. The groundwater elevations would be collected in all of the wells during the sampling event, but groundwater samples will only be taken from key indicator wells: MW-24, MW-2, MW-6A, MW-23, MW-18, MW-25 and MW-21 will be sampled during the May events. These indicator wells were chosen to monitor the plume stability.

Duke will use low flow sampling techniques to sample the groundwater wells. Prior to purging, the water levels will be gauged using an electronic interface probe. Each well will be purged using a peristaltic pump with dedicated tubing. The pump rate will be adjusted to stabilize drawdown (usually to less than one foot) and purge water will be passed through a flow cell attached to a Hydrolab® water quality instrument to measure temperature, pH and specific conductance. Purge water will be collected into suitable containers for proper disposal. Purging will be deemed complete after a minimum removal of three well volumes and when three consecutive measurements taken at three to five minute intervals are found to be within the following criteria:

- Temperature is not varying more than one degree Celsius (^{o}C);
- pH is not varying by more than 0.1 standard pH units;
- Specific conductance is not varying by more than 10 percent, and
- Turbidity is below 10 NTU's or has stabilized.

When field indicator parameters are stabilized, the pump discharge line will be disconnected from the flow cell and samples will be collected directly from the pump discharge line into the appropriate sample containers provided by the laboratory.

Each well sampling will be completed within three hours after final purge. Prior to sampling VOCs, the pumping rate will be reduced to 50-ml per minute to minimize the loss of VOCs through sample aeration. Appropriate preservatives will be added to samples, custody sheet documentation will be completed, and samples will be stored on ice at 4°C until delivered to the laboratory.

7.2 Lab Analysis

The groundwater samples are currently being sampled for VOCs by EPA Method 8260 and PAHs by EPA Method 8270. Carcinogenic PAHs have historically been below detection in all wells, excluding the May 2005 and November 2006 sampling event for MW-20, November 2007 for MW-21 and May 2008 sampling event for MW-6A. Although other non-carcinogenic PAHs in addition to naphthalene have been detected through EPA Method 8270, naphthalene is the main constituent of concern.

The use of the EPA Method 8260 plus naphthalene analysis is proposed as the only analytical test to be used for long-term organic monitoring at the site. Based on the analytical results observed to date, this analysis should allow effective evaluation and trending of the site groundwater contamination.

The sample analyses will be performed by the Duke Energy Analytical Laboratory located in Huntersville, NC or other South Carolina certified labs.

7.3 Reporting of Analytical Data

Duke will submit an annual summary report after the May sampling event that provides an analysis of a year of groundwater data and any recommendations for changes in the sampling program. The summary report will include a summary data table along with figures showing approximate benzene and naphthalene plume contours, and graphs showing the contaminant trends.

7.4 Abandonment of MW-4

Well MW-4, located east of the landfill and near Meadow Street, was installed with a hand auger. This well has historically had non-detectable concentrations when sampling personnel were able to access it. It has been inaccessible due to standing water since the May 2004 sampling event. It is recommended that MW-4 be properly abandoned as soon as it can be accessed again. A replacement well is not recommended; well MW-25 will provide sufficient data to show if the plume is expanding to the east.

8.0 CONCLUSIONS

The source material at the former Bramlette MGP has been removed through excavation where it was accessible and practical, thereby minimizing the addition of contaminants to groundwater. The source material in the CSX/Vaughn Landfill cannot be removed without the potential mobilization of coal tars and/or the destruction of the wetlands. The groundwater on these sites has little to no potential for becoming a source of drinking water. After almost 10 years of groundwater sampling, the contaminant plume has remained relatively stable or has decreased; at no time has the plume extended beyond the CSXT property boundaries. Also, the contaminants of concern, as shown in Section 4.3, do not present a risk to human health or to the flora or fauna within the wetlands. Duke Energy recommends that long term monitoring continue, on an annual basis, for the next five years, and then if conditions do not adversely change, and that the site be closed.

9.0 REFERENCES

Air Force Center for Environmental Excellence, *Designing Monitoring Programs to Effectively Evaluate the Performance of Natural Attenuation.*

Air Force Center for Environmental Excellence, *Summary of the Lines of Evidence Used to Evaluate Natural Attenuation.*

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Table 1: Historic Groundwater Elevations

Location	Measurement Date	Groundwater Elevation (ft)
MW-1	06/99	926.07
	11/00	926.12
	05/01	926.31
	11/01	926.15
	12/02	927.14
	05/03	927.19
	11/03	926.69
	05/04	926.24
	11/04	926.96
	05/05	927.23
	11/05	926.14
	05/06	926.68
	11/06	927.50
	05/07	927.07
	11/07	925.63
	05/08	926.36
	11/08	925.95
MW-2	06/99	921.11
	11/00	920.42
	05/01	921.17
	11/01	920.84
	12/02	922.90
	05/03	923.22
	11/03	921.64
	05/04	921.11
	11/04	922.33
	05/05	923.11
	11/05	920.92
	05/06	921.92
	11/06	922.92
	05/07	923.17
	11/07	920.23
	05/08	921.06
	11/08	920.1
MW-3	06/99	924.10
	11/00	923.86
	05/01	924.00
	11/01	923.91
	12/02	924.71
	05/03	924.99
	11/03	924.57
	05/04	924.11
	11/04	924.88
	05/05	925.67
	11/05	924.39
	05/06	924.80
	11/06	925.18
	05/07	925.09
	11/07	923.88
	05/08	924.27
	11/08	923.81

Table 1: Historic Groundwater Elevations

Location	Measurement Date	Groundwater Elevation (ft)
MW-3D	06/99	924.17
	11/00	923.91
	05/01	923.96
	11/01	924.02
	12/02	924.81
	05/03	925.19
	11/03	924.62
	05/04	924.13
	11/04	924.89
	05/05	925.26
	11/05	924.43
	05/06	924.85
	11/06	925.46
	05/07	925.21
	11/07	923.14
	05/08	924.41
	11/08	923.97
MW-4	11/00	926.03
	05/01	926.42
	11/01	926.34
	12/02	927.09
	11/03	927.17
	05/04	926.27
	05/08	926.49
	11/08	926.22
MW-5	06/99	919.4
	11/00	918.56
	05/01	919.29
	11/01	919.28
	12/02	921.13
	05/03	922.5
	11/03	921.68
	05/04	920.65
	11/04	922.35
	05/05	922.55
	11/05	919.9
	05/06	922.16
	11/06	922.5
	05/07	922.45
	11/07	918.35
	05/08	920.5
	11/08	919.4
MW-6	06/99	922.39
MW-6A	11/05	924.47
	11/06	924.89
	05/07	924.79
	11/07	923.75
	05/08	924.16
	11/08	924.12

Table 1: Historic Groundwater Elevations

Location	Measurement Date	Groundwater Elevation (ft)
MW-15	06/99	928.79
	11/00	928.59
	05/01	929.04
	11/01	928.75
	12/02	930.36
	05/03	930.19
	11/03	929.39
	05/04	929.01
	11/04	929.79
	05/05	929.92
	11/05	928.64
	05/06	929.37
	11/06	930.10
	05/07	929.67
	11/07	928.09
	05/08	929.04
	11/08	928.38
MW-16	06/99	928.45
	11/00	928.23
	05/01	928.99
	11/01	928.58
	12/02	929.33
	05/03	929.34
	11/03	928.95
	05/04	928.84
	11/04	929.23
	05/05	929.26
	11/05	928.34
	05/06	929.02
	11/06	929.29
	05/07	929.13
	11/07	927.94
	05/08	928.91
	11/08	928.09
MW-18	06/99	919.92
	11/00	918.94
	05/01	919.42
	11/01	919.74
	12/02	920.79
	05/03	920.88
	11/03	920.68
	05/04	920.06
	11/04	921.31
	05/05	921.57
	11/05	919.37
	05/06	921.04
	11/06	921.50
	05/07	921.34
	11/07	918.08
	05/08	920.24
	11/08	919.00

Table 1: Historic Groundwater Elevations

Location	Measurement Date	Groundwater Elevation (ft)
MW-19	06/99	926.06
	11/00	926.09
	05/01	926.28
	11/01	926.14
	12/02	927.07
	05/03	927.53
	11/03	926.67
	05/04	926.23
	11/04	926.94
	05/05	927.25
	11/05	926.12
	05/06	926.67
	11/06	927.47
	05/07	927.1
	11/07	925.58
	05/08	926.34
	11/08	925.93
MW-20	06/99	924.21
	11/00	923.94
	05/01	924.08
	11/01	924.06
	12/02	924.86
	05/03	925.25
	11/03	924.64
	05/04	924.15
	11/04	924.92
	05/05	925.29
	11/05	924.34
	05/06	924.87
	11/06	925.48
	05/07	925.24
	11/07	923.16
	05/08	924.43
	11/08	924.22
MW-24	06/99	920.02
	11/00	919.2
	05/01	920.02
	11/01	920.06
	12/02	921.42
	11/03	921.92
	05/04	921.92
	11/05	921.1
	05/07	919.01
	11/07	915.32
	05/08	917.83
	11/08	916.64

Table 1: Historic Groundwater Elevations

Location	Measurement Date	Groundwater Elevation (ft)
MW-21	06/99	922.46
	11/00	922.43
	05/01	922.5
	11/01	922.69
	12/02	923.44
	05/03	924.14
	11/03	923.03
	05/04	922.8
	11/04	923.46
	05/05	923.78
	11/05	922.75
	05/06	923.36
	11/06	923.34
	05/07	922.98
	11/07	922.02
	05/08	922.33
	11/08	922.32
MW-22	06/99	919.19
	11/00	917.72
	05/01	919.03
	11/01	918.99
	12/02	920.03
	05/03	921.85
	11/03	921.17
	05/04	920.13
	11/04	921.7
	05/05	921.06
	11/05	919.63
	05/06	921.25
	11/06	921.99
	05/07	921.78
	11/07	918.3
	05/08	920.15
	11/08	919.14
MW-23	06/99	920.58
	11/00	919.61
	05/01	920.55
	11/01	920.32
	12/02	922.16
	11/03	922.26
	05/04	921.77
	11/05	921.27
	05/07	923.09
	11/07	919.43
	05/08	921.79
	11/08	920.63

Table 1: Historic Groundwater Elevations

Location	Measurement Date	Groundwater Elevation (ft)
MW-25	06/99	926.66
	11/00	926.82
	05/01	926.74
	11/01	926.83
	12/02	927.58
	05/03	927.43
	11/03	927.32
	05/04	926.5
	11/04	927.43
	05/05	927.56
	11/05	926.53
	05/06	927.04
	11/06	927.85
	05/07	927.58
	11/07	925.84
	05/08	926.58
	11/08	926.42

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-1													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	4600	580	2800	1700	1800	1500	2300	2200	2300	2800	1100	1000	2640	1140
	Acenaphthene	670	--	500	260	470	320	310	5	450	410	5	250	340	330	349	317
	Acenaphthylene	--	--	500	5	5	5	5	5	5	5	5	4.8	4.1	3 8	5 15	5
	Fluorene	1100	--	500	130	110	110	110	120	140	120	110	83	100	120	153	167
	Dibenzofuran	--	--	500	50	39	36	37	43	25	43	37	31	42	42	41	34.9
	Phenanthrene	--	--	500	110	94	100	100	120	140	110	110	99	93	120	95.6	95.6
	Anthracene	8300	--	500	24	16	16	16	20	23	20	18	15	20	18	17.8	19.9
	Fluoranthene	140	--	500	5	5	5	5	5	5	5	5	4 1	4 4	4 9	5 15	5
	Pyrene	830	--	500	5	5	5	5	5	5	5	5	5.4	6.2	8 4	5 15	5
	Benzo(g,h,i)perylene	--	--	500	5	5	5	5	5	5	5	5	5	5	5	5 15	5
Carcinogenic PAHs	Benzo(a)anthracene	0 0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Chrysene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(b)fluoranthene	0 0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(k)fluoranthene	0 0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(a)pyrene	0 0038	0 2	500	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Dibenzo(a,h)anthracene	0 0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Total CPAHs	--	--	3500	35	35	35	35	35	35	35	35	35	35	35	36 05	35
	Total PAHs	--	--	12600	1209	3584	2337	2428	1863	3133	2958	2635	3332	1750	1687	3353	1829
VOCs	Benzene	2.2	5	200	62	72	78	78	73	20	32	10	18	16	87	79.6	44.6
	Ethylbenzene	530	700	150	36	37	25	43	33	20	30	27	32	20	34	30 5	42 6
	Toluene	1300	1000	290	20	24	25	27	21	20	21	10	23	9 3	32	33 6	34.9
	Xylene, o-	--	--	150	32	29	25	34	31	20	28	26	30	20	34	--	--
	Xylene, m,p-	--	--	300	31	29	50	38	31	40	20	20	34	20	1	--	--
	Total Xylenes	--	10000	450	63	58	75	72	62	60	48	46	64	40	35	52 6	67 7
	Total BTEX	--	**11705**	1090	181	191	203	220	189	120	131	93	137	85 3	188	196	190

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-1													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	4600	580	2800	1700	1800	1500	2300	2200	2300	2800	1100	1000	2640	1140
	Acenaphthene	670	--	500	260	470	320	310	5	450	410	5	250	340	330	349	317
	Acenaphthylene	--	--	500	5	5	5	5	5	5	5	5	4.8	4.1	3.8	5.15	5
	Fluorene	1100	--	500	130	110	110	110	120	140	120	110	83	100	120	153	167
	Dibenzofuran	--	--	500	50	39	36	37	43	25	43	37	31	42	42	41	34.9
	Phenanthrene	--	--	500	110	94	100	100	120	140	110	110	99	93	120	95.6	95.6
	Anthracene	8300	--	500	24	16	16	16	20	23	20	18	15	20	18	17.8	19.9
	Fluoranthene	140	--	500	5	5	5	5	5	5	5	5	4.1	4.4	4.9	5.15	5
	Pyrene	830	--	500	5	5	5	5	5	5	5	5	5.4	6.2	8.4	5.15	5
	Benzo(g,h,i)perylene	--	--	500	5	5	5	5	5	5	5	5	5	5	5	5.15	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Chrysene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Benzo(b)fluoranthene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Benzo(k)fluoranthene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Benzo(a)pyrene	0.0038	0.2	500	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Dibenzo(a,h)anthracene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Total CPAHs	--	--	3500	35	35	35	35	35	35	35	35	35	35	35	36.05	35
	Total PAHs	--	--	12600	1209	3584	2337	2428	1863	3133	2958	2635	3332	1750	1687	3353	1829
VOCs	Benzene	2.2	5	200	62	72	78	78	73	20	32	10	18	16	87	79.6	44.6
	Ethylbenzene	530	700	150	36	37	25	43	33	20	30	27	32	20	34	30.5	42.6
	Toluene	1300	1000	290	20	24	25	27	21	20	21	10	23	9.3	32	33.6	34.9
	Xylene, o-	--	--	150	32	29	25	34	31	20	28	26	30	20	34	--	--
	Xylene, m,p-	--	--	300	31	29	50	38	31	40	20	20	34	20	1	--	--
	Total Xylenes	--	10000	450	63	58	75	72	62	60	48	46	64	40	35	52.6	67.7
	Total BTEX	--	**11705**	1090	181	191	203	220	189	120	131	93	137	85.3	188	196	190

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
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Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-2																
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	05/06	11/06	05/07	11/07	05/08	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	80	5	270	600	25	5	5	520	860	2.6	830	220	71	4.85	1230	1040	1110
	Acenaphthene	670	--	100	120	82	170	5	5	5	95	110	5	130	43	21	4.85	117	89.4	154
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Fluorene	1100	--	14	27	11	19	5	5	5	5	13	5	16	8.4	3.7	4.85	19.7	15.8	21
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	5	5.8	5	5	4.85	5.15	5	5
	Phenanthrene	--	--	5	15	5	11	5	5	5	5	5	5	10	3.8	5	4.85	5.15	5	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Chrysene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Benzo(k)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Benzo(a)pyrene	0.0038	0.2	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Dibenzo(a,h)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35	35	35	35	34.0	36.1	35	35
	Total PAHs	--	--	264	232	433	865	105	85	85	690	1053	82.6	1052	340	166	82.5	1439	1215	1355
VOCs	Benzene	2.2	5	89	170	140	200	11	2.8	1	150	320	0.25	280	160	90	0.25	448	456	539
	Ethylbenzene	530	700	15	48	32	47	2.1	1	1	35	91	0.5	88	53	42	0.5	166	143	131
	Toluene	1300	1000	1.5	1.5	1.5	12.5	1	1	1	1	5	0.5	1.4	5	0.5	0.5	1.17	0.5	1.34
	Xylene, o-	--	--	6.8	14	10	12.5	1	1	1	8.9	20	0.5	9.8	5	1.1	0.5	--	--	--
	Xylene, m,p-	--	--	3	3	3	25	2	2	2	8.1	10	1	24	13	1	1	--	--	--
	Total Xylenes	--	10000	9.8	17	13	37.5	3	3	3	17	30	1.5	33.8	18	2.1	1.5	36.7	32.9	43.2
	Total BTEX	--	**11705**	115.3	236.5	186.5	297	17.1	7.8	6	203	446	2.75	403.2	236	134.6	2.8	652	632	715

