Assessment of Corrective Measures

Prepared for

Alexander County Landfill - Permit #02-01
Taylorsville, Alexander County, North Carolina

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TABLE OF CONTENTS

1 INTRODUCTION 1

1.1 Site Background 1

1.1.1 Site History 1

1.1.2 Sampling History 1

1.2 Site Characteristics 2

1.2.1 Site Description 2

1.2.2 Geology 2

1.2.3 Hydrogeology 3

1.2.4 Hydrology 5

Potable Sources 5

Groundwater Regime 5

Groundwater Flow Components 6

1.3 Site Conceptual Model 6

2 CONTAMINATION CHARACTERIZATION 8

2.1 Contamination of Concern 8

2.1.1 Inorganic Constituents 8

2.1.2 Organic Constituents 10

2.2 Contamination Distribution 12

2.3 Contamination Characteristics 14

2.4 Source Control Measures 15

2.4.1 MT3D96 Modeling 15

2.4.2 Stream Dilution 16

2.5 Groundwater End Use 17

2.6 Exposure Pathways 17

2.7 Human Health Risk Assessment 17

2.7.1 Carcinogenic 17

2.7.2 Non-Carcinogenic 18

2.8 Adult Risk 19

2.9 Child Risk 19

2.10 Sensitivity Receptor Pathways 20

3 CORRECTIVE MEASURES SCREENING AND EVALUATION 20

3.1 Overview 20
3.2 Institutional Controls 20
3.3 Infiltration Controls 21
3.4 Landfill Gas Controls 21
3.5 Groundwater Technologies 21
3.5.1 Monitored Natural Attenuation 22
3.5.2 Vapor Extraction System/Bioventing 22
3.5.3 Air Sparging 22
3.5.4 Enhanced Bioremediation 22
3.5.5 Phytoremediation 23
3.5.6 Constructed Wetland 23

4 SUMMARY CONCLUSIONS 23

4.1 Conclusions – Selection of Remedy 23

5 REFERENCES 25

TABLES

Table 1 ..... Well Construction Details
Table 2 ..... Historical Groundwater Elevation Data
Table 3 ..... Summary of Slug Test Results
Table 4 ..... Summary of Geologic Properties
Table 5 ..... Summary of Field Parameters
Table 6 ..... Historical Inorganic Groundwater Results
Table 7 ..... Historical Inorganic Surface Water Results
Table 8 ..... Historical Organic Groundwater Results
Table 9 ..... Historical Organic Surface Water Results
Table 10 ..... Current Organic Groundwater Sampling Results
Table 11 ..... Current Inorganic Groundwater Sampling Results
Table 12 ..... Carcinogenic Toxicity Values for Oral Ingestion
Table 13 ..... Carcinogenic Toxicity Values for Inhalation Exposure
Table 14 ..... Carcinogenic Toxicity Values for Dermal Exposure

Table 15 ..... Non-Carcinogenic Toxicity Values for Oral Ingestion Exposure
Table 16 ..... Non-Carcinogenic Toxicity Values for Inhalation Exposure
Table 17 ..... Non-Carcinogenic Toxicity Values for Dermal Exposure
Table 18 ..... Remediation Alternatives
Table 19 ..... Stream Dilution Calculations
Table 20 ..... Flow Rate Calculations
Table 21 ..... Vertical Flow

PLATES

Plate 1 ..... Topographic Map with Site Location
Plate 2 ..... Facility Map
Plate 3 ..... Site Map with Sampling Locations
Plate 4 ..... Regional Characterization Map
Plate 5 ..... Stream Trace Analysis with Rose Diagram
Plate 6 ..... Estimated Top of Competent Rock
Plate 7 ..... Average Potentiometric Groundwater Map
Plate 8 ..... Isoconcentration Map Total VOC's
Plate 9 ..... Tax Map
Plate 10A ..... Cross-Section
Plate 10B ..... Cross-Section
Plate 10C ..... Cross-Section

APPENDIX

Appendix A ..... Boring Logs and Monitoring Well Construction Diagrams
Appendix B ..... Sampling History
Appendix C ..... Groundwater Modeling
Appendix D ..... Slug Tests

1 INTRODUCTION

1.1 Site Background

1.1.1 Site History

The Alexander County Construction and Demolition (C&D) landfill is located at 2500 Payne Dairy Road, Taylorsville, Alexander County, North Carolina. A topographical map showing the location of the site is included as Plate 1. Alexander County C&D landfill operates under permit #02-01. The C&D landfill is operated within the area covered under the transition plan. Prior to operating as a C&D landfill, the site operated as a Municipal Solid Waste (MSW) unlined sanitary landfill that consisted of two units. The western unit was closed prior to October 9, 1991 with a 24 inch final soil cover. The second, eastern unit was closed by mid-1999, with a cohesive cap of 18 inches of soil with permeability of 1 x 10^{-5} cm/sec, and 18 inches of erosive layer.[19] The C&D landfill was constructed and is operating on top of the western MSW unit. A facility map showing the location of the permitted facility is included as Plate 2.

1.1.2 Sampling History

Four monitoring wells (MW-1, MW-2, MW-3, and MW-4) were installed in September 1990. Well construction records are provided in Appendix A. A summary of existing monitoring wells is included as Table 1. Initial sampling of these monitoring wells occurred on April 30, 1990 and included pH, Biological Oxygen Demand, Chemical Oxygen Demand, Nitrate Nitrogen, Total Organic Carbon, Chloride, Fluoride, Total Dissolved Solids, Arsenic, Barium, Cadmium, Copper, Total Chromium, Iron, Lead, Manganese, Mercury, Selenium, Silver, Zinc, Total Organic Halides, Sulfate, Conductivity, Temperature, and Static Water Level. Additional sampling occurred on July 18, 1991. Sample results for these events are available in the Transition Plan.

The Ground and Surface Water Monitoring System (SAP) was prepared in February 1994 and submitted as part of the Transition Plan.[19] Included in the SAP, monitoring wells MW-1A, MW-5, MW-6, MW-7 and MW-8 were installed in September 1994. Monitoring well MW-4R was also installed to replace monitoring well MW-4 in September 1994. Appendix I sampling was initiated in October 1994 with background sampling occurring on October 1, 1994, January 31, 1994, February 15, 1995, and March 7, 1995. Appendix II sampling was performed on monitoring wells MW-1, MW-1A, MW-2, MW-3, MW-4R, MW-5, MW-6, MW-7, and MW-8 on December 3, 1997. Background Appendix II sampling was preformed on March 23, 1998, April 30, 1998, and June 4, 1998.

Appendix I with select constituents from Appendix II sampling was preformed on November 18, 1998, and May 13, 1999. Appendix I sampling including sampling for Mercury was performed on December 6, 1999. Additional monitoring wells MW-9, MW-10, MW-11, MW-12S, MW-13, MW-14, and MW-15 were installed in October 2000.

A Groundwater Assessment and Corrective Measures was completed by Municipal Engineering Services Company, PA. on October 31, 2001, with revision on August 27, 2002.[20] In May 2003 monitoring well MW-1B was installed as the new background well due to MW-1A being dry. Monitoring well MW-12D and MW-17 were installed in June 2003. Monitoring well MW-11D was attempted. No deep water bearing fractures were identified. The boring was abandoned. Appendix I sampling resumed on a semi-annual basis. Monitoring wells MW-16, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, MW-26, and MW-27 were installed in December 2007 to fully delineate the extent of impact. A sampling history table is included in Appendix B.

1.2 Site Characteristics

1.2.1 Site Description

The site lies within the Piedmont physiographic province that is characterized by gently rolling hills with moderately sloped valleys. There are approximately 180 feet of topographical relief across the facility. The highest elevation is located around the scale house. The lowest elevations occur in the drainage features with elevations of approximately 900 feet. The Catawaba River is located due south of the facility at an elevation of approximately 835 feet.

Multiple drainage features control surface water flow off the site. The northern and western portion of the site have three drainage features, the primary being a tributary of Little River. Little River drains into the Catawaba River southwest of the facility. The southern portion of the site has five drainage features that empty into the Catawaba River. It should be noted that one of the primary drainage features is located immediately off the property line.

1.2.2 Geology

The geology, as addressed in the SAP, is composed primarily of regolith and rock. The regolith consists of soil composed of tan to orange clayey silt, coarse to fine sand, and saprolite produced by in-situ weathering of interlayered schist and gneiss. The thickness of the regolith ranges from 10-31 feet. Below the regolith is interlayered mica schist and biotite gneiss.[16][14] The schist is composed of muscovite, biotite, and sillimanite with minor garnet and pyrite. Gneiss layers are gradational, thin to thick, with biotite, feldspar, and quartz.

The pronounced ridges are primarily sillimanite and quartz, which are more resistant to weathering. A regional characterization map with the geology is included as Plate 4.

The area has many overturned anitforms and synforms that plunge northeast less than 25°. Strike varies with relation to the fold axis, but is generally northwest, dipping northeast less than 45°. [14] Measured foliations on the gneiss had a strike of N20°W dipping northeast 35-60°. The predominant joint patterns are N60°E and N40°W.[18][25]

Well construction records for monitoring wells are included in Appendix A. Partially Weathered Rock (PWR), as generally classified when Standard penetration tests (SPT) encounter a count of 50 blows over a 6-inch interval, was encountered in a number of wells just above the top of competent rock (TOR). TOR was generally classified based on auger refusal. In cases of Air Rotary Drilling, TOR was classified based on professional judgment. TOR is depicted on Plate 6. Rock cores collected from MW-11D and MW-12D indicate that Rock Quality Designation (RQD) is poor in the upper 10 to 15 feet of rock. RQD became excellent beyond 15 feet. Deep water bearing fractures were not identified in MW-11D.

A stream trace analysis was performed on a 2.5-mile radius of the facility. Structurally controlled features were traced from the Millersville and Stony Point USGS 7.5 min quadrangle. The Rose diagrams (Plate 5) display both symmetric (directionally independent) and asymmetric (directionally dependent) modes. Two primary features were observed in the asymmetric mode. The S10-20E can be associated with the strike of the foliation. The S40-50E may be associated with shear joint fracture as part of the joint set associated with the overall geological fold structure. No dominate structures were identified from the symmetric mode. Generalized subsurface geology and hydrology are shown in cross sections on Plate 10A, Plate 10B, and Plate 10C.

1.2.3 Hydrogeology

Hydrogeological properties of monitoring wells MW-1A, MW-2, MW-3, MW-4R, MW-5, MW-6, MW-7, and MW-8 were reported in Response to Review Comments.[13] Hydrogeological properties of monitoring wells MW-16, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, MW-26, and MW-27 were performed by MESCO and are included in Appendix D. A summary of slug test results is provided as Table 3. Hydraulic conductivity values ranged from a high of 1.33×10^{-2} cm/sec in MW-24, to a low of 1.60×10^{-6} cm/sec in MW-7, and an average of 1.08×10^{-3} cm/sec. Hydraulic conductivity of the saprolite, consisting of a silty sand, has an average value of 1.25×10^{-3} cm/sec. Hydraulic conductivity of gneiss has an average value of 8.02×10^{-5} cm/sec.

Total porosity values for MW-1A, MW-2, MW-3, MW-4R, MW-5, MW-6, MW-7, and MW-8 were reported in Response to Review Comments[13] and are summarized in Table 4. As part of this investigation bulk soil samples were collected from two monitoring wells, MW-16 and MW-22. Samples were tested in accordance with the ASTM Standards for the following soil properties:

1. Grain size analysis by sieve with hydrometer (ASTM D-422)
2. Atterberg limits (ASTM D4318 96)
3. Specific gravity (STMS D-854 92)

Table D-1 summarizes the laboratory test results and soil sample results are included in Appendix D.

Total porosity was calculated based on the following formula:

$$n = 1 - \frac{\gamma_d}{(G_s)(62.4)}$$

where: n = total porosity

γ_d = dry density (Estimated from literature of 90 lb/ft^3 for silty sand)

G_s = Specific Gravity (Calculated from soil samples)

62.4 = unit weight of water

Values of total porosity were 49.9% in MW-16 and 47.0% in MW-22. Values of porosity from the Response to Review Comments could not be traced to calculations or collected data. Based on review these values are inaccurate and will not be used.