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Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-3													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	750	100	650	790	1100	1300	1500	1600	1700	2900	870	870	206	64.6
	Acenaphthene	670	--	140	35	67	97	140	220	190	230	220	120	180	180	67.4	32.1
	Acenaphthylene	--	--	5	5	5	5	5	5	10	5	5	5	5	5	5.25	5
	Fluorene	1100	--	34	13	19	23	31	44	52	54	49	38	51	64	31.5	12.6
	Dibenzofuran	--	--	10	5	5	5	10	14	5	17	15	12	18	18	5.25	5
	Phenanthrene	--	--	29	14	21	24	30	40	38	42	43	44	54	61	35.2	14.5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	5.2	8.4	7	5.25	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	5	3	3.8	5.25	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Chrysene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Benzo(k)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Benzo(a)pyrene	0.0038	0.2	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Dibenzo(a,h)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35	35	35	37	35
	Total PAHs	--	--	1023	227	822	999	1371	1678	1850	2003	2087	3174	1234	1254	408	189
VOCs	Benzene	2.2	5	49	6.4	97	82	110	100	150	74	120	71	88	190	2.06	0.5
	Ethylbenzene	530	700	28	5.6	41	25	76	63	95	57	75	53	71	120	4	0.5
	Toluene	1300	1000	11	1.5	16	25	24	24	40	10	21	8.7	8.6	54	0.5	0.5
	Xylene, o-	--	--	8.6	1.5	12	25	24	18	33	10	27	20	20	39	--	--
	Xylene, m,p-	--	--	9.4	3	16	50	31	35	63	20	50	39	38	1	--	--
	Total Xylenes	--	10000	18	4.5	28	75	55	53	96	30	77	59	58	40	3.37	1.5
	Total BTEX	--	**11705**	106	18	182	207	265	240	381	171	293	191.7	225.6	404	9.9	3

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MCL=Maximum Contaminant Level (USEPA)
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Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-3D													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	6400	730	8200	11000	5500	5800	5400	6100	7100	8300	4300	3700	4370	4630
	Acenaphthene	670	--	500	250	300	470	370	270	460	420	550	260	390	320	431	360
	Acenaphthylene	--	--	500	94	79	90	63	59	56	44	35	15	21	13	5.25	11.7
	Fluorene	1100	--	500	110	97	110	97	110	130	110	110	76	97	100	128	133
	Dibenzofuran	--	--	500	36	30	33	28	35	20	33	31	24	32	31	5.25	33.4
	Phenanthrene	--	--	500	96	89	110	94	110	120	89	98	88	91	100	97.6	104
	Anthracene	8300	--	500	18	14	15	13	17	18	15	15	13	18	17	15.9	18.4
	Fluoranthene	140	--	500	5	5	5	5	5	5	5	5	3.5	4.6	4.4	5.25	5
	Pyrene	830	--	500	5	5	5	5	5	5	5	5	4.5	6.9	7.5	5.25	5
	Benzo(g,h,i)perylene	--	--	500	5	5	5	5	5	5	5	5	5	5	5	5.25	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Chrysene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Benzo(b)fluoranthene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Benzo(k)fluoranthene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Benzo(a)pyrene	0.0038	0.2	500	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Dibenzo(a,h)anthracene	0.0038	--	500	5	5	5	5	5	5	5	5	5	5	5	5.25	5
	Total CPAHs	--	--	3500	35	35	35	35	35	35	35	35	35	35	35	36.8	35
	Total PAHs	--	--	14400	1384	8859	11878	6215	6451	6254	6861	7989	8824	5001	4333	5106	5341
VOCs	Benzene	2.2	5	990	840	820	890	590	850	850	820	850	760	710	880	759	740
	Ethylbenzene	530	700	430	450	370	420	370	470	490	450	460	520	490	550	474	515
	Toluene	1300	1000	150	150	130	140	100	120	120	120	110	100	95	88	69.9	60.8
	Xylene, o-	--	--	150	140	97	130	98	140	140	120	140	160	150	160	--	--
	Xylene, m,p-	--	--	300	240	180	250	200	250	270	240	250	290	280	10	--	--
	Total Xylenes	--	10000	450	380	277	380	298	390	410	360	390	450	430	170	391	393
	Total BTEX	--	**11705**	2020	1820	1597	1830	1358	1830	1870	1750	1810	1830	1725	1688	1694	1709

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-4									
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	11/03	05/04	05/08	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	5	5	5	5	5	5	5	5	5	5
	Acenaphthene	670	--	5	5	5	5	5	5	5	5	5	5
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	5
	Fluorene	1100	--	5	5	5	5	5	5	5	5	5	5
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	5
	Phenanthrene	--	--	5	5	5	5	5	5	5	5	5	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	5
Carcinogenic PAHs	Benzo(a)anthracene	0 0038	--	5	5	5	5	5	5	5	5	5	5
	Chrysene	0 0038	--	5	5	5	5	5	5	5	5	5	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5
	Benzo(k)fluoranthene	0 0038	--	5	5	5	5	5	5	5	5	5	5
	Benzo(a)pyrene	0 0038	0.2	5	5	5	5	5	5	5	5	5	5
	Indeno(1,2,3-cd)pyrene	0 0038	--	5	5	5	5	5	5	5	5	5	5
	Dibenzo(a,h)anthracene	0 0038	--	5	5	5	5	5	5	5	5	5	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35
	Total PAHs	--	--	85	85	85	85	85	85	85	85	85	85
VOCs	Benzene	2 2	5	1 5	1 5	1 5	2 5	1	1	1	1	0 5	0 5
	Ethylbenzene	530	700	1 5	1 5	1 5	2 5	1	1	1	1	0 5	0 5
	Toluene	1300	1000	1 5	1 5	1 5	2 5	1	1	1	1	0 5	0 5
	Xylene, o-	--	--	1 5	1 5	1 5	2 5	1	1	1	1	--	--
	Xylene, m,p-	--	--	3	3	3	5	2	2	2	2	--	--
	Total Xylenes	--	10000	4 5	4 5	4.5	7 5	3	3	3	3	1 5	1 5
	Total BTEX	--	**11705**	9	9	9	15	6	6	6	6	3	3

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-5													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	5	5	5	5	5	5	5	5	5	0 5	5	5	5 15	5
	Acenaphthene	670	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Fluorene	1100	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Phenanthrene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Chrysene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(k)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(a)pyrene	0.0038	0 2	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Indeno(1,2,3-cd)pyrene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Dibenzo(a,h)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35	35	35	36	35
	Total PAHs	--	--	85	85	85	85	85	85	85	85	85	80 5	85	85	88	85
VOCs	Benzene	2 2	5	1 5	1 5	1 5	2 5	1	1	1	1	1	0 25	0 25	0 25	0 5	0 5
	Ethylbenzene	530	700	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	1	0 5	0 5
	Toluene	1300	1000	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	0 5	0 5
	Xylene, o-	--	--	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	--	--
	Xylene, m,p-	--	--	3	3	3	5	2	2	2	2	2	1	1	1	--	--
	Total Xylenes	--	10000	4 5	4.5	4.5	7.5	3	3	3	3	3	1.5	1.5	1.5	4 6	1 5
	Total BTEX	--	**11705**	9	9	9	15	6	6	6	6	6	2.8	2.8	3 3	6.1	3

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MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Groundwater Analytical Data

	Well ID	W/O	MCL	MW-6	MW-6A						MW-15													
	Sample Date			06/99	11/05	11/06	05/07	11/07	05/08	11/08	06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	470	910	40	260	1390	229	12.4	5	5	5	5	5	5	5	5	5	0.5	5	5	5.15	5
	Acenaphthene	670	--	13	56	3.1	12	94.6	40.2	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Acenaphthylene	--	--	20	46	5	15	18.4	18.2	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Fluorene	1100	--	15	53	2.8	12	53.3	39.6	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Dibenzofuran	--	--	11	43	5	9.9	50	29.8	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Phenanthrene	--	--	17	55	5	13	45.2	76.4	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Anthracene	8300	--	5	16	5	3.3	13.7	25.9	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Fluoranthene	140	--	5	12	5	4.7	5.25	45.2	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Pyrene	830	--	5	7.8	5	2.8	5.25	42.2	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Benzo(g,h,i)perylene	--	--	5	5	5	4.9	5.25	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	5	5	5	4.9	5.25	17.5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Chrysene	0.0038	--	5	5	5	4.9	5.25	14.9	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	4.9	5.25	11.1	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Benzo(k)fluoranthene	0.0038	--	5	5	5	4.9	5.25	11	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Benzo(a)pyrene	0.0038	0.2	5	5	5	4.9	5.25	14.7	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	5	5	5	4.9	5.25	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Dibenzo(a,h)anthracene	0.0038	--	5	5	5	4.9	5.25	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.15	5
	Total CPAHs	--	--	35	35	35	34	37	79	35	35	35	35	35	35	35	35	35	35	35	35	35	36	35
	Total PAHs	--	--	601	1239	116	372	1718	274	92	85	85	85	85	85	85	85	85	85	80.5	85	85	88	85
VOCs	Benzene	2.2	5	570	180	7.3	7.5	42.8	2.44	0.5	1.5	1.5	1.5	2.5	1	1	1	1	1	0.25	0.25	0.25	0.5	0.25
	Ethylbenzene	530	700	350	42	5.1	9.3	30.6	7.97	0.5	1.5	1.5	1.5	2.5	1	1	1	1	1	0.5	0.5	0.57	0.5	0.25
	Toluene	1300	1000	1.5	170	15	12	63.2	7.42	0.5	1.5	1.5	1.5	2.5	1	1	1	1	1	1.1	1.2	1.8	0.5	0.25
	Xylene, o-	--	--	140	49	6.2	8.2	--	--	--	1.5	1.5	1.5	2.5	1	1	1	1	1	0.5	0.5	0.62	--	--
	Xylene, m,p-	--	--	170	97	1	20	--	--	--	3	3	3	5	2	2	2	2	2	1	1	1	--	--
	Total Xylenes	--	10000	310	146	7.2	28.2	94.7	23.2	1.5	4.5	4.5	4.5	7.5	3	3	3	3	3	1.5	1.5	1.62	1.5	0.25
	Total BTEX	--	**11705**	1232	538	34.6	57	137	41	3	9	9	9	15	6	6	6	6	6	3.4	3.5	4.2	3	1

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
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Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-16													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	5	5	5	5	5	5	5	5	5	0 5	5	5	5 15	5
	Acenaphthene	670	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Fluorene	1100	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Phenanthrene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Chrysene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(k)fluoranthene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(a)pyrene	0.0038	0 2	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Dibenzo(a,h)anthracene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35	35	35	36	35
	Total PAHs	--	--	85	85	85	85	85	85	85	85	85	80 5	85	85	88	85
VOCs	Benzene	2 2	5	1 5	1 5	1 5	2 5	1	1	1	1	1	0 25	0 25	0 25	0 5	0 5
	Ethylbenzene	530	700	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	0 5	0 5
	Toluene	1300	1000	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	0 5	0 5
	Xylene, o-	--	--	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	--	--
	Xylene, m,p-	--	--	3	3	3	5	2	2	2	2	2	1	1	1	--	--
	Total Xylenes	--	10000	4 5	4 5	4.5	7.5	3	3	3	3	3	1 5	1 5	1 5	1 5	1 5
	Total BTEX	--	**11705**	9	9	9	15	6	6	6	6	6	2 8	2.8	2 8	3	3

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
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Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-18															
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/05	11/05	05/06	11/06	05/07	11/07	05/08	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	5	5	5	5	5	5	5	5	0.5	5	5	5	4.85	5.15	5	5
	Acenaphthene	670	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Fluorene	1100	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Phenanthrene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Chrysene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Benzo(k)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Benzo(a)pyrene	0.0038	0.2	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Dibenzo(a,h)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	4.85	5.15	5	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35	35	35	34	31	35	35
	Total PAHs	--	--	85	85	85	85	85	85	85	85	80.5	85	85	85	82	88	85	85
VOCs	Benzene	2.2	5	1.5	1.5	1.5	2.5	1	1	1	1	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.5
	Ethylbenzene	530	700	1.5	1.5	1.5	2.5	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Toluene	1300	1000	1.5	1.5	1.5	2.5	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Xylene, o-	--	--	1.5	1.5	1.5	2.5	1	1	1	1	0.5	0.5	0.5	0.5	0.5	--	--	--
	Xylene, m,p-	--	--	3	3	3	5	2	2	2	2	1	1	1	1	1	--	--	--
	Total Xylenes	--	10000	4.5	4.5	4.5	7.5	3	3	3	3	1.5	1.5	1.5	1.5	0.5	1.5	1.5	1.5
	Total BTEX	--	**11705**	9	9	9	15	6	6	6	6	2.8	2.8	2.8	2.8	2.8	3	3	3

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-19													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	4700	750	6800	4900	4800	2300	6500	7500	5600	6900	3600	3600	3900	4600
	Acenaphthene	670	--	500	250	320	430	370	470	460	400	580	260	320	330	332	333
	Acenaphthylene	--	--	500	15	5	5	5	5	50	5	5	4.5	5.5	5.9	5.15	5
	Fluorene	1100	--	500	120	120	120	120	110	150	120	120	79	84	110	137	30.2
	Dibenzofuran	--	--	500	43	38	39	39	40	50	41	39	28	35	39	35.2	40.6
	Phenanthrene	--	--	500	110	100	110	100	100	140	100	110	84	77	100	88.9	103
	Anthracene	8300	--	500	26	20	18	17	19	50	20	19	14	17	18	18.2	24
	Fluoranthene	140	--	500	5	5	5	5	5	50	5	5	3.1	3	4.5	5.15	5
	Pyrene	830	--	500	13	5	5	5	5	50	5	5	4.1	4.5	8	5.15	5
	Benzo(g,h,i)perylene	--	--	500	5	5	5	5	5	50	5	5	5	5	5	5.15	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	500	5	5	5	5	5	50	5	5	5	5	5	5.15	5
	Chrysene	0.0038	--	500	5	5	5	5	5	50	5	5	5	5	5	5.15	5
	Benzo(b)fluoranthene	0.0038	--	500	5	5	5	5	5	50	5	5	5	5	5	5.15	5
	Benzo(k)fluoranthene	0.0038	--	500	5	5	5	5	5	50	5	5	5	5	5	5.15	5
	Benzo(a)pyrene	0.0038	0.2	500	5	5	5	5	5	50	5	5	5	5	5	5.15	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	500	5	5	5	5	5	50	5	5	5	5	5	5.15	5
	Dibenzo(a,h)anthracene	0.0038	--	500	5	5	5	5	5	50	5	5	5	5	5	5.15	5
	Total CPAHs	--	--	3500	35	35	35	35	35	350	35	35	35	35	35	36	35
	Total PAHs	--	--	12700	1372	7453	5672	5501	3094	7900	8236	6523	7417	4186	4255	4568	5186
VOCs	Benzene	2.2	5	140	130	150	170	140	150	140	120	50	95	100	130	145	143
	Ethylbenzene	530	700	120	130	140	150	170	160	170	170	140	160	150	170	186	164
	Toluene	1300	1000	190	180	210	210	210	200	200	210	160	180	190	200	170	180
	Xylene, o-	--	--	75	70	62	20	82	88	87	50	50	89	87	93	--	--
	Xylene, m,p-	--	--	150	120	110	100	170	160	160	100	100	150	150	10	--	--
	Total Xylenes	--	10000	225	190	172	120	252	248	247	150	150	239	237	103	246	256
	Total BTEX	--	**11705**	675	630	672	650	772	758	757	650	500	674	677	603	747	743

wrong

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-20													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	500	650	7700	6800	5900	5100	3900	7000	7600	19000	4400	4500	5010	4400
	Acenaphthene	670	--	500	280	580	590	470	5	270	540	630	4200	440	340	417	428
	Acenaphthylene	--	--	500	83	86	100	100	100	87	87	300	5300	73	190	43.3	40.1
	Fluorene	1100	--	500	110	110	110	110	110	69	100	300	5800	120	160	103	139
	Dibenzofuran	--	--	500	36	33	34	34	36	50	33	61	1300	35	41	28.4	36.4
	Phenanthrene	--	--	500	94	100	110	100	110	69	90	570	18000	93	250	84.5	126
	Anthracene	8300	--	500	18	16	16	15	19	50	15	96	4000	18	57	14.7	24.3
	Fluoranthene	140	--	500	5	5	5	5	5	50	5	96	4600	5.7	57	5.15	12.7
	Pyrene	830	--	500	5	5	5	5	12	50	5	240	6800	8.5	100	5.15	21.5
	Benzo(g,h,i)perylene	--	--	500	5	5	5	5	5	50	5	5	350	5	4	5.15	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	500	5	5	5	5	5	50	5	38	2000	5	19	5.15	5
	Chrysene	0.0038	--	500	5	5	5	5	5	50	5	27	1500	5	13	5.15	5
	Benzo(b)fluoranthene	0.0038	--	500	5	5	5	5	5	50	5	12	800	5	8.3	5.15	5
	Benzo(k)fluoranthene	0.0038	--	500	5	5	5	5	5	50	5	16	980	5	12	5.15	5
	Benzo(a)pyrene	0.0038	0.2	500	5	5	5	5	5	50	5	30	1700	5	18	5.15	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	500	5	5	5	5	5	50	5	5	560	5	4.3	5.15	5
	Dibenzo(a,h)anthracene	0.0038	--	500	5	5	5	5	5	50	5	5	500	5	5	5.15	5
	Total CPAHs	--	--	3500	35	35	35	35	35	350	35	133	8040	35	80	36	35
	Total PAHs	--	--	8500	1321	8675	7810	6779	5537	4995	7915	10031	77390	5233	5779	5752	5268
VOCs	Benzene	2.2	5	860	780	1.5	940	780	950	890	1000	960	830	740	1100	833	839
	Ethylbenzene	530	700	290	350	1.5	370	390	420	400	480	410	440	370	520	475	473
	Toluene	1300	1000	140	130	1.5	160	140	160	150	170	150	140	110	140	119	93.9
	Xylene, o-	--	--	75	100	15	120	110	130	120	140	120	140	120	160	--	--
	Xylene, m,p-	--	--	170	190	30	260	240	250	240	290	250	260	230	10	--	--
	Total Xylenes	--	10000	245	290	45	380	350	380	360	430	370	400	350	170	465	395
	Total BTEX	--	**11705**	1535	1550	49.5	1850	1660	1910	1800	2080	1890	1810	1570	1930	1892	1801

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-21																
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	05/06	11/06	05/07	11/07	05/08	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	3500	620	2000	2900	140	140	50	550	1300	1500	3700	310	73	50	5810	252	67
	Acenaphthene	670	--	<500	140	78	220	16	22	5	35	65	23	180	33	16	7.7	1680	30.8	12
	Acenaphthylene	--	--	<500	150	30	26	5	5	5	5	5	4.7	56	6.1	5	4.85	341	5	5
	Fluorene	1100	--	<500	110	50	94	5	14	5	21	36	13	79	24	9.2	4.3	108	19.4	5
	Dibenzofuran	--	--	<500	110	47	100	5	13	5	19	35	14	64	20	7.1	3.6	886	16.7	5
	Phenanthrene	--	--	<500	99	52	88	12	23	5	22	38	20	79	30	9.8	4.8	4010	22.4	11.1
	Anthracene	8300	--	<500	33	13	20	5	5	5	5	5	5.8	22	7.3	5	4.85	1640	5	5
	Fluoranthene	140	--	<500	18	5	5	5	5	5	5	5	6.5	12	6.4	5	4.85	2740	5	5
	Pyrene	830	--	<500	13	5	5	5	5	5	5	5	4.5	8.5	5	5	4.85	2280	5	5
	Benzo(g,h,i)perylene	--	--	<500	5	5	5	5	5	5	5	5	5	5	5	5	4.85	419	5	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	<500	5	5	5	5	5	5	5	5	5	5	5	5	4.85	898	5	5
	Chrysene	0.0038	--	<500	5	5	5	5	5	5	5	5	5	5	5	5	4.85	762	5	5
	Benzo(b)fluoranthene	0.0038	--	<500	5	5	5	5	5	5	5	5	5	5	5	5	4.85	582	5	5
	Benzo(k)fluoranthene	0.0038	--	<500	5	5	5	5	5	5	5	5	5	5	5	5	4.85	532	5	5
	Benzo(a)pyrene	0.0038	0.2	<500	5	5	5	5	5	5	5	5	5	5	5	5	4.85	840	5	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	<500	5	5	5	5	5	5	5	5	5	5	5	5	4.85	413	5	5
	Dibenzo(a,h)anthracene	0.0038	--	<500	5	5	5	5	5	5	5	5	5	5	5	5	4.85	133	5	5
	Total CPAHs	--	--	0	35	35	35	35	35	35	35	35	35	35	35	35	34	4160	35	35
	Total PAHs	--	--	3500	1333	2320	3498	238	272	130	707	1534	1632	4241	482	175	129	24074	401	160
VOCs	Benzene	2.2	5	840	380	160	300	11	7.6	1	200	250	48	640	17	13	15	56.1	44.8	10.1
	Ethylbenzene	530	700	150	160	82	120	8.4	3.8	1	89	84	25	310	15	7.3	4.1	37.4	15.6	6.45
	Toluene	1300	1000	610	460	190	250	7.1	2.1	1	150	150	36	630	14	19	2.5	48.2	15.9	7.39
	Xylene, o-	--	--	130	150	82	100	6.2	2.4	1	61	65	18	250	14	7.5	1.7	--	--	--
	Xylene, m,p-	--	--	280	270	160	200	11	4.1	2	130	130	40	520	35	1	5.7	--	--	--
	Total Xylenes	--	10000	410	420	242	300	17.2	6.5	3	191	195	58	770	49	8.5	7.4	93.4	34.8	14.5
	Total BTEX	--	**11705**	2010	1420	674	970	43.7	20	6	630	679	167	2350	95	48	29	235	111	38

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
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Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-22													
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	11/06	11/07	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	5	5	5	5	5	5	5	5	23	0 5	5	5	5 15	5
	Acenaphthene	670	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Fluorene	1100	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Phenanthrene	--	--	5	5	5	5	5	5	5	5	17	5	5	5	5 15	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
Carcinogenic PAHs	Benzo(a)anthracene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Chrysene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(b)fluoranthene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(k)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Benzo(a)pyrene	0 0038	0 2	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Dibenzo(a,h)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5 15	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35	35	35	36	35
	Total PAHs	--	--	85	85	85	85	85	85	85	85	115	80 5	85	85	88	85
VOCs	Benzene	2 2	5	1 5	1 5	1 5	2 5	1	1	1	1	1	0 25	0 25	0 25	0 5	0 5
	Ethylbenzene	530	700	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	0 5	0 5
	Toluene	1300	1000	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	0 5	0 5
	Xylene, o-	--	--	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	--	--
	Xylene, m,p-	--	--	3	3	3	5	2	2	2	2	2	1	1	1	--	--
	Total Xylenes	--	10000	4.5	4 5	4 5	7.5	3	3	3	3	3	1 5	1 5	1.5	4.01	1 5
	Total BTEX	--	**11705**	9	9	9	15	6	6	6	6	6	3	3	3	6	3

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-23												
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	11/03	05/04	11/05	05/07	11/07	05/08	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Acenaphthene	670	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Fluorene	1100	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Phenanthrene	--	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
Carcinogenic PAHs	Benzo(a)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Chrysene	0.0038	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Benzo(k)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Benzo(a)pyrene	0.0038	0 2	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Indeno(1,2,3-cd)pyrene	0.0038	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Dibenzo(a,h)anthracene	0.0038	--	5	5	5	5	5	5	5	5	5	4 95	5 25	5	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35	37	35	35
	Total PAHs	--	--	85	85	85	85	85	85	85	85	85	84	89	85	85
VOCs	Benzene	2 2	5	1 5	1 5	1 5	2 5	1	1	1	1	0 25	0 25	0 5	0 5	0 5
	Ethylbenzene	530	700	1 5	1 5	1 5	2 5	1	1	1	1	0 5	0 5	0 5	0 5	0 5
	Toluene	1300	1000	1 5	1 5	1 5	2 5	1	1	1	1	1 2	0 5	0 5	0 5	0 5
	Xylene, o-	--	--	1 5	1 5	1 5	2 5	1	1	1	1	0 5	0 5	--	--	--
	Xylene, m,p-	--	--	3	3	3	5	2	2	2	2	1	1	--	--	--
	Total Xylenes	--	10000	4 5	4 5	4 5	7.5	3	3	3	3	1.5	1.5	1 5	1 5	1 5
	Total BTEX	--	**11705**	9	9	9	15	6	6	6	6	3	3	3	3	3

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou...water Analytical Data

	Well ID	W/O	MCL	MW-24												
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	11/03	05/04	11/05	05/07	11/07	05/08	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Acenaphthene	670	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Fluorene	1100	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Phenanthrene	--	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
Carcinogenic PAHs	Benzo(a)anthracene	0 0038	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Chrysene	0.0038	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Benzo(b)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Benzo(k)fluoranthene	0 0038	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Benzo(a)pyrene	0 0038	0.2	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Indeno(1,2,3-cd)pyrene	0 0038	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Dibenzo(a,h)anthracene	0 0038	--	5	5	5	5	5	5	5	5	5	4 9	5 25	5	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	34	37	35	35
	Total PAHs	--	--	85	85	85	85	85	85	85	85	85	83	89	85	85
VOCs	Benzene	2 2	5	1 5	1 5	1 5	2 5	1	1	1	1	0 25	0 25	0 5	0 5	0 5
	Ethylbenzene	530	700	1 5	1 5	1 5	2 5	1	1	1	1	0 5	0 5	0 5	0 5	0 5
	Toluene	1300	1000	1 5	1 5	1 5	2 5	1	1	1	1	0 5	0 5	0 5	0 5	0 5
	Xylene, o-	--	--	1 5	1 5	1 5	2 5	1	1	1	1	0 5	0 5	--	--	--
	Xylene, m,p-	--	--	3	3	3	5	4	4	4	4	1	1	--	--	--
	Total Xylenes	--	10000	4 5	4 5	4.5	7.5	5	5	5	5	1 5	1 5	1 5	1 5	1 5
	Total BTEX	--	**11705**	9	9	9	15	8	8	8	8	3	3	3	3	3

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 2: Historic Grou..._water Analytical Data

	Well ID	W/O	MCL	MW-25																
	Sample Date			06/99	11/00	05/01	11/01	05/02	12/02	05/03	11/03	05/04	05/05	11/05	05/06	11/06	05/07	11/07	05/08	11/08
Non-Carcinogenic PAHs	Naphthalene	--	--	5	5	5	5	5	5	5	5	13	0 5	5	5	5	4 9	5 15	5	5
	Acenaphthene	670	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Acenaphthylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Fluorene	1100	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Dibenzofuran	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Phenanthrene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Anthracene	8300	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Fluoranthene	140	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Pyrene	830	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Benzo(g,h,i)perylene	--	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
Carcinogenic PAHs	Benzo(a)anthracene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Chrysene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Benzo(b)fluoranthene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Benzo(k)fluoranthene	0.0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Benzo(a)pyrene	0 0038	0 2	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Indeno(1,2,3-cd)pyrene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Dibenzo(a,h)anthracene	0 0038	--	5	5	5	5	5	5	5	5	5	5	5	5	5	4 9	5 15	5	5
	Total CPAHs	--	--	35	35	35	35	35	35	35	35	35	35	35	35	35	34	36	35	35
	Total PAHs	--	--	85	85	85	85	85	85	85	85	93	80.5	85	85	85	83	88	85	85
VOCs	Benzene	2 2	5	1 5	1 5	1 5	2 5	1	1	1	1	1	0 25	0 25	0 8	0 25	0 25	0 5	0 5	0 5
	Ethylbenzene	530	700	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0.58	0 5	0 5	0 5	0 5	0 5
	Toluene	1300	1000	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	0 5	0 5	0 5	0 5	0 5
	Xylene, o-	--	--	1 5	1 5	1 5	2 5	1	1	1	1	1	0 5	0 5	0 5	0 5	0 5	--	--	--
	Xylene, m,p-	--	--	3	3	3	5	2	2	2	2	2	1	1	0 69	1	1	--	--	--
	Total Xylenes	--	10000	4 5	4 5	4 5	7.5	3	3	3	3	3	1.5	1.5	1 19	1.5	1.5	1 5	1 5	1 5
	Total BTEX	--	**11705**	9	9	9	15	6	6	6	6	6	3	3	3	3	3	3	3	3

W/O=Human Health Criterion for Consumption of Water and Organisms (SCDHEC)
MCL=Maximum Contaminant Level (USEPA)
Non-detect results indicated by smaller text and reported at half detection limit
Highlighted=above either W/O or MCLs

Table 3: Summary of Groundwater Natural Attenuation Analytical Data

Location	Measurement Date	Iron ICP (Digested) (mg/L)	Nitrate (mg/L)	pH (std. units)	Sulfate (mg/L)	Specific Conductance (uhoms/cm)
MW-1	Jun-99	ns	ns	6.26	<1	377
	Nov-00	39.7	<0.1	6.1	<0.1	17.13
	May-01	37.35	0.516	6.29	0.21	385
	Nov-01	44.564	<0.1	6.32	<0.1	415
	May-02	48.469	<1	ns	<1	ns
	Dec-02	55.34	<0.1	6.4	0.52	492
	May-03	43.972	0.43	6.1	0.5	406
	Nov-03	45.303	<0.1	6.1	0.19	398
	May-04	41.62	<0.1	6.2	4.6	368
	Nov-04	43.994	<0.1	6.2	0.6	383
	May-05	35.325	<0.1	6.1	<0.1	340
	Nov-05	29.19	<0.1	6	<0.1	388
	Nov-06	52.405	<0.1	6.26	0.1	417
	May-07	ns	ns	ns	ns	ns
	Nov-07	48.3	<0.1	6.28	<0.1	373
	May-08	ns	ns	ns	ns	ns
	Nov-08	46.4	<0.1	6.34	<1	476
MW-2	Jun-99			5.94	1.3	409
	Nov-00	16.255	<0.1	6.04	0.54	18.42
	May-01	8.124	0.086	6.15	5.89	398
	Nov-01	16.94	<0.1	5.95	<0.1	452
	May-02	0.736	4.8	ns	22.3	ns
	Dec-02	0.272	11.7	6.3	32.2	357
	May-03	4.099	6.13	6.2	71.92	545
	Nov-03	17.595	<0.1	6.1	2.88	432
	May-04	18.53	<0.1	6.2	7	484
	Nov-04	2.197	0.36	6	16.44	325
	May-05	0.14	2.23	6.1	57.3	468
	Nov-05	19.18	<0.1	6.1	<0.1	483
	May-06	5.517	<0.1	5.9	23.2	370
	Nov-06	2.043	5.49	6.1	23.86	334
	May-07	0.177	2.42	6.51	46.83	381
	Nov-07	19.5	<0.1	6.23	<0.1	408
	May-08	15.4	<0.1	8.4	1.05	448
	Nov-08	19.6	<0.1	6.02	<1	470
MW-3	Jun-99	ns	ns	6.54	102.5	1307
	Nov-00	25.149	0.1	6.4	6.81	18.35
	May-01	12.648	0.344	6.61	213.05	1560
	Nov-01	27.447	<0.1	6.63	0.1	1173
	May-02	12.892	<1	ns	91.9	ns
	Dec-02	12.051	<0.1	6.7	230.54	1618
	May-03	15.556	0.47	6.6	77.5	1180
	Nov-03	24.46	0.13	6.4	0.46	1205
	May-04	9.33	<0.1	6.7	13	1342
	Nov-04	20.796	0.2	6.5	1.82	1159
	May-05	10.873	<0.1	6.6	4.47	586
	Nov-05	22	<0.1	6.4	<0.1	825
	Nov-06	22.14	<0.1	6.44	1.02	653
	May-07	ns	ns	ns	ns	ns
	Nov-07	27.9	<0.1	6.49	<0.1	817
	May-08	ns	ns	ns	ns	ns
	Nov-08	21.6	<0.1	6.28	1.36	939

ns = not sampled

Table 3: Summary of Groundwater Natural Attenuation Analytical Data

Location	Measurement Date	Iron ICP (Digested) (mg/L)	Nitrate (mg/L)	pH (std. units)	Sulfate (mg/L)	Specific Conductance (uhoms/cm)
MW-3D	Jun-99	ns	ns	6.05	8	294
	Nov-00	14.899	<0.1	5.91	<0.1	16.84
	May-01	13.747	0.215	6.16	0.47	278
	Nov-01	13.908	<0.1	6.17	<0.1	261
	May-02	14.357	<1	ns	<1	ns
	Dec-02	13.305	<0.1	6.3	0.2	268
	May-03	14.201	<0.1	6.3	<0.1	262
	Nov-03	14.413	<0.1	6	<0.1	266
	May-04	13.92	<0.1	6.2	5.2	252
	Nov-04	13.942	<0.1	6.2	0.12	240
	May-05	14.321	<0.1	6.2	<0.1	255
	Nov-05	14.11	<0.1	6.5	<0.1	267
	Nov-06	14.271	<0.1	6.2	<0.1	243
	May-07	ns	ns	ns	ns	ns
	Nov-07	13.5	<0.1	6.22	<0.1	225
	May-08	ns	ns	ns	ns	ns
	Nov-08	11.8	<0.1	5.97	<1	232
MW-4	Nov-00	133.182	<0.1	5.98	10.97	16.29
	May-01	14.438	0.129	6.45	25.36	231
	Nov-01	29.625	0.52	5.96	25.8	221
	May-02	11.433	<1	ns	21.56	ns
	Dec-02	12.129	<0.1	6.6	19.01	230
	Nov-03	16.453	<0.1	5.9	22.63	264
	May-04	26.09	<0.1	6.1	32	247
	May-08	9.39	<0.1	8.9	18	226
	Nov-08	1.57	<0.1	5.87	67.1	263
MW-5	Jun-99	ns	ns	5.55	25.2	288
	Nov-00	8.882	<0.1	5.5	61.6	20.39
	May-01	8.866	0.086	5.6	103.71	344
	Nov-01	7.319	<0.1	5.59	70.17	337
	May-02	7.625	<1	ns	105.4	ns
	Dec-02	6.298	<0.1	6	77.92	336
	May-03	12.362	<0.1	5.5	62.34	292
	Nov-03	16.732	<0.1	5.8	78.67	357
	May-04	11.29	<0.1	6	43	292
	Nov-04	16.613	<0.1	6	29.37	328
	May-05	15.096	<0.1	5.9	15.1	260
	Nov-05	19.25	<0.1	6	11.3	363
	Nov-06	16.912	<0.1	6.25	46.19	332
	May-07	ns	ns	ns	ns	ns
	Nov-07	15.1	<0.1	5.93	16.6	233
	May-08	ns	ns	ns	ns	ns
	Nov-08	9.06	<0.1	5.85	59	303
MW-6	Jun-99	ns	ns	6.41	<1	742
MW-6A	Nov-05	30.83	<0.1	6.8	4.21	802
	Nov-06	7.543	<0.1	6.73	45.95	516
	May-07	11.917	<0.1	7.2	6.52	496
	Nov-07	24.7	<0.1	6.61	3.34	640
	May-08	16.5	2.04	8.5	2.04	607
	Nov-08	12.8	<0.1	6.17	130	734