Effective porosity values were calculated for MW-16 and MW-22 using the Johnson "tri-linear graph of textural classification."[17] Values of effective porosity for silty sand from MW-16 and MW-22 are 25.7% and 30.5%, respectively. Effective porosity values from the Response to Review Comments were based on published values. A summary of effective porosity values are included in Table 4.

More detailed investigations of total porosity and effective porosity values of rock have been conducted since the Response to Review Comments. The following table shows representative values of porosity (n) and effective porosity (n_e) of crystalline rocks in three different forms by the degree of fracture/weathering.

Representative Value of Porosity (n) and Specific Yield {Effective Porosity (n_e)}

(Selected values - after Singhal and Gupta, 1999)[26][page 152]

Rock Type	n (%)	*Specific Yield* (%)
Dense crystalline rock	0 – 5	0 – 3
Fractured crystalline rock	5 – 10	2 – 5
Weathered crystalline Rock	20 – 40	10 – 20

Note: Singhal and Gupta(1999, page 153) state "Effective porosity (n_e) or kinematic porosity This is the same as specific yield."

The identified highly fractured rock, along with the weathered nature of the upper 15 feet of rock, provide a better representative estimate of total porosity at 20% with an effective porosity of 10%.

1.2.4 Hydrology

Potable Sources

Municipal water is available to the surrounding area. A receptor survey was performed as part of the Transition Plan. No potable water supply wells were identified within 2000 feet of the facility. An updated receptor survey was performed in December 2007. The updated receptor survey confirmed that there are no potable water supply wells within 2000 feet of the facility. One (1) non-potable water supply well is located at the facility. This water supply well has limited use, which is primarily for dust suppression. Well details on the water supply well were not available.

Groundwater Regime

The aquifer consists of three layers, the uppermost unconsolidated regolith, the partially weathered rock transition, and the upper 15 feet of highly fractured rock. Groundwater typically occurs 20-40 feet below ground surface; however, shallow groundwater is found in draws and near drainage features. Groundwater is found primarily in the highly weathered rock, with groundwater occurring in the saprolite in and near the drainage areas. The general trend follows the topography flowing south. On the western side groundwater flows more southwesterly; and on the northern end it flows west.

Locally, groundwater exhibits flow dynamics that are primarily controlled by major drainage features and ultimately the Catawba River. Groundwater elevations have been recorded during sampling events. A summary of Historical Groundwater Elevation Data is included as Table 2. Water elevations are fairly consistent; on average, groundwater in MW-4R, MW-8, MW-9, MW-17, MW-22 and MW-23 is less than 20 feet below ground surface (bgs). Groundwater in MW-2, MW-3, MW-6, MW-15 MW-21, MW-26 and MW-27 is between 20 to 30 feet bgs. Groundwater in MW-1, MW-5, MW-7, MW-10, MW-13, MW-14 MW-16,

MW-24 and MW-25 is 30 to 40 feet bgs. Groundwater in MW-1A, MW-1B, MW11, MW-12, MW-12D, MW-18, MW-19 and MW-20 is greater than 40 feet bgs. A potentiometeric map is provided as Plate 7.

Groundwater Flow Components

The potentiometeric map was used to calculate the average linear velocity defined as:

$$v_x = \frac{K}{n_e}\frac{dh}{dl}$$

where

v_x is the average linear velocity

K is the hydraulic conductivity

n_e is the effective porosity

$\frac{dh}{dl}$ is the hydraulic gradient

The hydraulic gradient was calculated graphically by first drawing a line from each monitoring well to a perpendicular of the equipotential line. Elevations of hydraulic head (*dh*) were calculated by subtracting the elevation equipotential from the groundwater elevation for the corresponding monitoring well. The lateral distance (*dl*) is the horizontal length of the line; *dl* values are further denoted on Plate 7. Calculation of the hydraulic gradient at a given piezometer location was determined by dividing *dh* by *dl*. Table 20 shows the results of the flow rate calculations in units of feet per year and the parameters used in the calculations.

Vertical hydraulic gradient for clustered monitoring wells MW-12/MW-12D was calculated using the EPA Vertical Gradient with Well Screen Effects Calculator.[3] The dl is the mid-point of the saturated screen length. The vertical gradient calculations are shown in Table 21. A downward gradient was observed in the well cluster. This gradient appears to be localized, other areas of monitoring are controlled by drainage features. Further confirmation can be seen in abandoned well MW-11D, where no deep water bearing fractures were identified. This downward gradient should transition into an upward gradient near the discharge feature associated with this area. The transition can be observed in the high hydraulic conductivity in MW-24, which is located near the discharge feature and convergence of potentiometric contours near the drainage areas.

1.3 Site Conceptual Model

A conceptual model of the site was developed with Visual MODFLOW designed by Waterloo Hydrogeologic, Inc. The visual MODFLOW package includes the USGS developed MODFLOW, the accompanying particle tracking program, MODPATH, as well as the contamination transport package MT3D[96] developed by Papadopulos and Associates, Inc.

The model grid consists of an area 2100 feet x 2700 feet. The area was divided into 85 rows, 109 columns and 3 layers. To approximate the aquifer characteristics, each layer was defined with distinct hydraulic properties.

Layer 1 – Saprolite of Silty Sand

Layer 2 – Partially Weathered Rock

Layer 3 – Highly Fractured Rock.

Estimated hydraulic properties for each lithology were obtained by slug tests and soil results.

Hydraulic properties

	Hydraulic Conductivity cm/sec	Total Porosity	Effective Porosity
Layer 1	1.25×10^{-3}	48.5	28.1
Layer 2	4.90×10^{-4}	20	10
Layer 3	8.05×10^{-5}	20	10

Hydraulic properties of the waste and cohesive cap were not applied as they are addressed in boundary conditions.