ns = not sampled

Table 3: Summary of Groundwater Natural Attenuation Analytical Data

Location	Measurement Date	Iron ICP (Digested) (mg/L)	Nitrate (mg/L)	pH (std. units)	Sulfate (mg/L)	Specific Conductance (uhoms/cm)
MW-15	Jun-99	ns	ns	6.78	17.8	274
	Nov-00	0.944	11.28	6.57	4.61	16.81
	May-01	0.863	13.416	6.39	3.22	182
	Nov-01	3.407	18.65	6.24	3.05	179
	May-02	0.111	24.52	ns	2.34	ns
	Dec-02	1.352	23.98	6.4	2.93	140
	May-03	0.986	24.79	6.1	2.96	150
	Nov-03	0.111	28.9	6	2.92	124
	May-04	0.14	6.4	6	8.7	116
	Nov-04	0.327	31.06	5.9	3.03	115
	May-05	0.723	29.02	6.1	2.57	126
	Nov-05	0.479	30.1	6.3	1.97	138
	Nov-06	0.461	33.76	6.18	2.18	141
	May-07	ns	ns	ns	ns	ns
	Nov-07	3.06	3.19	6.09	3.19	112
	May-08	ns	ns	ns	ns	ns
	Nov-08	0.863	7.21	5.46	2.47	128
MW-16	Jun-99	ns	ns	5.99	151.3	656
	Nov-00	40.77	<0.1	6.05	281.65	18.42
	May-01	4.568	0	6.09	285.84	895
	Nov-01	10.196	<0.1	5.98	248.61	898
	May-02	6.867	<1	ns	353.16	ns
	Dec-02	2.785	<0.1	6.3	692.94	1638
	May-03	3.789	0.26	6.2	381.18	1186
	Nov-03	5.27	<0.1	6.1	92.85	682
	May-04	4.12	<0.1	6.2	130	667
	Nov-04	3.839	<0.1	6.4	71.8	688
	May-05	3.91	<0.1	6.3	82.23	651
	Nov-05	24.33	0	6.4	0	907
	Nov-06	4.83	< 0.1	6.23	173.01	769
	May-07	ns	ns	ns	ns	ns
	Nov-07	61.6	< 0.1	6.4	147	807
	May-08	ns	ns	ns	ns	ns
	Nov-08	75.8	< 0.1	5.83	190	1106
MW-18	Jun-99	ns	ns	5.43	7.5	280
	Nov-00	13.309	<0.1	5.4	69.83	17.72
	May-01	5.67	0	5.71	58.1	230
	Nov-01	7.772	<0.1	5.53	88.95	347
	May-02	5.861	<1	ns	71.54	ns
	Dec-02	5.482	<0.1	5.8	53.63	249
	May-03	5.259	<0.1	5.8	37.28	197
	Nov-03	5.603	<0.1	5.4	92.65	353
	May-04	8.23	<0.1	5.6	63	290
	Nov-04	4.693	<0.1	5.9	39.66	269
	May-05	4.521	<0.1	5.8	27.01	197
	Nov-05	6.517	<0.1	5.8	21.6	247
	May-06	5.356	<0.1	5.7	31.42	210
	Nov-06	5.141	0.33	5.97	< 0.10	296
	May-07	4.13	0.11	6.23	26.68	182
	Nov-07	2.61	<0.1	5.9	34.6	237
	May-08	6.66	<0.1	8.64	28.7	240
	Nov-08	4.25	<0.1	5.67	54.2	321

ns = not sampled

Table 3: Summary of Groundwater Natural Attenuation Analytical Data

Location	Measurement Date	Iron ICP (Digested) (mg/L)	Nitrate (mg/L)	pH (std. units)	Sulfate (mg/L)	Specific Conductance (uhoms/cm)
MW-19	Jun-99	ns	ns	6.28	<1	406
	Nov-00	43.949	<0.1	6.11	<0.1	17.08
	May-01	45.976	0.473	6.24	0.22	409
	Nov-01	47.717	<0.1	6.38	<0.1	406
	May-02	51.371	<1	ns	<1	ns
	Dec-02	51.534	<0.1	6.4	<0.1	489
	May-03	48.455	<0.1	6.1	0.57	469
	Nov-03	49.434	<0.1	6.1	<0.1	429
	May-04	41.37	<0.1	6.2	4.3	375
	Nov-04	40.6	<0.1	6.2	0.15	378
	May-05	38.283	<0.1	6.2	<0.1	361
	Nov-05	44.63	<0.1	6.1	<0.1	398
	Nov-06	49.022	0.18	6.22	<0.1	411
	May-07	ns	ns	ns	ns	ns
	Nov-07	41.8	<0.1	6.26	<0.1	364
	May-08	ns	ns	ns	ns	ns
	Nov-08	43.1	<0.1	6	1.05	476
MW-20	Jun-99	ns	ns	6.1	3.5	316
	Nov-00	18.08	<0.1	5.91	<0.1	16.15
	May-01	16.521	0.258	6.13	0.21	279
	Nov-01	16.69	<0.1	6.24	<0.1	274
	May-02	15.878	<1	ns	<1	ns
	Dec-02	15.286	<0.1	6.3	<0.1	268
	May-03	16.275	<0.1	6.3	<0.1	262
	Nov-03	17.257	<0.1	6.1	<0.1	275
	May-04	16.27	<0.1	6.3	5.6	251
	Nov-04	16.263	<0.1	6.2	<0.1	245
	May-05	15.777	<0.1	6.2	<0.1	262
	Nov-05	16.67	<0.1	6.3	<0.1	263
	Nov-06	15.66	<0.1	6.19	<0.1	246
	May-07	ns	ns	ns	ns	ns
	Nov-07	14.1	<0.1	6.24	<0.1	224
	May-08	ns	ns	ns	ns	ns
	Nov-08	15	<0.1	6.27	<1	250
MW-21	Jun-99	ns	ns	6.36	3.8	751
	Nov-00	34.685	<0.1	6.49	1.43	21.46
	May-01	16.767	0.387	6.56	4.41	717
	Nov-01	34.623	<0.1	6.57	0.43	817
	May-02	8.315	<1	ns	90.41	ns
	Dec-02	9.072	<0.1	6.7	123.16	830
	May-03	3.989	<0.1	6.6	100.4	717
	Nov-03	25.47	<0.1	6.5	2.71	737
	May-04	8.73	<0.1	6.7	6.9	644
	Nov-04	20.095	<0.1	6.7	15.26	686
	May-05	7.746	<0.1	6.8	15.46	537
	Nov-05	40.38	<0.1	6.9	0.4	793
	May-06	15.612	<0.1	7	0.77	591
	Nov-06	9.472	<0.1	6.67	53.05	473
	May-07	9.71	<0.1	7.52	5.69	473
	Nov-07	187	<0.1	6.43	31.6	648
	May-08	10.8	1.27	8.31	1.27	572
	Nov-08	18.8	<0.1	6.18	55.6	722

ns = not sampled

Table 3: Summary of Groundwater Natural Attenuation Analytical Data

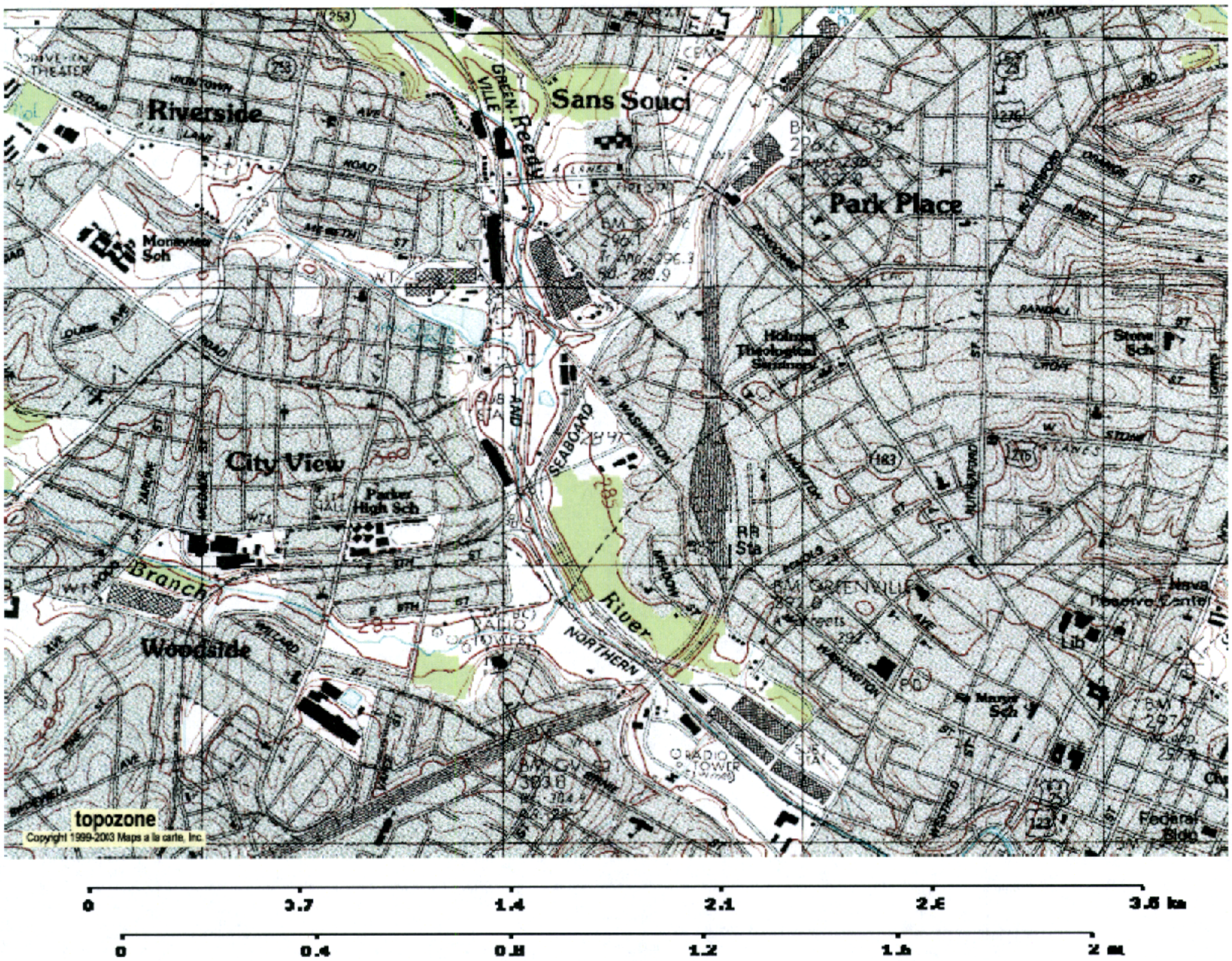
Location	Measurement Date	Iron ICP (Digested) (mg/L)	Nitrate (mg/L)	pH (std. units)	Sulfate (mg/L)	Specific Conductance (uhoms/cm)
MW-22	Jun-99	ns	ns	5.61	4.7	194
	Nov-00	0.154	21.6	5.39	1.92	17.25
	May-01	0.246	17.974	5.42	1.69	175
	Nov-01	0.462	15.97	5.6	2.42	177
	May-02	0.076	17.38	ns	1.13	ns
	Dec-02	3.313	8.59	5.9	1.47	180
	May-03	0.115	14.86	5.8	1.06	173
	Nov-03	0.329	18.97	5.7	1.19	155
	May-04	>0.1	2.6	5.8	6.4	164
	Nov-04	0.688	11.71	5.7	1.79	167
	May-05	0.223	9.43	5.7	1.77	165
	Nov-05	0.149	10.36	5.8	1.58	177
	Nov-06	0.144	10.1	5.88	2.17	172
	May-07	ns	ns	ns	ns	ns
	Nov-07	0.213	0.968	5.66	4.33	160
	May-08	ns	ns	ns	ns	ns
	Nov-08	1.28	2.1	5.11	2.48	170
MW-23	Jun-99	ns	ns	6.07	20.9	206
	Nov-00	1.735	18.06	5.57	14.36	16.62
	May-01	16.262	17.974	5.97	12.68	186
	Nov-01	1.943	17.56	5.75	13.9	194
	May-02	0.657	17.32	ns	13.55	ns
	Dec-02	10.457	16.99	5.7	13.85	185
	Nov-03	4.6	18.5	5.5	15.3	187
	May-04	0.94	4	5.9	21	177
	Nov-05	6.779	18.3	6	14.9	181
	May-07	6.145	17.42	6.47	15.15	176
	Nov-07	11.4	4.8	5.55	17.8	169
	May-08	12	3.99	8.61	17.1	179
	Nov-08	15.6	4.41	5.33	17.4	185
MW-24	Jun-99	ns	ns	5.19	18.2	169
	Nov-00	0.294	1.98	5.11	2.09	17.84
	May-01	2.62	2.967	5.99	47.52	305
	Nov-01	0.395	0.58	6.01	46.34	358
	May-02	1.529	4.26	ns	34.38	ns
	Dec-02	1.364	3.05	6.1	45.58	311
	Nov-03	18.379	<0.1	6.1	59.97	644
	May-04	21.9	<0.1	6.3	22	662
	Nov-05	100.5	<0.1	6.6	100.8	991
	May-07	103	<0.1	6.65	1.35	600
	Nov-07	42	1.25	6.25	40.7	317
	May-08	102	0.434	8.43	47.5	738
	Nov-08	43.2	0.308	5.53	344	763

ns = not sampled

Table 3: Summary of Groundwater Natural Attenuation Analytical Data

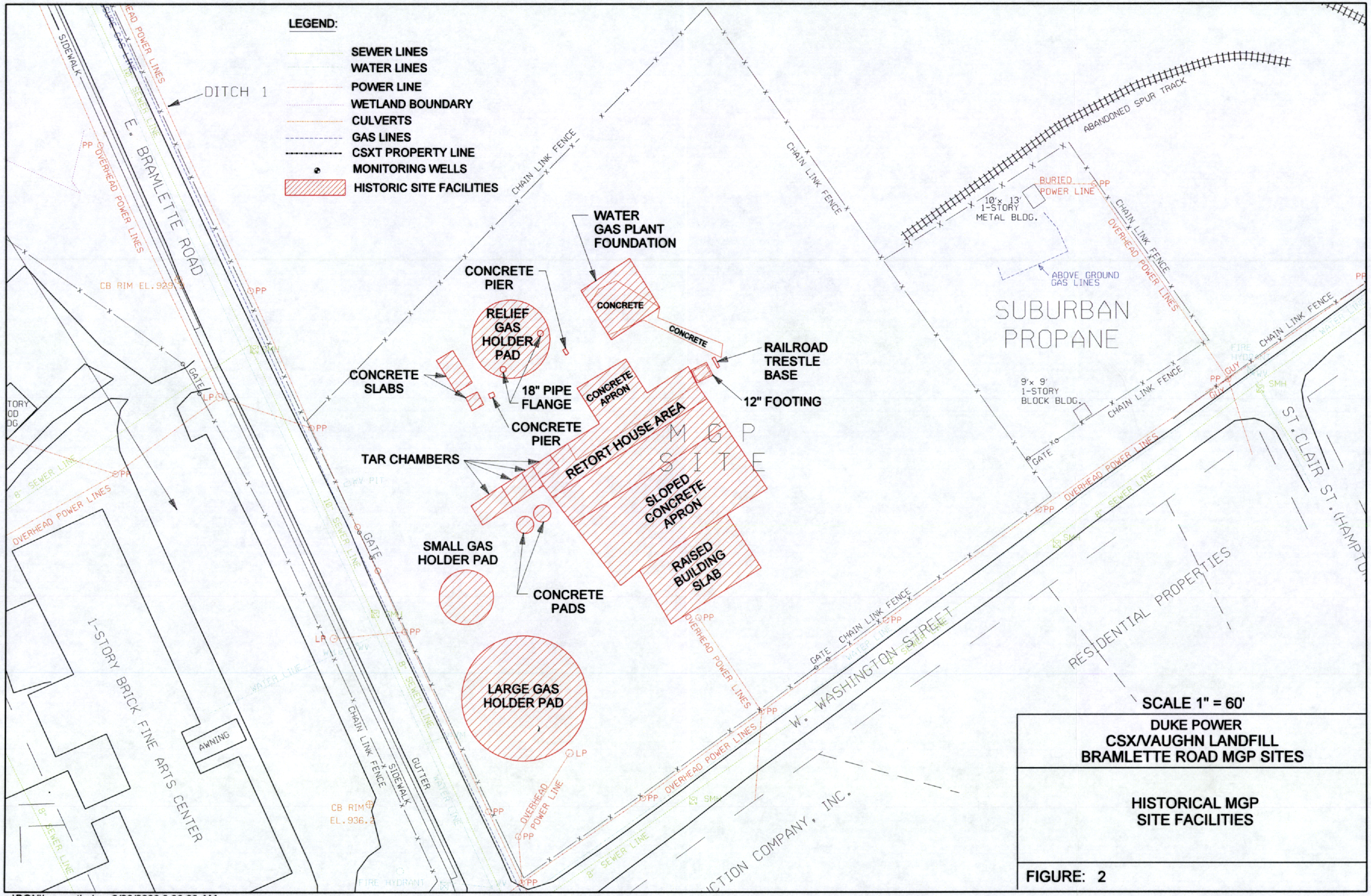
Location	Measurement Date	Iron ICP (Digested) (mg/L)	Nitrate (mg/L)	pH (std. units)	Sulfate (mg/L)	Specific Conductance (uhoms/cm)
MW-25	Jun-99	ns	ns	5.94	19	249
	Nov-00	5.238	<0.1	5.8	4.85	18.47
	May-01	5.364	0	6.17	9.92	241
	Nov-01	5.064	0.15	5.94	3.66	237
	May-02	6.438	<1	ns	11.03	ns
	Dec-02	6.005	<0.1	6.1	12.16	235
	May-03	5.562	<0.1	5.9	10.76	264
	Nov-03	5.956	<0.1	6	6.84	224
	May-04	5.55	<0.1	6.1	11	238
	Nov-04	4.682	<0.1	6.1	4.26	230
	May-05	5.609	<0.1	6	6.48	228
	Nov-05	4.877	<0.1	6.1	7.13	233
	May-06	4.399	<0.1	5.9	6.48	239
	Nov-06	3.986	<0.1	6.19	5.1	211
	May-07	4.437	<0.1	6.52	6.22	204
	Nov-07	3.7	<0.1	5.96	4.82	194
	May-08	4.37	<0.1	8.45	8.37	213
	Nov-08	3.78	<0.1	5.68	2.22	217

ns = not sampled



Fine Arts Center, USGS Greenville (SC) Topo Map
34° 51' 44"N, 82° 25' 04"W (NAD83/WGS84)