Boundaries

The integrity of Visual MODFLOW depends largely on the accurate definition of boundary conditions. The model was developed to simulate the observed hydrologic conditions. In a generalized hydrologic cycle, ground water recharge is the result of precipitation, surface water inflow, evapotranspiration, surface water outflow, and change in aquifer storage. Precipitation data at the Conover Oxford Shoals station was reviewed via the State Climate Office of North Carolina web site.[27] The Conover Oxford Shoals station is located approximately 2.7 miles from the site. Annually, the Conover Oxford Shoals station receives an average of 47.0 inches. Total runoff is comprised of two parts: the water lost to creeks and streams through overland runoff and water gained through groundwater recharge or base flow. Total run off is estimated to be 17.2 inches per year where overland runoff accounts for 6.9 inches and base flow accounts for 10.3 inches. Evapotranspiration is estimated at 31.0 inches per year. Aquifer "storativity S, [was] developed primarily for the analysis of well hydraulics in confined aquifers."[11][page 61] Change in aquifer storage in an unconfined aquifer system results in an increase/decrease in water level.[12] Change in aquifer storage is considered negligible due to the unconfined nature of the system and the assumption that the system is under steady state conditions. [11][page 205] Values of the water budget were derived in Hydrogeology and Simulation of Ground-Water Flow in the Thick Regolith-Fractured Crystalline Rock Aquifer System of Indian Creek Basin, North Carolina.[1] Based on these estimations groundwater recharge is estimated at 10.3 inches per year. Recharge area is limited due to landfill activities, structures, and roads and was applied to areas that have limited impact.

Drainage features, which act as constant head features, were simulated as rivers. River stage and bed elevations were estimated from topographical and potentiometric maps. Conductance was calculated from parameters in Visual MODFLOW.

Model Calibration

Calibration of the model was a trial and adjustment procedure. Alternative model parameters were run utilizing varied model input and multiple layers, of which the silty clay/clayey silt layer was included. The process was repeated to minimize the difference between the computed and observed values. These models could not be accurately calibrated due to limitations in the MODFLOW program, in part due to the discontinuity of the layers and ground surface interaction. The site conceptual model represents the most accurate conceptual model.

A graph of simulated heads versus observed heads is included in Appendix C. The calibration for the model is believed to be successful for the conditions at this site. Head variation was limited to a root mean square of 15.6 feet. The simulated heads show a linear relationship with the observed heads at a slightly higher elevation. Further exclusion of monitoring wells MW-16, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, MW-26, and MW-27 from the calibration curve, since these wells only have one water level reading, had a root mean square of 11.4 feet. These estimations may be due in part because the site may not receive the estimated 10.3 inches per year of recharge, recharge is controlled by seasonal fluctuation which isn't accounted for in MODFLOW, or the multiple drainage features controlling the flow on the site.

2 CONTAMINATION CHARACTERIZATION

2.1 Contamination of Concern

2.1.1 Inorganic Constituents

Inorganic constituents Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, Tin, Vanadium, and Zinc, have all been detected in groundwater samples. Included in Table 6 is a summary of Historical Inorganic Groundwater Results. Due to a varying array of circumstances, statistical significance has not been analyzed with any consistency; therefore, the basis for significance of exceedance will be based on frequency of detections. In addition, statistical analysis was determined to be ineffective due to the fact there was no true background well available. Inorganic constituents detected above 2L include Barium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc.

Inorganic constituents Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Mercury, Nickel, Silver, Thallium, Vanadium, and Zinc have been detected in surface water samples. A summary of historical surface water inorganics is provided in Table 7.

Sampling results are used to identify if detected inorganics are the result of waste disposal activities. Ground and surface water samples are collected as unfiltered samples. Unfiltered samples represent the total concentration of inorganics. Often times "(s)tatistical analysis of total metal concentrations may not provide an accurate representation of contamination at the facility."[23][page 79] In addition, sampling techniques play a role in the detection of inorganic constituents. Too high a purge velocity can increase the turbidity of the sample, causing an over estimation of sampling results.[4]

Original background sampling detected Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Nickel, Silver, Vanadium and Zinc with Barium, Cadmium, Chromium, Copper, Lead, Nickel and Zinc appearing above 2L levels. 2008 background sampling for newly installed monitoring wells detected Arsenic, Barium, Chromium, Cobalt, Copper, Lead, Nickel, Thallium, Vanadium and Zinc with only Chromium occurring above 2L levels. A summary of background sampling results is provided in Appendix B.

Geochemistry of sediments from the USGS Taylorsville Quadrangle was retrieved from the USGS National Uranium Resources Evaluation (NURE)[28] database. The presence of metals in NURE soil samples includes, but is not limited to, Barium, Beryllium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Thallium, Tin, Vanadium and Zinc. A summary of select detected NURE sediment samples is included in Appendix B.

The presence of metals occurring in the surface water samples, background samples, and NURE sediment samples indicate that Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Nickel, Silver, Thallium, Tin, Vanadium, and Zinc are falsely reported, or naturally occurring and do not represent contamination associated with the landfill.

Tin, Selenium and Mercury cannot be attributed to turbidity (falsely reported) or natural occurrence. Selenium was detected on December 11, 2000 in MW-4R and MW-9, on December 27, 2001 in MW-9, on January 2, 2003 in MW-4R and MW-9, on January 3, 2003 in MW-11 and on June 5, 2003 in MW-4R. The presence of Selenium consistently being detected in MW-4R and MW-9 and the inability to attribute detects to false positive or natural occurrence implies Selenium was the result of landfill disposal activities. However, Selenium has not been detected since June 2003 and currently is <u>not</u> a constituent of concern. Mercury has been detected numerous times since the initiation of sampling in wells MW-1, MW-1A, MW-1B, MW-2, MW-4R, MW-6, MW-8, MW-12, MW-14, MW-15, MW-17 and SW-3. The most recent detect occurred in

June 2007, in MW-1B, MW-2, MW-8, MW-14, MW-15 and MW-17. The presence of Mercury consistently being detected in multiple wells and the inability to attribute detects to false positive or natural occurrence implies Mercury is the result of landfill disposal activities. Mercury is currently a constituent of concern.

2.1.2 Organic Constituents

Organic constituents have been detected in the groundwater from numerous sampling events. A sampling history is provided in Appendix B. A summary of detected historical organic groundwater results is included as Table 8. Organic constituents detected above 2L include 1,2-Dichloroethane (Ethylene dichloride), 1,2-Dichloropropane, 1,4-Dichlorobenzene (p-Dichlorobenzene), Benzene, Chloroethene, Dichloromethane (Methylene chloride), Heptachlor, and Tetrachloroethene and Trichloroethylene.

Many of the recent detections are the result of the 2006 amended Solid Waste Section Limits (SWSL). Benzene has been detected in MW-1B, MW-2, MW-4R, MW-5, MW-6, MW-7, MW-10, MW-14, MW-15, and MW-17 due to the SWSL. Chloroethene has been detected in MW-3 and MW-11 as result of the SWSL. Ethylene Dichloride was detected in MW-11 as a result of the amended SWSL. p-Dichlorobenzene has been detected in MW-1B, MW-2, MW-3, MW-4R, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-13, MW-14, MW-15, MW-16, and MW-17 due to the amended SWSL. Tetrachloroethene has been detected in MW-1B, MW-3, MW-5, MW-7, MW-11, MW-12, MW-16, and MW-17 due to the amended SWSL. Trichloroethene has been detected in MW-1, MW-1B, MW-3, MW-4R, MW-5, MW-7, MW-11, MW-12, MW-14, MW-15, MW-16, and MW-17 due the amended SWSL.

Current groundwater results collected in December 2007 and January 2008 are included in Table 10. The proceeding table indicates there is VOC contamination. Some of the detected organic constituents do not appear to be constituents of concern, in that they have been detected infrequently or have not been detected for a significant period of time. Constituents of concern are 1,1-Dichloroethane, 1,2-Dichloropropane, Benzene, cis-1,2-Dichloroethene, Methylene Chloride, p-dichlorobenzene, Tetrachloroethene, Trichloroethylene and Xylenes.

Detected Organic Constituents

Constituent	Number of Sampling Events	Number of Sampling Events with Detections	Total Number Detects	Last date of Detect	Monitoring Wells Constituent Detected In
APPENDIX I VOC'S					
1,1-Dichloroethane	32	30	214	1/9/2008	MW-1, MW-1A, MW-1B, MW-2, MW-3, MW-4, MW-4R, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-12D, MW-13, MW-14, MW-15, MW-16, MW-17, MW-20, MW-21, MW-23, MW-24, MW-25, MW-26, MW-27
1,2-Dichlorobenzene (o- dichlorobenzene)	32	2	3	12/28/2007	MW-3, MW-11
1,2-Dichloropropane	32	6	6	1/8/2008	MW-3, MW-16
Acetone	32	5	20	1/9/2008	MW-1, MW-1A, MW-2, MW-3, MW-4R, MW-5, MW-7, MW-8, MW-10, MW-12D, MW-15, MW-17, MW-18, MW-20, MW-23, MW-25, MW-27
Benzene	32	30	113	1/9/2008	MW-1, MW-1B, MW-2, MW-3, MW-4, MW-4R, MW-5, MW-6, MW-7, MW-8, MW-10, MW-11, MW-12, MW-12D, MW-13, MW-14, MW-15, MW-16, MW-17, MW-21, MW-24, MW-26
Carbon Disulfide	32	15	56	1/7/2008	MW-1, MW-1A, MW-1B, MW-3, MW-4R, MW-5, MW-6, MW-7, MW-8, MW-10, MW-11, MW-12D, MW-13, MW-15, MW-18
Chlorobenzene	32	3	14	1/9/2008	MW-2, MW-3, MW-4R, MW-7, MW-11, MW-12, MW-14, MW-26
Chloroethane	32	15	44	1/9/2008	MW-1, MW-2, MW-3, MW-4, MW-4R, MW-5, MW-6, MW-7, MW-8, MW-11, MW-12, MW-14, MW-15, MW-16, MW-24, MW-26
Chloroethene (Vinyl Chloride)	32	3	4	12/27/2007	MW-3, MW-11
Cis-1,2-Dichloroethylene	32	30	216	1/9/2008	MW-1, MW-1B, MW-2, MW-3, MW-4, MW-4R, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-12D, MW-13, MW-14, MW-15, MW-16, MW-17, MW-21, MW-23, MW-24, MW-25, MW-26, MW-27
Chloride	32	1	10	6/28/2007	MW-1, MW-1B, MW-2, MW-3, MW-6, MW-7, MW-11, MW-12, MW-12D, MW-13
Ethylbenzene	32	5	7	12/28/2007	MW-1B, MW-3
Ethylene dichloride (1-2 Dichlorethane)	32	1	1	12/14/2006	MW-11
Methylbenzene (Toluene)	32	7	18	12/28/2007	MW-1, MW-2, MW-3, MW-5, MW-8, MW-11, MW-12, MW-12D, MW-15, MW-17
Methylene chloride (Dichloromethane)	32	14	24	1/9/2008	MW-1B, MW-3, MW-7, MW-11, MW-12, MW-15, MW-16, MW-17, MW-21
p-Dichlorobenzene	32	23	80	1/9/2008	MW-1, MW-1B, MW-2, MW-3, MW-4, MW-4R, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-23, MW-24, MW-26
Tetrachloroethene	32	5	18	1/8/2008	MW-1, MW-1B, MW-3, MW-5, MW-7, MW-11, MW-12, MW-16, MW-17, MW-25

Detected Organic Constituents (continued)

Constituent	Number of Sampling Events	Number of Sampling Events with Detections	Total Number Detects	Last date of Detect	Monitoring Wells Constituent Detected In
APPENDIX I VOC'S					
Trichloroethene	32	10	37	1/8/2008	MW-1, MW-1B, MW-2, MW-3, MW-4, MW-4R, MW-5, MW-7, MW-8, MW-11, MW-12, MW-14, MW-15, MW-16, MW-17
Trichloromethane (Chloroform)	32	2	2	12/11/2003	MW-1B, MW-12D
Xylenes	32	20	40	1/9/2008	MW-1, MW-1A, MW-1B, MW-3, MW-6, MW-8, MW-11, MW-12, MW-14, MW-16, MW-27
SVOC's					
1,2,4-Trimethylbenzene	8	2	2	5/13/1999	MW-3
1,3,5-Trimethylbenzene	8	1	1	12/3/1997	MW-3
Methyl tert-butyl ether	8	1	2	12/3/1997	MW-3, MW-7
APPENDIX II – SVOC'S					
2-Butanone	8	1	1	6/27/2007	MW-5
Bis(2-ethylhexyl)phthalate	8	1	1	12/3/1997	MW-1
Cumene (2-phenylpropane)	8	1	1	12/3/1997	MW-3
Methyl methacrylate	8	1	1	12/3/1997	MW-3
Naphthalene	8	4	4	6/28/2007	MW-3, MW-5, MW-14
APPENDIX II – Pesticide/herbicide/Insecticide					
BHC-beta	8	1	1	12/3/1997	MW-6
BHC-alpha	8	5	9	1/3/2003	MW-3, MW-4R, MW-7, MW-8, MW-11
BHC-gamma (Lindane)	8	1	3	11/18/1998	MW-1, MW-4R, MW-8
Heptachlor	8	1	1	12/3/1997	MW-3
2,4,5-TP Silvex (Silvex Acid)	8	1	1	6/13/2002	MW-3