DUKE POWER CSX/VAUGHN LANDFILL BRAMLETTE ROAD MGP SITES
SITE LOCATION
FIGURE 1



SCALE 1" = 60'

DUKE POWER
CSX/VAUGHN LANDFILL
BRAMLETTE ROAD MGP SITES

HISTORICAL MGP
SITE FACILITIES

FIGURE: 2

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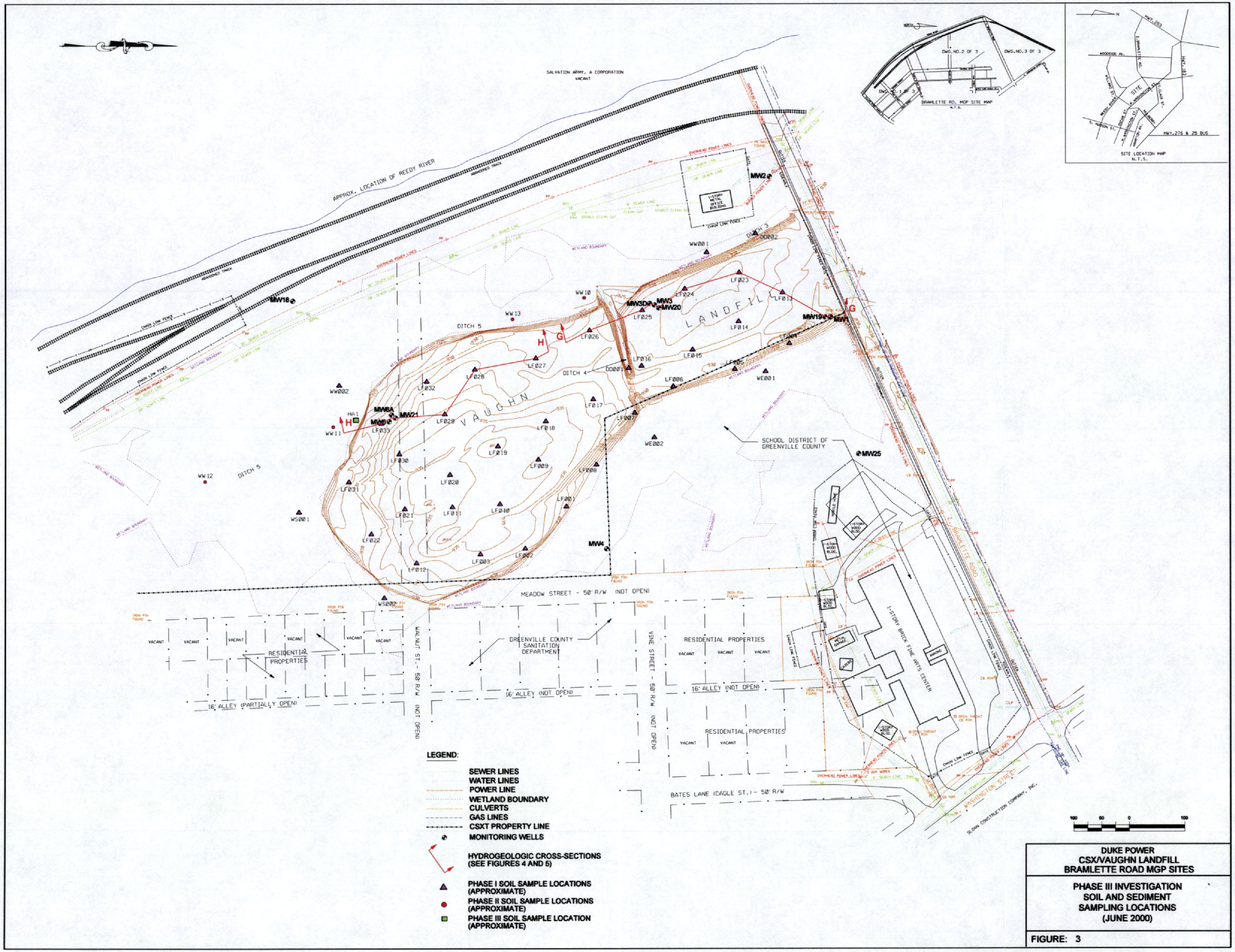
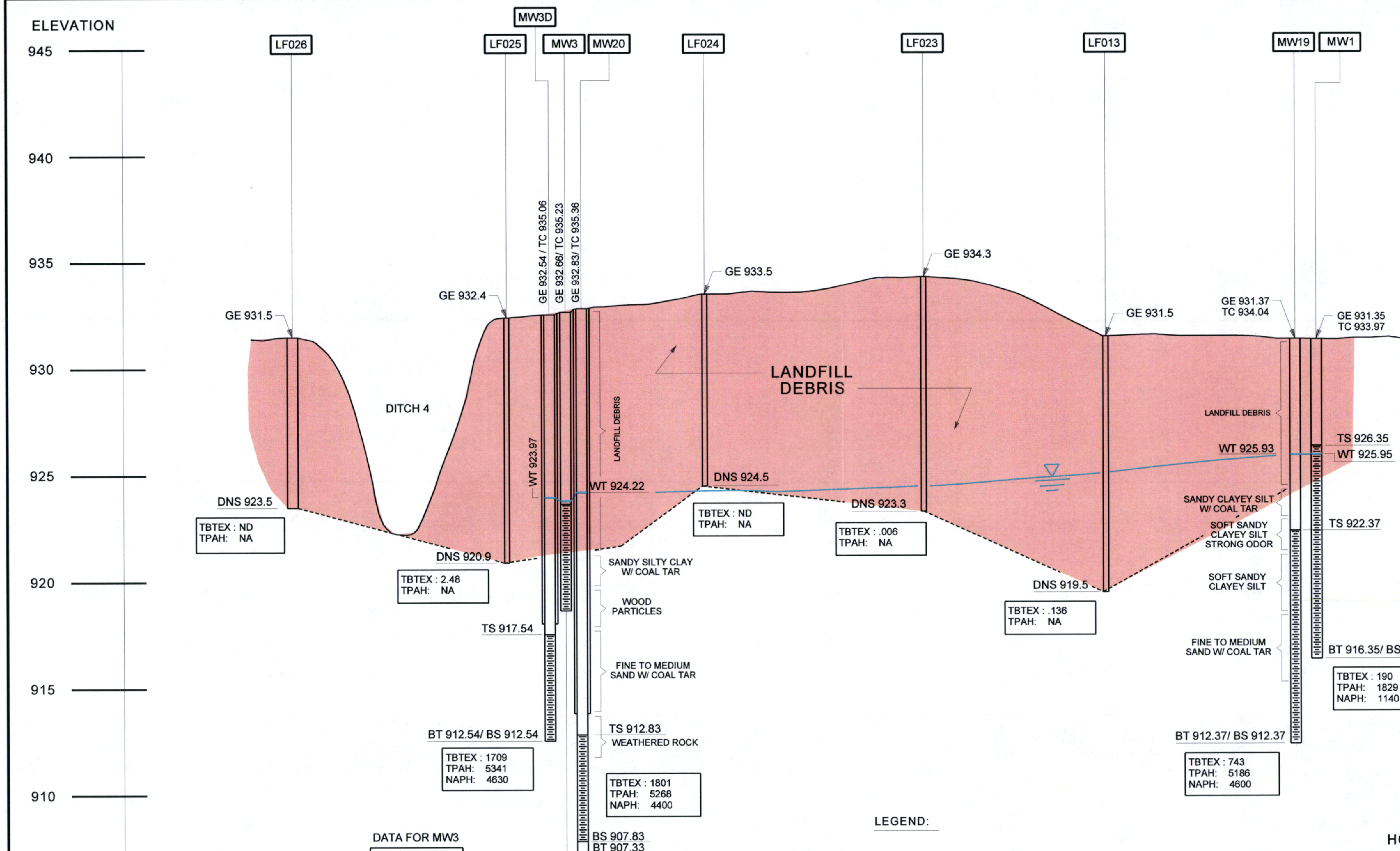


DUKE POWER
CSX/VAUGHN LANDFILL
BRAMLETTE ROAD MGP SITES

PHASE III INVESTIGATION
SOIL AND SEDIMENT
SAMPLING LOCATIONS
(JUNE 2000)

FIGURE: 3



NOTES:

GW LEVELS AND ANALYTICAL RESULTS NOVEMBER 2008 UNITS IN PPB FOR ALL WELLS

SOIL ANALYTICAL RESULTS IN PPM

PAH NON-DETECTS INDICATED AT ONE-HALF THE DETECTION LIMIT

TBTEX = TOTAL BTEX

TPAH = TOTAL PAHS

NAPH = NAPHTHALENE RESULTS BY METHOD 8270

SOIL ANALYTICAL DATA FROM MARCH 1995 PHASE I INVESTIGATION

LEGEND:

TC TOP OF CASING
TS TOP OF SCREEN
BT BORING TERMINATION
WT WATER TABLE
GE GROUND ELEVATION
AR AUGER REFUSAL
GROUNDWATER TABLE NOVEMBER 2008
WELL SCREENED INTERVAL
BORING
TEST PIT
DOUBLE-CASED WELL
LANDFILL DEBRIS

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'

DUKE POWER COMPANY

CSX/VAUGHN LANDFILL AND BRAMLETTE ROAD MGP SITES

PHASE III INVESTIGATION
HYDROGEOLOGIC
CROSS SECTION G-G
(NOVEMBER 2008)

FIGURE: 4

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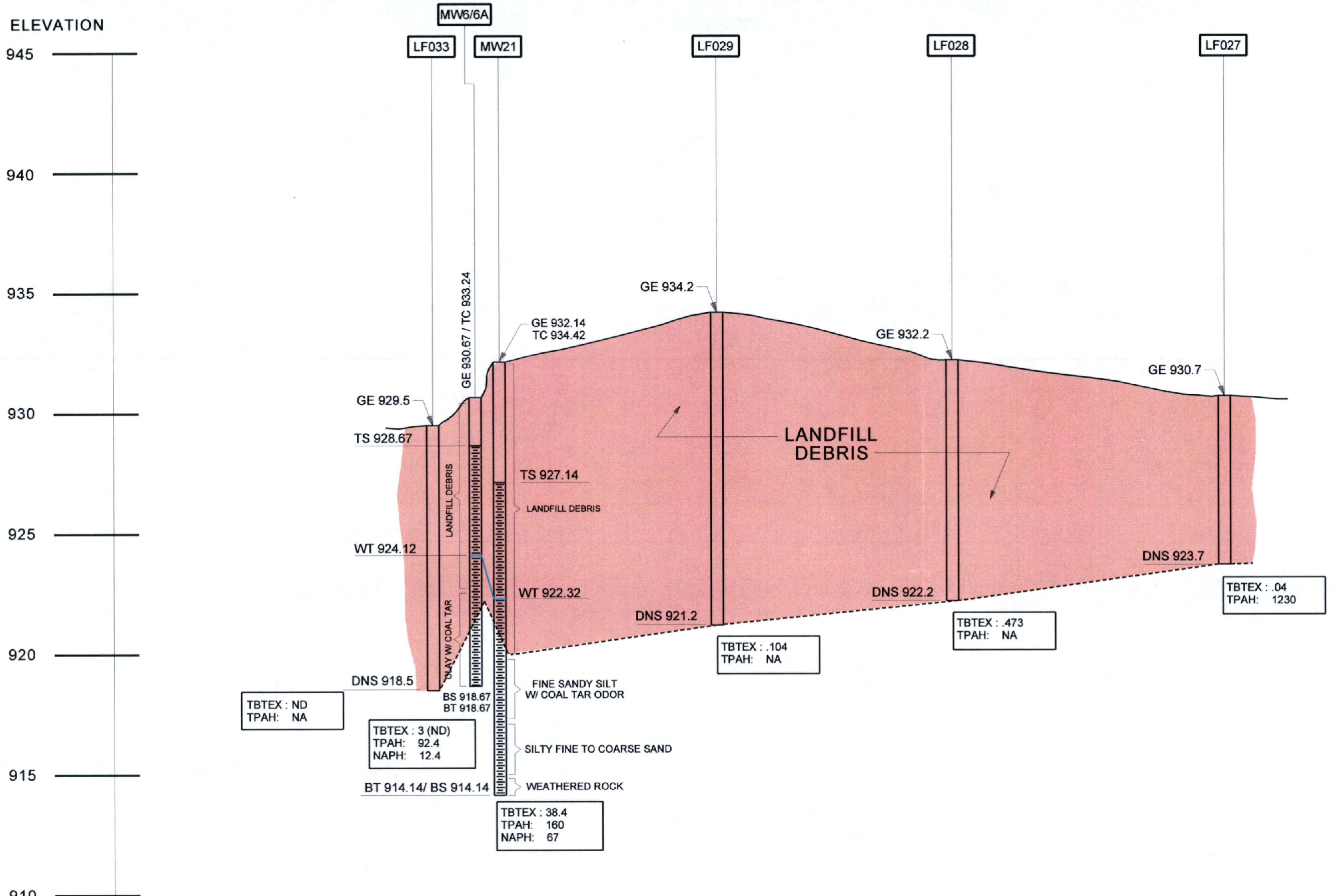

NOTES:

GW LEVELS AND ANALYTICAL RESULTS NOVEMBER 2008 UNITS IN PPB FOR ALL WELLS

SOIL ANALYTICAL RESULTS IN PPM

PAH NON-DETECTS INDICATED AT ONE-HALF THE DETECTION LIMIT

TBTEX = TOTAL BTEX

TPAH = TOTAL PAHS

NAPH = NAPHTHALENE RESULTS BY METHOD 8270

SOIL ANALYTICAL DATA FROM MARCH 1995 PHASE I INVESTIGATION

LEGEND:

TC TOP OF CASING
TS TOP OF SCREEN
BT BORING TERMINATION
WT WATER TABLE
GE GROUND ELEVATION
AR AUGER REFUSAL
GROUNDWATER TABLE NOVEMBER 2008
WELL SCREENED INTERVAL
BORING
TEST PIT
LANDFILL DEBRIS

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'

DUKE POWER COMPANY

CSX/VAUGHN LANDFILL AND BRAMLETTE ROAD MGP SITES

PHASE III INVESTIGATION
HYDROGEOLOGIC
CROSS SECTION H-H
(NOVEMBER 2008)