2.2 Contamination Distribution

Contamination consists of 1,1-Dichloroethane, 1,2-Dichloropropane, Benzene, cis-1,2-Dichloroethylene, Methylene Chloride, p-Dichlorobenzene, Tetrachloroethene, Trichloroethylene and Xylenes. Contamination primarily consists of several finger plumes toward the drainage areas. Each plume will be identified based on the drainage feature's adjacent monitoring well. Plate 8 shows total VOC concentrations in each monitoring well and the estimated extent of 15A NCAC 2L impact. Additional impact observed in the background wells is most likely due to landfill gas.

The plume associated with monitoring well MW-24 appears to have traveled the farthest to date. This plume movement is due to the high hydraulic conductivity observed in MW-24. Impact in this area primarily consists of Benzene, p-Dichlorobenzene and cis-1,2-Dichloroethylene. Low concentrations of Tetrachloroethene were detected in MW-7 and MW-12 to due the amended SWSL. Deep monitoring well MW-12D has not observed quantifiable impact. J qualified VOC constituents were detected in June and December 2007 sampling events due the amended SWSLs.

The plume associated with the drainage area near monitoring well MW-26 consists of Benzene, p-Dichlorobenzene and cis-1,2-Dichloroethylene. Linear decrease in Benzene and p-Dichlorobenzene concentration away from the landfill is observed from MW-3 → MW-11 → MW-26.

The plume associated with the drainage area near monitoring wells MW-16 and MW-5 consists of 1,1-Dichloroethane, and 1,2-Dichloropropane, Benzene, cis-1,2-Dichloroethene, Methylene Chloride, p-Dichlorobenzene, Tetrachloroethene, and Trichloroethylene. Only 1,1-Dichloroethane, Benzene, p-Dichlorobenzene are observed in upgradient monitoring well MW-5. Trichloroethylene is observed in MW-5 as a J qualifier. p-Dichlorobenzene, cis-1,2-Dichloroethene and 1,1-Dichloroethane were observed below surface water standards in down-gradient surface water sampling point SW-5 in December 2006, but have not been detected since. It should be noted that MW-16 is not located on property owned or controlled by Alexander County.

Included on Plate 9, is a tax map showing surrounding property owners. Approximate monitoring well locations are included on this plate. Alexander County is currently in the process of acquiring the Crescent Resources property. Alexander County approached Tony Correll on purchasing his property. He was non cooperative. In addition Alexander County is considering acquiring a portion of the Gray Area Land property.

The up gradient plume associated with MW-1 and MW-1B is most likely attributed to landfill gas. The area between the landfill and the property line is compacted with much of the area covered with asphalt. It is believed that landfill gas is pushing the impact towards MW-1 and MW-1B. This mechanism was further confirmed through modeling. Simulation could not obtain impact up-gradient through molecular diffusion or advection. Off-site monitoring well MW-18 and MW-19 were <u>not</u> impacted, indicating impact is just at the property line.

Mercury sampling has been sporadic. Sampling in June 2007 indicated impact above 2L in MW-1B and MW-17. This impact is most likely attributed to landfill gas migration. The nature of Mercury in groundwater is essentially immobile. "(M)ercury appears to bind to dissolved matter or fine particulates."[9]

VOC's are also detected in some additional areas that are not an immediate concern at this time due to impact below 2L at the estimated relevant point of compliance of 250 feet. The drainage area associated with MW-9 has detected cis-1,2-Dichloroethylene below 2L. MW-27 also has detected cis-1,2-Dichloroethylene below 2L. Alexander County owns and controls the down gradient areas around these monitoring wells.

VOC's are being detected in MW-2, MW-14 and MW-6 that consists of Benzene, p-Dichlorobenzene and cis-1,2-Dichloroethylene. Down gradient monitoring wells MW-20, MW-21, MW-22 and MW-23 were installed at the estimated relevant point of compliance. VOC's were not detected in these wells. Surface water sampling point SW-4R had acetone detected with a J qualifier in June 2007. Acetone was also detected at this same level in 11 other samples during this event. Based on these results the June 2007 acetone can not be attributed to landfill disposal activities. The above results indicate that impact has not reached the relevant point of compliance in this area. Alexander County owns and controls the down gradient areas around these monitoring wells.

Monitoring well MW-17 is detecting Benzene just above the 2L level. This recent detection can be attributed to the amended SWSL. Surrounding monitoring wells both up gradient and down gradient do not indicate impact. It is believed that this is a residual low level of occurrence and currently is not an area of concern.

2.3 Contamination Characteristics

P-Dichlorobenzene is a halogenated aromatic. 1,2 Dichloropropane is a halogentated propane. 1,1-Dichloroethane, cis-1,2-Dichloroethylene, Methylene Chloride, Tetrachloroethene and Trichloroethylene are halogenated aliphatics. Benzene and Xylenes are aromatic hydrocarbon.[24] Mercury is a inorganic heavy metal.

Physical Characteristics of Constituents of Concern

Constituent	Density[1] (g/cm3 at 20°C)	Henry's Constant[1] (atm-m3/mol 20°C)	Water Solubility[1] (mg/l at 20°C)	Octanol - Water Partitioning Coefficient[1] (log Kow)	Soil - Water Partitioning Coefficient[2] Koc (mL/g)	Mobility Class[2]
1,1 Dichloroethane	1.176	0.0043	400	1.8	45	Very High
1,2 Dichloropropane	1.16	-	-	1.99	51	High
Benzene	0.88	0.0055	1,780	2.13	97	High
cis-1,2 Dichloroethylene	1.284	0.0029	-	-	-	-
Methylene Chloride	1.33	0.002	20,000	1.26	25	Very High
p-Dichlorobenzene	1.248	0.0031	19	3.56	594	Low
Tetrachloroethene	1.623	0.012	200	2.88	303	Moderate
Trichloroethene	1.464	0.0088	1,100	2.29	152	Moderate
Xylenes*	0.868	-	175	-	501	Low-Moderate
Mercury	13.5[3]	0.002[3]	60[3]	-	6310	-

[1]Data obtained from Environmental Biotechnology: Principles and Applications [24]

[2] Data obtained from Applied hydrogeology 3rd ed[11]

[3] Data obtained form EPA Technical Factsheet on: Mercury.[9]

* Data for total xylenes averaged from o, p and m xylenes

The nature of the constituents with low Octanol/Water Partitioning Coefficients is to have a "relative tendency for an organic compound to remain dissolved in water rather than be adsorbed in soil."[11][page 467] Thus the higher attraction to the aquifer solids the slower it moves.[22] Octanol/Water Partitioning Coefficients have been characterized into mobility class by Fetter (1994). p-Dichlorobenzene has been classified as low. Xylenes are low to moderate. Tetrachloroethene and Trichloroethene are moderate. Benzene and 1,2-Dichloropropane are high with 1,1 Dichloroethane and Methylene Chloride having very high mobility rates.

2.4 Source Control Measures

The western unit of the MSW was closed prior to October 9, 1991. This unit was closed with a 24 inch final soil cover. The second, eastern unit was closed by mid-1999, with a cohesive cap of 18 inches of soil liner with permeability of 1 x 10^{-5} cm/sec, and 18 inches of erosive layer.[19]

A passive gas venting system for methane extraction/collection was installed as part of the transition plan. The venting system was installed on the eastern unit. The methane gas collection trenches and methane vents are limited to the upper portions of the eastern unit. Currently there is no collection system on the northern portion of the landfill, between the landfill and the scale house.

2.4.1 MT3D96 Modeling

MODFLOW with transport package MT3D^{96} was used to simulate a release. Modeling parameters assumed leakage occurred prior to installation of the cap systems. As with the development of the model in MODFLOW, MT3D^{96} transport was calibrated with a trial and adjustment procedure. The retardation coefficent and dispersion were calibrated using the trial and adjustment procedure. The plume model was calibrated to time periods 1997, 2001, 2003, 2006, 2007 and 2008. The initial simulation period was selected to begin in 1990, which roughly coincides with the installation of the soil cover on the western unit of the site. Target step periods of 7 years (1997), 11 years (2001), 13 years (2003), 16 years (2006), 17 years (2007), 18 years (2008), 25 years (2015), 35 years (2025), and 50 years (2040) were simulated. Modeling parameters indicated that flow is highly controlled by drainage features and hydraulic conductivities associated with MW-16 and MW-24. Contamination could not be modeled to reach MW-1/MW-1B. It is believed that this contamination is due to landfill gas.

MT3D^{96} modeling does not allow for remediation implementation at a specified time period during the modeling simulation, nor does it allow for enhanced biological or radiometric decay at specified time periods. Included in Appendix C is the estimated extent of the plume for the simulated time periods that would have resulted from groundwater movement without enhanced remediation, biological or radiometric decay.

Modeling indicates through advection flow on-site contamination reaches the estimated relevant point of compliance by 2025. Off-site contamination continues to migrate off-site with down-gradient flow.

2.4.2 Stream Dilution

The dilution factor of the surface water was determined using the following surface water mixing formula utilized by the NCDENR UST Section for G3CTM modeling.[21]

$$C_{sw} = C_{gs}\left[\frac{Q_{gw}}{(Q_{gw} + Q_{sw})}\right]$$

where:

C_{sw} = surface water contaminant concentration

C_{gs} = groundwater contaminant concentration at the groundwater/surface water boundary

Q_{gw} = groundwater flux into surface water body: $KA\left(\frac{dh}{dl}\right)$

where:

K = hydraulic conductivity (ft/sec)

A = cross sectional area of groundwater discharge (ft^2)

$\frac{dh}{dl}$ = hydraulic gradient (unitless)

Q_{sw} = minimum average discharge of a stream (ft^3/sec).

Contaminant concentrations of the highest observed concentration as well as the most recent concentration were calculated. Q_{sw} flow was obtained by identifying the size of the local drainage area using stream trace techniques. The local drainage areas were compared to published drainage areas of equal size with known discharge rates.[2] These discharge rates were averaged to attain the Q_{sw} flow value of 0.082 ft^3/sec. Low flow 7Q10 rates were initially estimated for the area. The 7Q10 rate was estimated at 4.35 ft^3/sec; however, this estimation did not account for the size of the drainage basins and compared to published values was found to be high. As a conservative estimate and to provide for the worst case scenario, flow rates were based on drainage area.

A plume discharge area was estimated for each drainage area. Estimated plume lengths of 160 feet for MW-26, 200 feet for MW-24, 100 feet for MW-16, and 85 feet for MW-9 with a plume depth of 10 feet were used to calculate the cross sectional area of discharge. Results of the stream dilution calculation are shown on Table 19.

2.5 Groundwater End Use

Groundwater flow is toward the drainage features where it discharges into the Catawba River. There are no known current users of groundwater for potable consumption within 2000 feet of the property.

2.6 Exposure Pathways

Evaluation of exposure pathways is designed to establish how a population is at risk of contamination exposure. If there is no method of exposure, there is no risk for adverse effects. There are four components that comprise the exposure pathways: (1) source and mechanism of constituent release into the environment, (2) retention and transport system, (3) exposure point, and (4) route of exposure to receptor at determined exposure point.

(1) Source of release has been identified as the landfill site. Mechanism of the release was the result of water percolating through the waste, thus picking up contamination and encountering the groundwater.
(2) Mechanism for transport of the contamination includes groundwater flow and vapor migration.
(3) Exposure points are the pathways in which contamination can be contacted - water supply wells, surface water, and vapor contact.
(4) Route of exposure is the method of contact at the exposure points – ingestion, inhalation and dermal contact.

Possible exposure pathways are assessed based on completeness, plausibility, and importance in relation to human health and the environment. The pathways for population exposure are limited to ingestion of contaminated groundwater through drinking, absorption of contaminated groundwater through dermal contact and inhalation of vapors. Source control measures limit direct contact with the contamination.