FIGURE: 5

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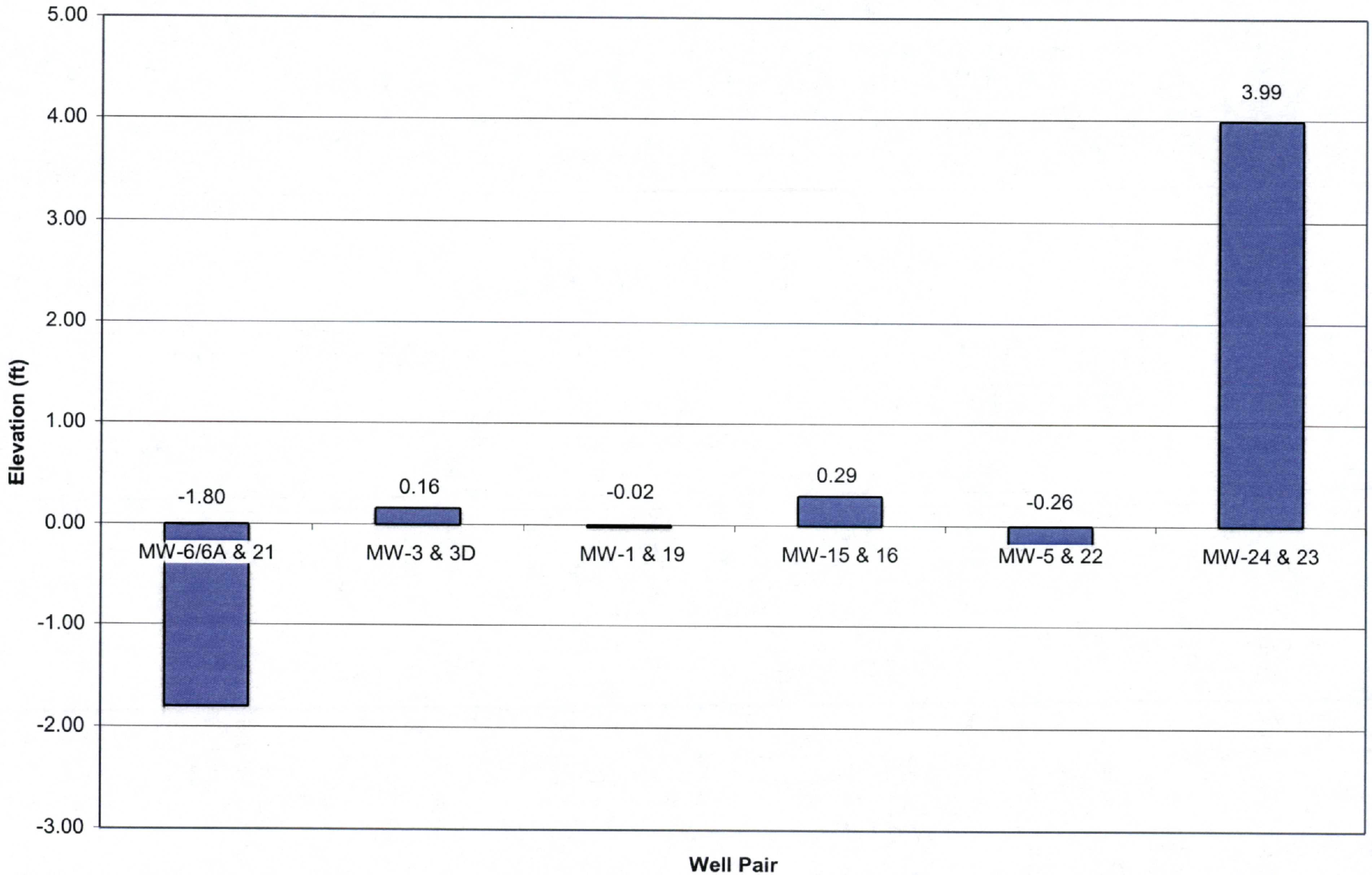
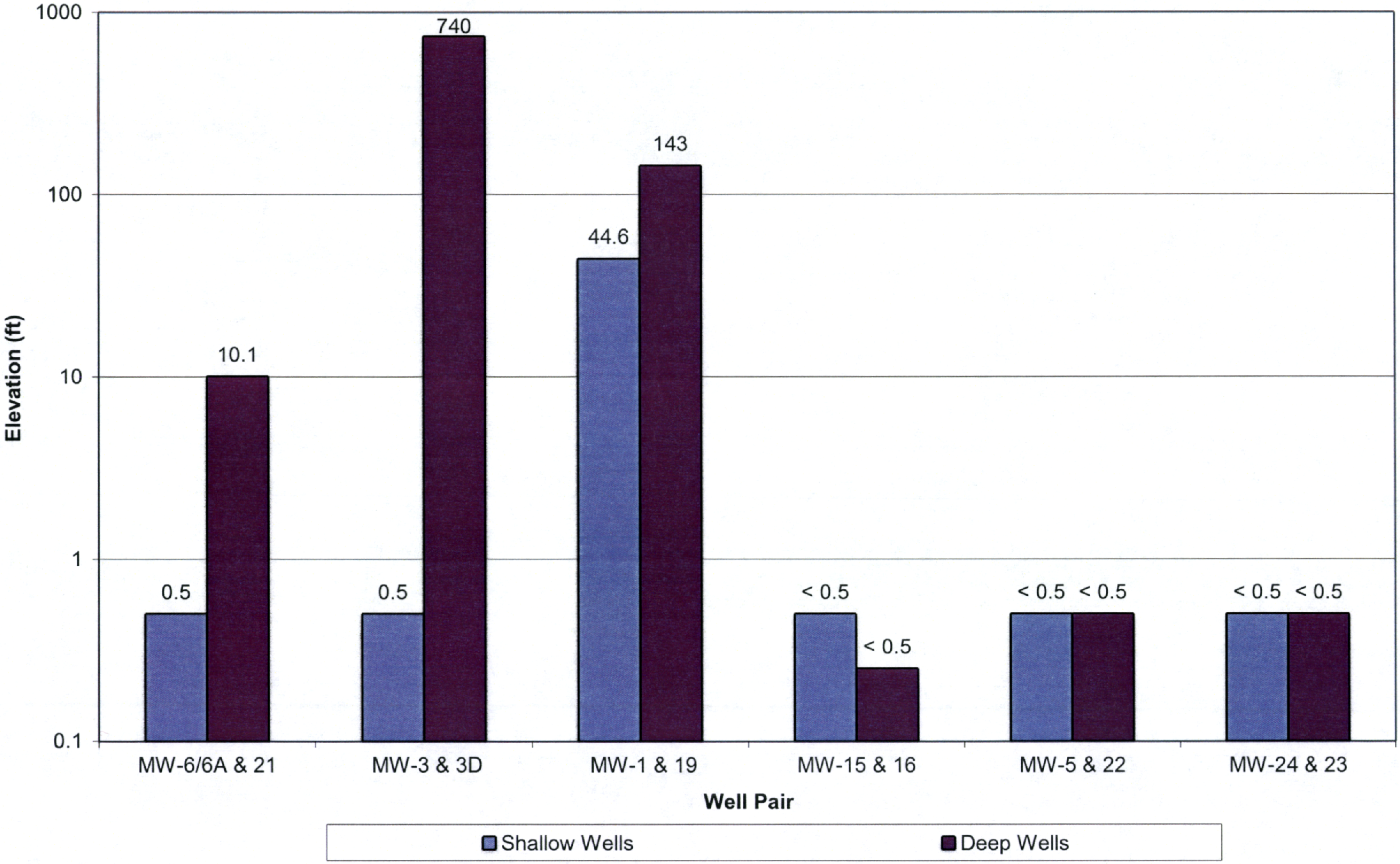
Figure 6: Comparison of Groundwater Level Differences in Well Pairs



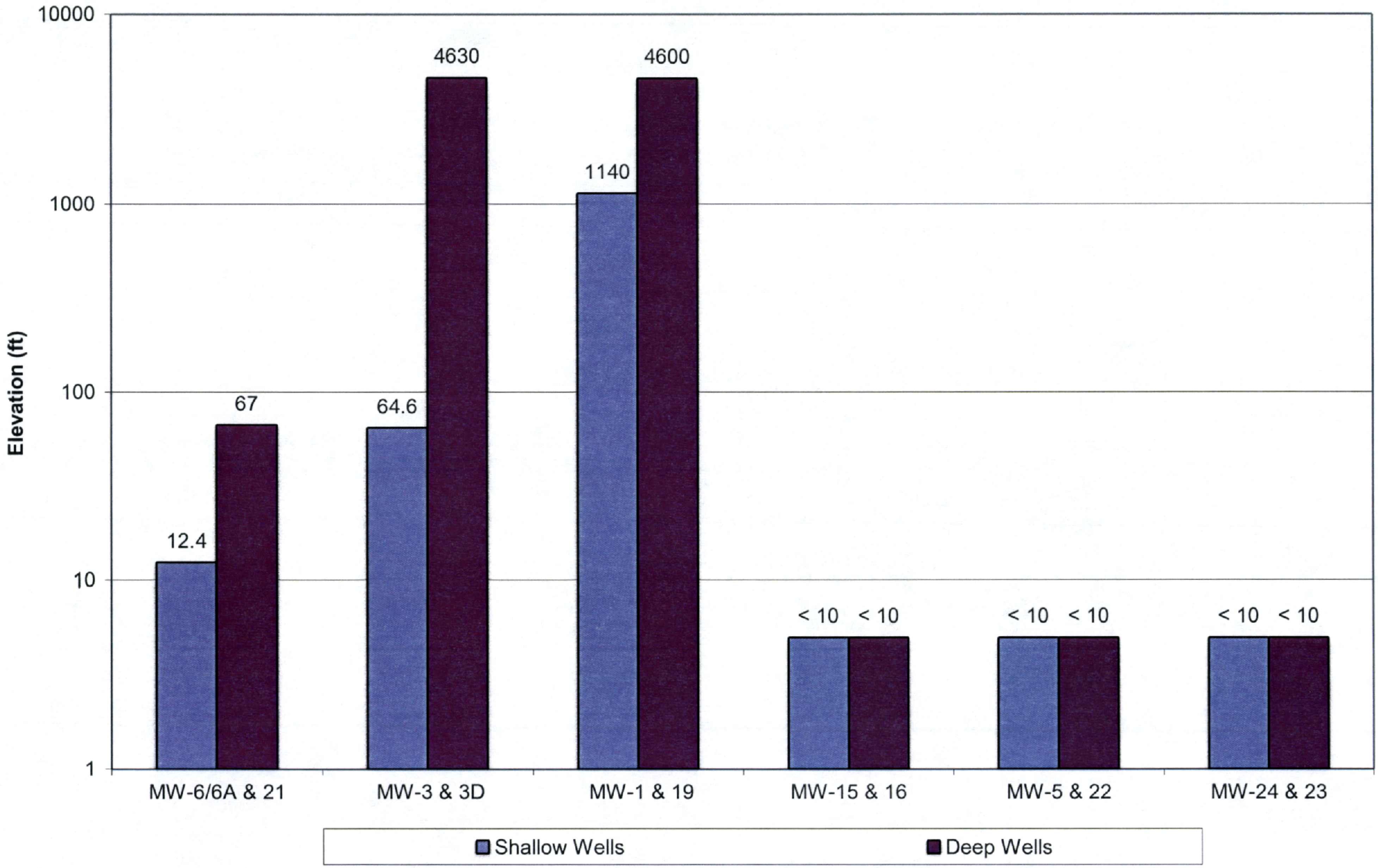
Based on Nov 2008 data

Figure 7: Comparison of Benzene Concentrations in Well Pairs

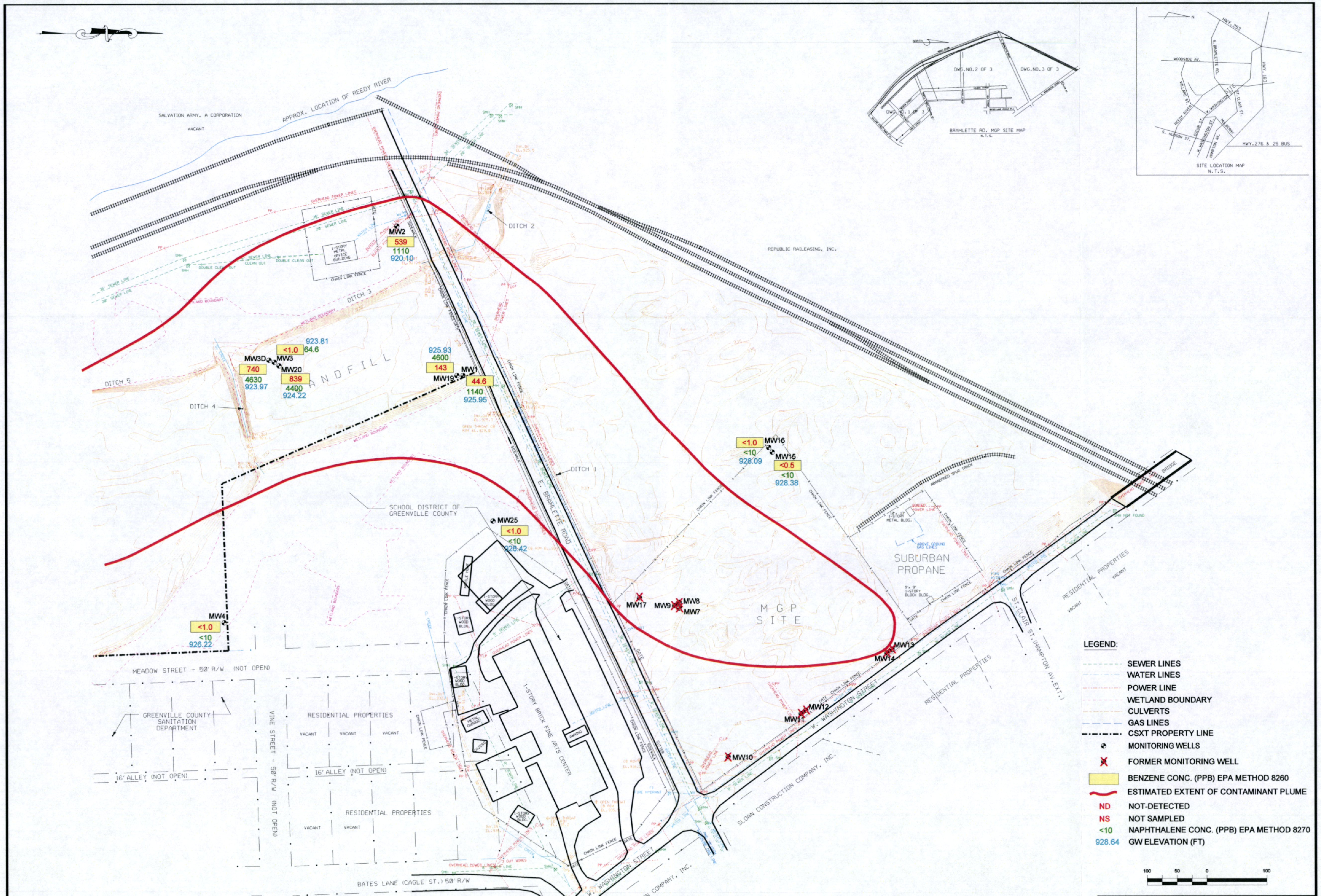


Based on Nov. 2008 data
Non-detect shown at half detection limit

Figure 8: Comparison of Naphthalene Concentrations in Well Pairs



Based on Nov. 2008 data, EPA Method 8270
Non-detects shown at half detection limit



DUKE POWER
CSX/VAUGHN LANDFILL
BRAMLETTE ROAD MGP SITES

GROUNDWATER DATA SUMMARY
NOVEMBER 2008

FIGURE: 9

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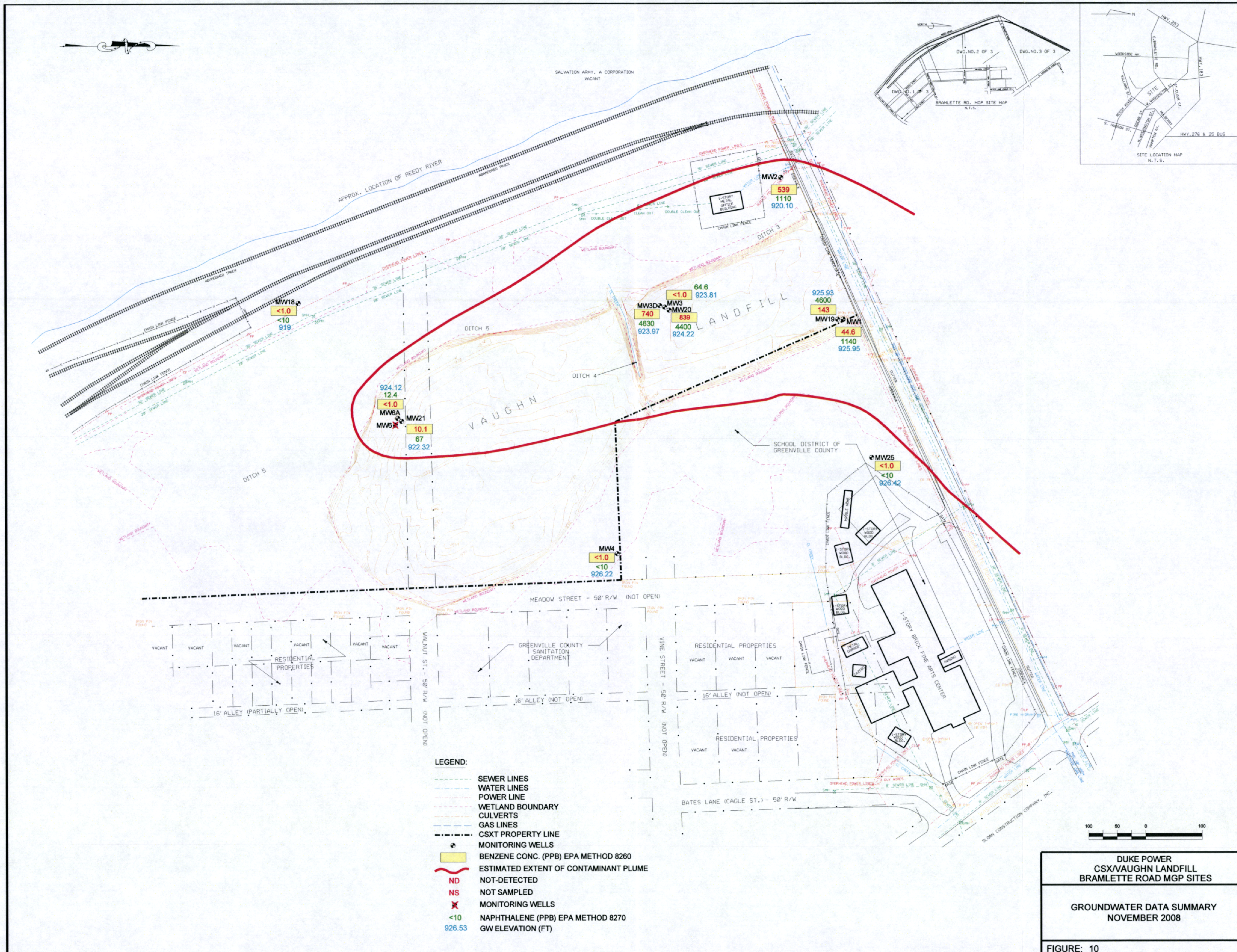

DUKE POWER
CSX/VAUGHN LANDFILL
BRAMLETTE ROAD MGP SITES

GROUNDWATER DATA SUMMARY
NOVEMBER 2008

FIGURE: 10

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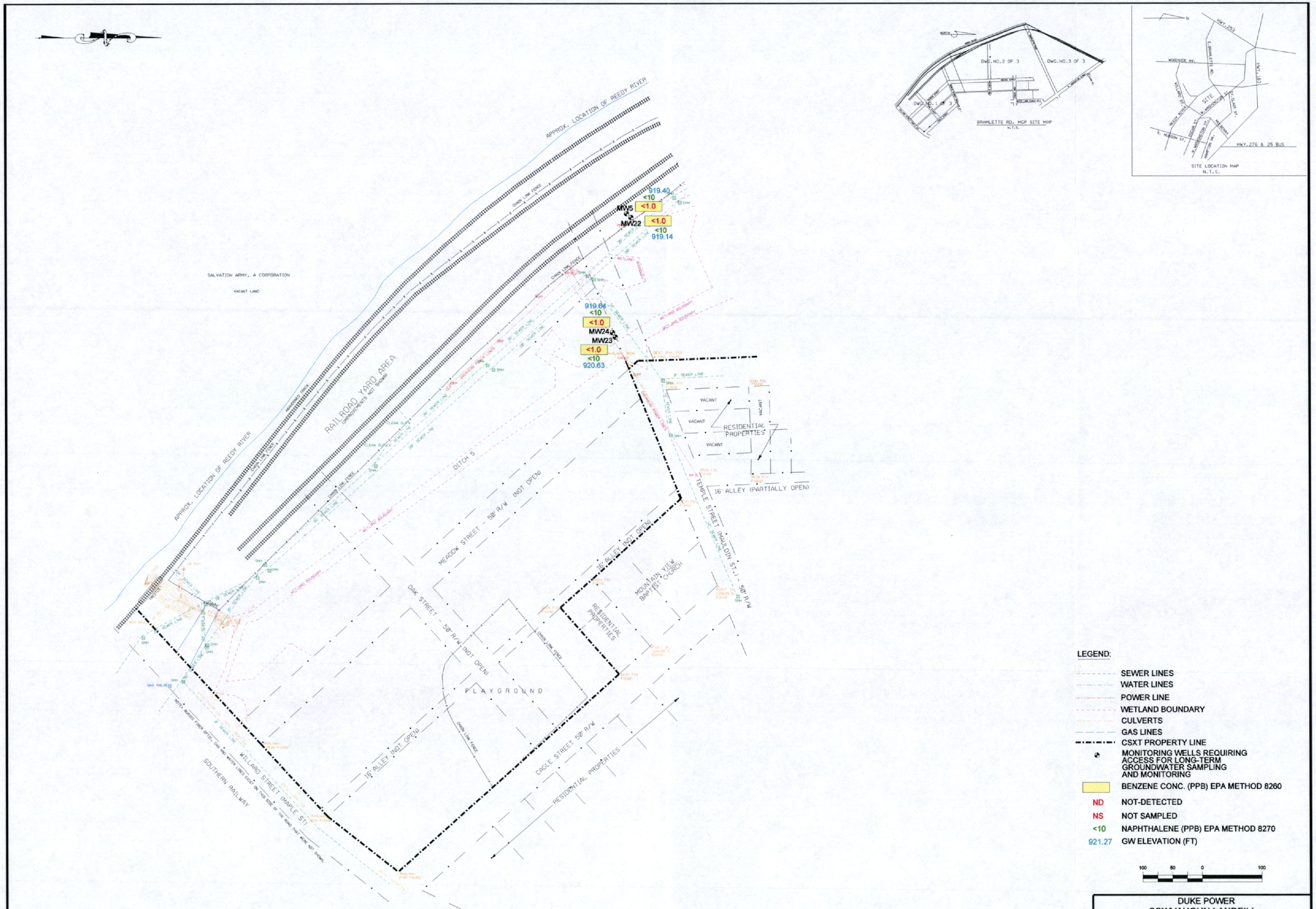

LEGEND:

- SEWER LINES
- WATER LINES
- POWER LINE
- WETLAND BOUNDARY
- CULVERTS
- GAS LINES
- CSXT PROPERTY LINE
- MONITORING WELLS REQUIRING ACCESS FOR LONG-TERM GROUNDWATER SAMPLING AND MONITORING
- BENZENE CONC. (PPB) EPA METHOD 8260
- ND NOT-DETECTED
- NS NOT SAMPLED
- <10 NAPHTHALENE (PPB) EPA METHOD 8270
- 921.27 GW ELEVATION (FT)

100 50 0 100

DUKE POWER
CSX/VAUGHN LANDFILL
BRAMLETTE ROAD MGP SITES

GROUNDWATER DATA SUMMARY
NOVEMBER 2008

FIGURE: 11

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Figure 12
Bramlette Road MGP
Historic Benzene Concentrations
Shallow Wells

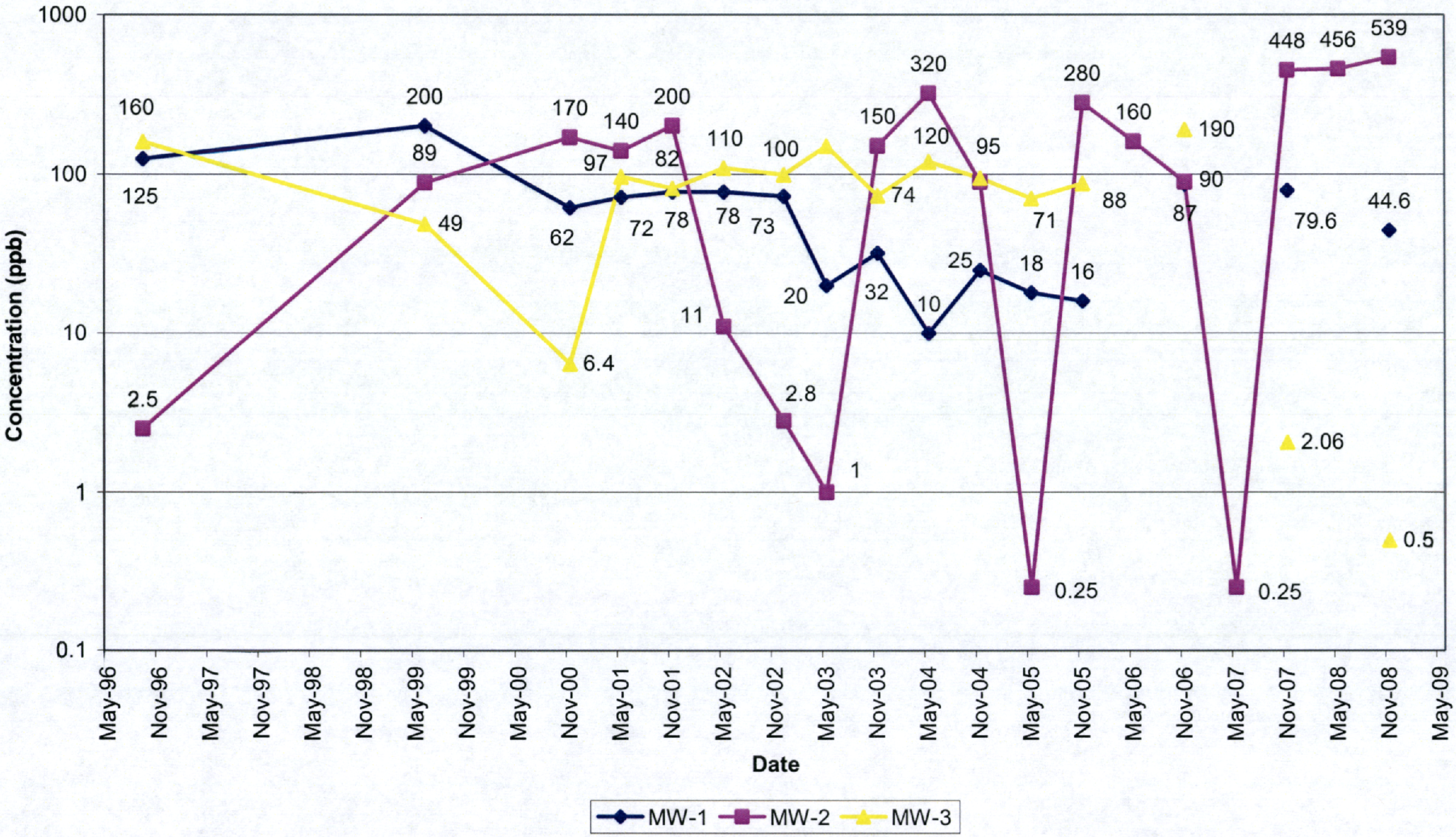


Figure 13
Bramlette Road MGP
Historic Naphthalene Concentrations
Shallow Wells

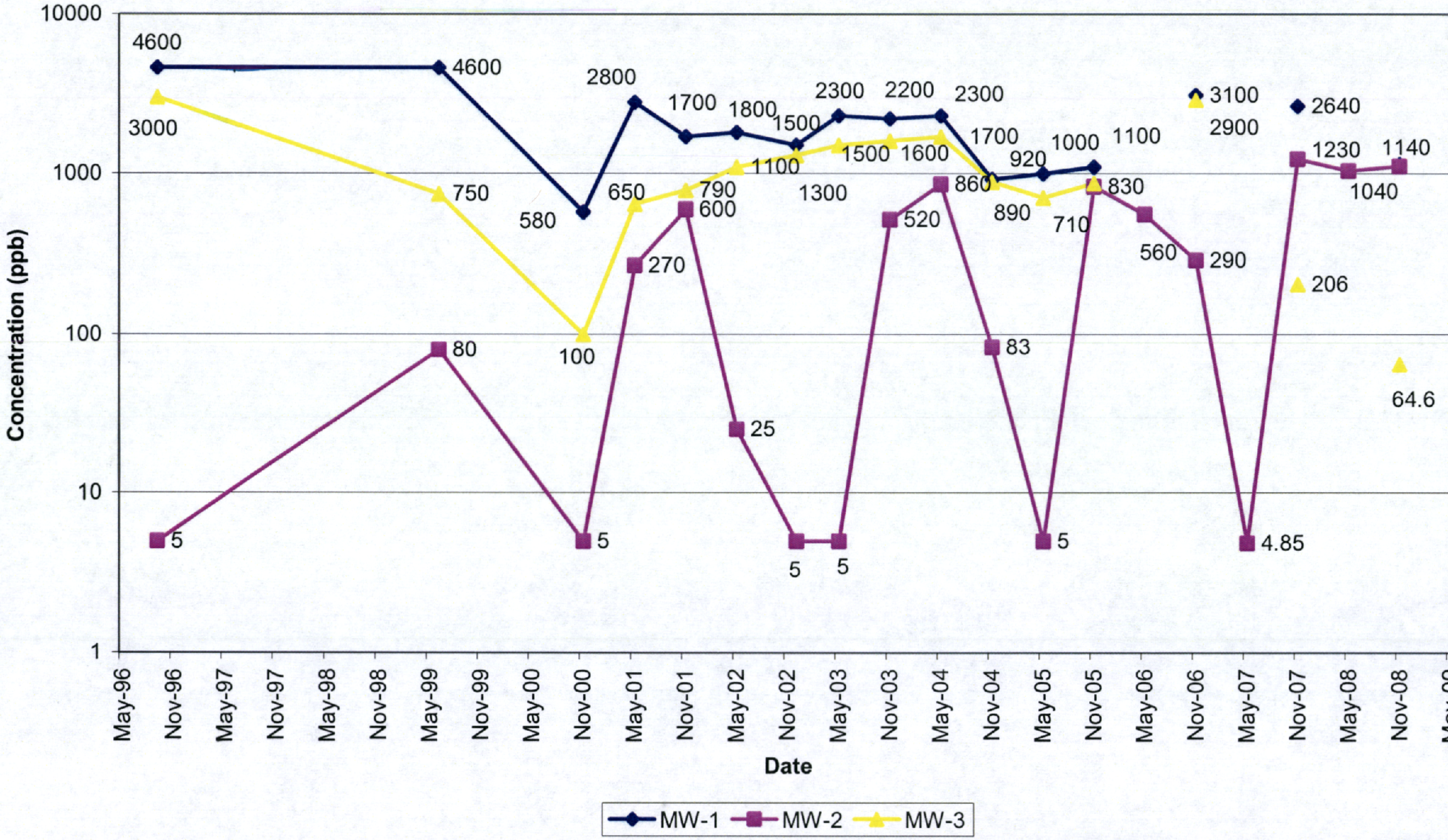
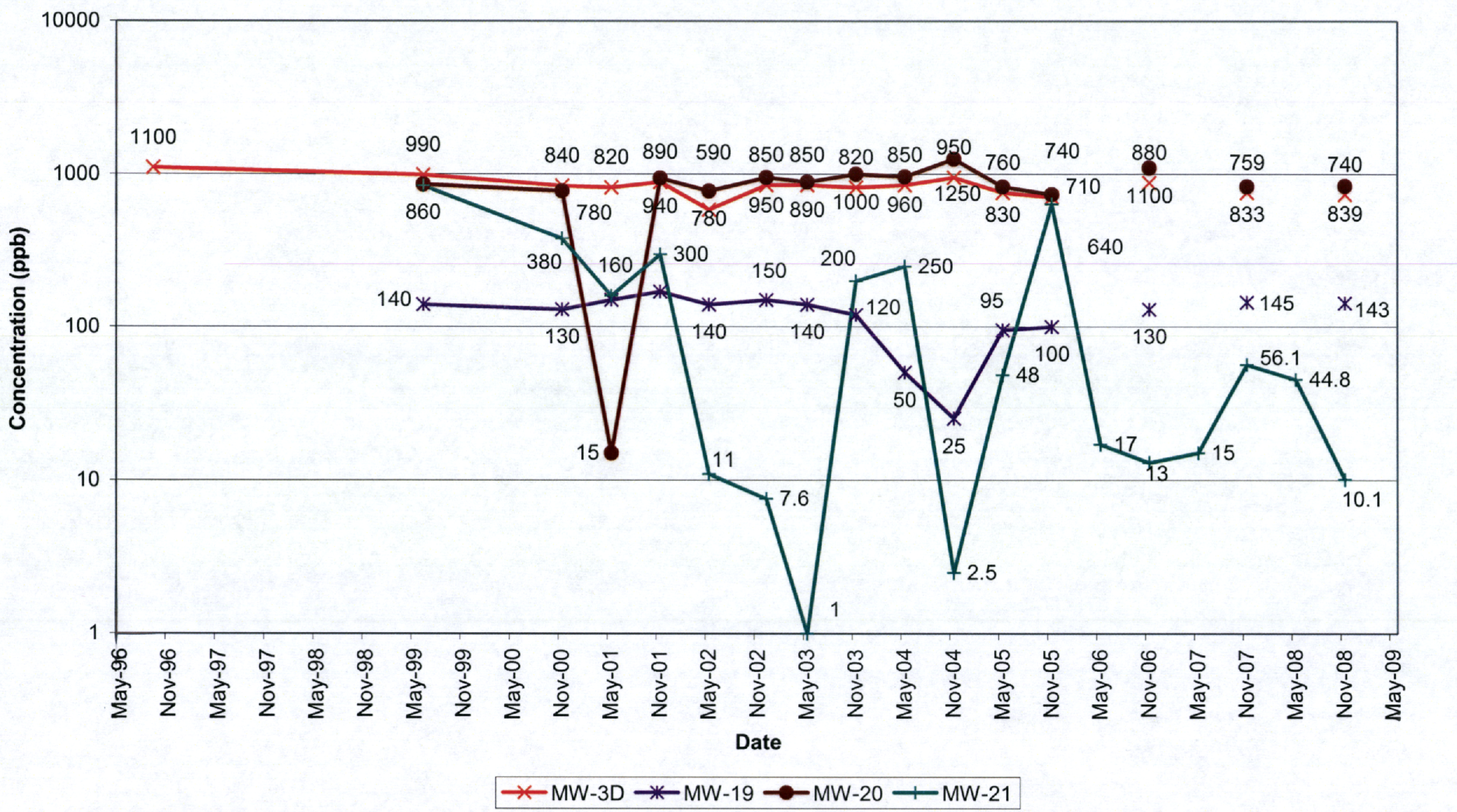
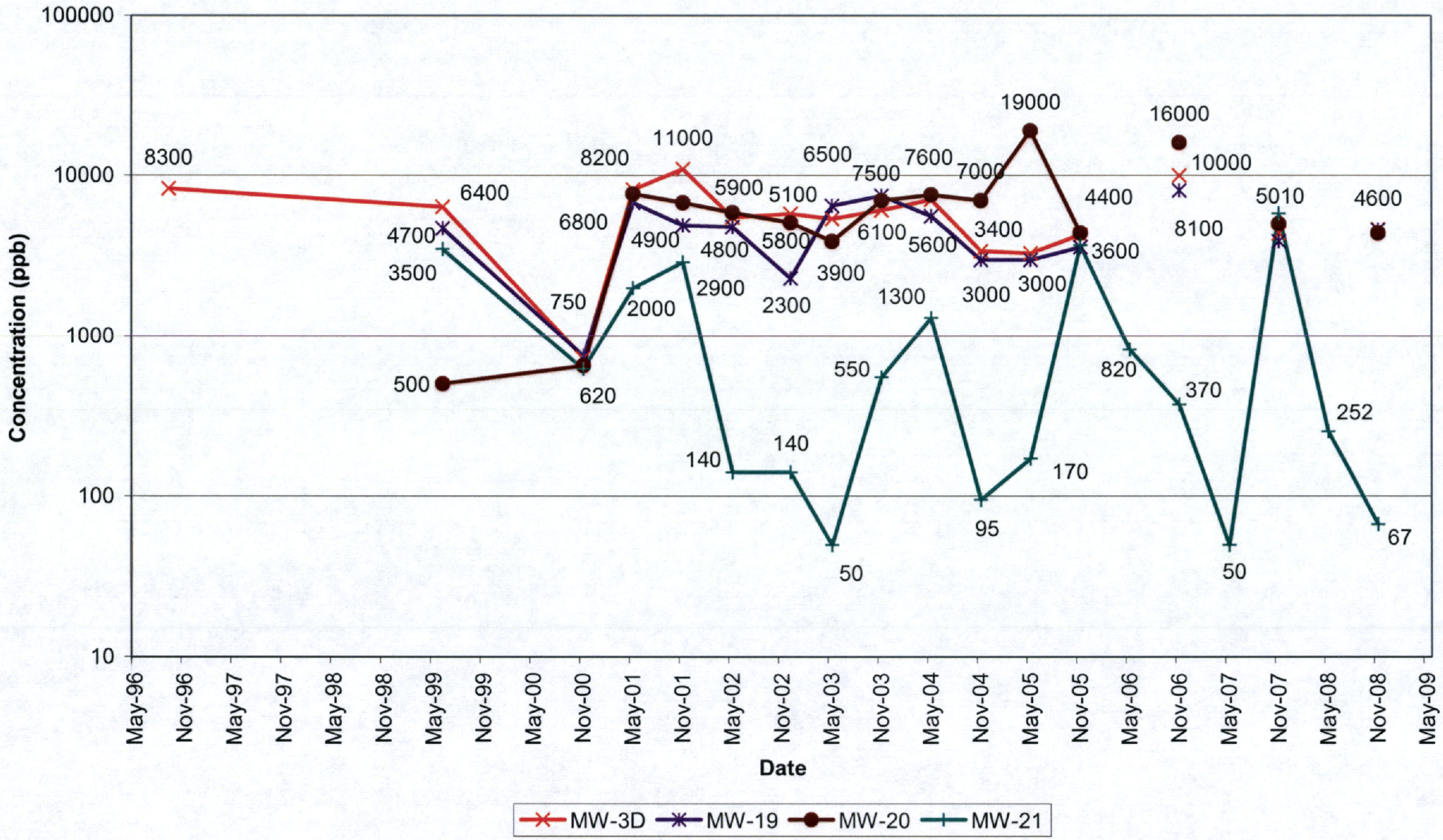


Figure 14
Bramlette Road MGP
Historic Benzene Concentrations
Deep Wells



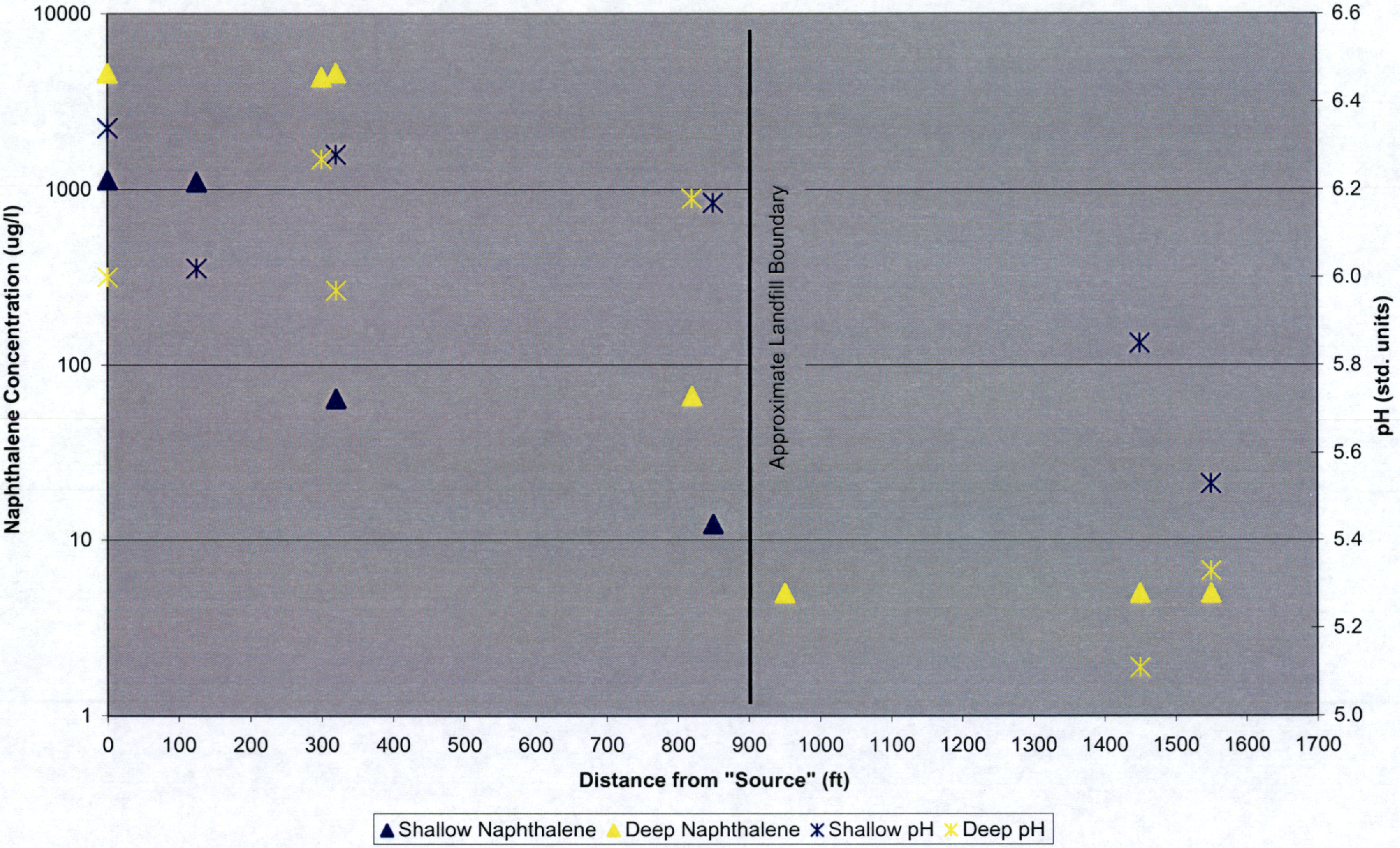
Based on EPA Method 8270

Figure 15
Bramlette Road MGP
Historic Naphthalene Concentrations
Deep Wells



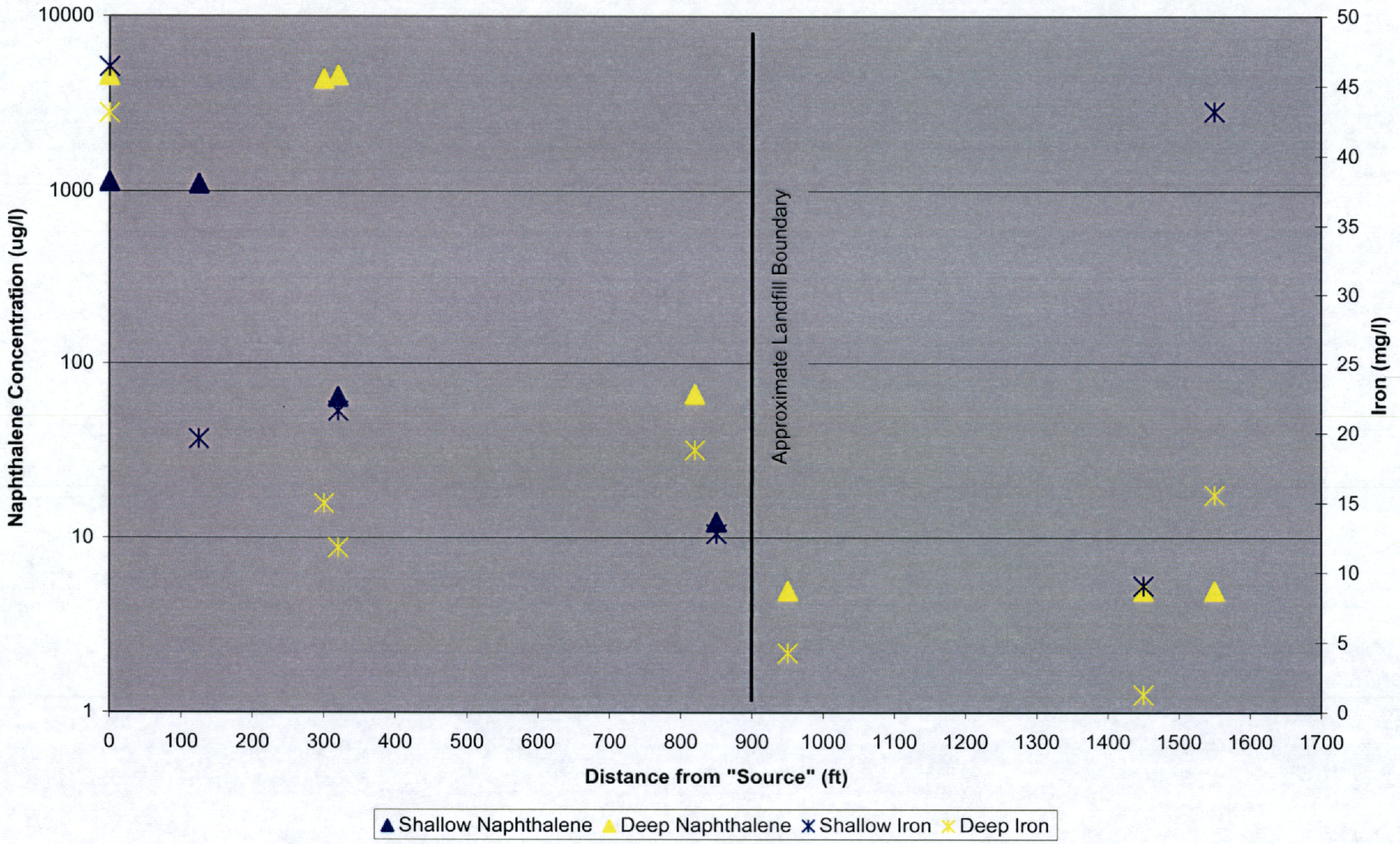
Based on EPA Method 8270

Figure 16: SLOE pH Trend along Contamination Pathway



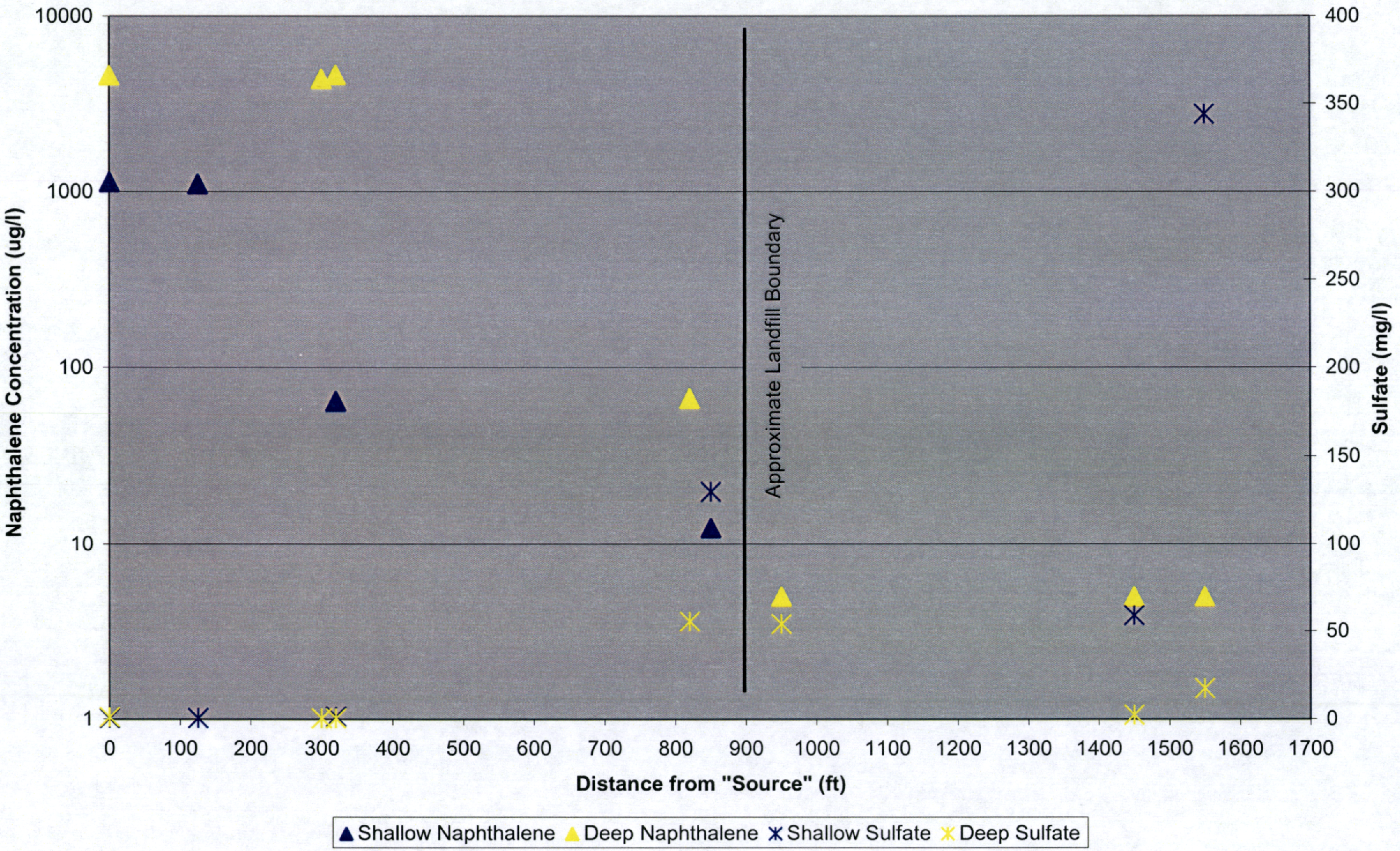
Shallow (left to right): MW-1, MW-2, MW-3, MW-6/6A, MW-5, MW-24
Deep (left to right): MW-19, MW-20, MW-3D, MW-21, MW-18, MW-22, MW-23
Based on November 2008 data

Figure 17: SLOE Iron Trend along Contamination Pathway



Shallow (left to right): MW-1, MW-2, MW-3, MW-6/6A, MW-5, MW-24
Deep (left to right): MW-19, MW-20, MW-3D, MW-21, MW-18, MW-22, MW-23
Based on November 2008 data

Figure 18: SLOE Sulfate Trend along Contamination Pathway



Shallow (left to right): MW-1, MW-2, MW-3, MW-6/6A, MW-5, MW-24
Deep (left to right): MW-19, MW-20, MW-3D, MW-21, MW-18, MW-22, MW-23
Based on November 2008 data