2.7 Human Health Risk Assessment

Human health was assessed for possible risk factors for contamination associated with the landfill. An evaluation of toxicity levels, presence of carcinogenic vs. non-carcinogenic constituents, as well as lifetime average daily dose calculations were computed for the constituents of concern. The primary purpose of toxicity assessment is to identify susceptible populations and lifestyles.

2.7.1 Carcinogenic

Cancer is caused through a complex series of reactions and processes, that may produce tumors at the point of contact or throughout the body in other tissues once they have been dispersed throughout the system of the host.[5] Various chemicals elicit different responses and different doses of the same chemical can create different responses. The USEPA has five recommended hazard descriptors, “Carcinogenic to humans”, “Likely to be carcinogenic to humans”, “Suggestive evidence of Carcinogenic Potential”, “Inadequate

information to assess carcinogenic potential", and "Not likely to be carcinogenic to humans".[5] For the purpose of this report focus will be placed on the first two descriptors.

The current guidelines approach the situation with the assumption that any exposure to a known carcinogen has a possibility of causing cancer. The EPA's Integrated Risk Information System (IRIS) was queried to evaluate carcinogenic risks for the constituents of concern; 1,1-Dichloroethane and Methylene Chloride are "likely carcinogenic to humans", Benzene is classified as "carcinogenic to humans", cis-1,2 Dichloroethylene is "not likely carcinogenic to humans", 1,2-Dichloropropane, p-Dichlorobenzene, Tetrachloroethane and Xylenes are reported to have "not undergone a complete evaluation and determination under USEPA's IRIS program for evidence of human carcinogenic potential" and Tichloroethene has "been withdrawn for further review".

Results for Benzene and Methylene Chloride were compared with the Carcinogenic Slope factor (Sfo or Sfi) found in the Region 9 tables from the EPA. 1,1-Dichloroethane was not evaluated due to a lack of Carcinogenic Slope factor. These values were also evaluated over a 70 year lifetime as opposed to the 30 year standard used for non-carcinogens. Hazard Index values were assessed and are shown on Table 12, Table 13, and Table 14. The observed highest reading for Methylene Chloride created a hazard index above 1 for adults in MW-7 by inhalation; however, current groundwater levels are below the hazard index. There were no exceedances of the hazard index by means of dermal exposure or ingestion.

2.7.2 Non-Carcinogenic

The non-carcinogenic effects typically require overcoming the body's resistance ability; therefore, creating a threshold below which effects will not occur. Similarly to carcinogenic effects, constituents may induce adverse effects based on dose, exposure rate, duration, and individual susceptibility. Also like cancer, they can show up at the point of contact or spread throughout the system affecting tissue sporadically. Most chemicals can produce a range of effects depending on the aforementioned variables.

Human health risk assessment for non-carcinogenic effects was developed by the USEPA, based on a series of toxicity studies, to calculate the risk for non-carcinogenic effects. These constituent specific reference dose (RfD) values represent daily exposure levels that are not harmful to human health, over a lifetime. These values for constituents of concern are shown on Table 15 for oral ingestion, Table 16 for inhalation, and Table 17 for dermal exposure.

2.8 Adult Risk

Adults can potentially be exposed to contaminants of concern through consumption of contaminated water, bathing in contaminated water or inhalation of vapors arising from contaminated groundwater. Risk assessments were performed assuming adults would consume 2 liters of water each day with an exposure duration of 30 years.[1] Dermal exposure risks assumed contact through bathing based on one 15 minute bath per day. Inhalation exposure assumed 20 cubic meters of air per day.[∂] Risk assessment is based on worst case scenario, where exposure is from the maximum observed concentrations and the current concentrations for the contaminants of concern.

Non-carcinogenic Lifetime Average Daily Dose (LADD) values were calculated for the constituents of concern and then compared to RfD values by generating hazard index values. If a hazard index is greater than 1, there may be a concern for remedial action. Hazard index values for adults were shown on Table 15, Table 16, and Table 17. The observed highest reading for 1,2-Dichloropropane created a hazard index above 1 in MW-3 for inhalation; however, current groundwater levels are below the hazard index. There were no exceedances of the hazard index by means of dermal exposure or ingestion.

2.9 Child Risk

Children can potentially be exposed to contamination of concern through consumption of contaminated water, bathing in contaminated water or inhalation of vapors arising from contaminated groundwater. Risk assessments were performed assuming children would consume 1 liter of water each day with an exposure duration of 8 years. Dermal exposure risks assumed contact through bathing based on one 15 minute bath per day. Inhalation exposure assumed 12 cubic meters of air per day.[∂] Risk assessment is based on worst case scenario, where exposure is from the maximum observed concentrations and the current concentrations for the contaminants of concern.

Non-carcinogenic LADD values were calculated for the constituents of concern and were then compared to RfD values by generating hazard index values. If a hazard index is greater than 1, there may be a concern for remedial action. Hazard index values for children are shown on Table 15, Table 16, and Table 17. The observed highest reading for 1,2-Dichloropropane created a hazard index above 1 for inhalation; however, current groundwater levels are below the hazard index. There were no exceedances of the hazard index by means of dermal exposure or ingestion.

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[1] Non-Carcinogenic values assume a 30 year exposure. Carcinogenic values assume a 70 year exposure.

[∂] Assumed values based on EPA published values.[5][6][7][8]

2.10 Sensitivity Receptor Pathways

Current human exposure to the contamination at the site is very minimal or non-existent. Institutional controls, as discussed in Section 3.2, limit access to the site. There are no identified potable groundwater users within 2000 feet of the facility. Contamination is primarily contained on-site with off-site contamination occurring around MW-16. The area surrounding the landfill is dense woodland.

3 CORRECTIVE MEASURES SCREENING AND EVALUATION

3.1 Overview

A remediation system needs to be designed that will be both cost effective and efficient in properly cleaning up the contamination. Due to the plume fingering, source controls, property considerations, geologic and hydrological conditions, remediation should focus on contamination areas separately. Contaminants of concern are further subject to the plume fingering.

MW-24 area – Contamination consists of halogenated aromatic, halogenated aliphatics and aromatic hydrocarbon.
MW-26 area – Contamination consists of halogenated aromatic, halogenated aliphatics and aromatic hydrocarbon.
MW-16 area – Contamination consists of halogenated aromatic, halogenated aliphatics, aromatic hydrocarbon and halogenated propane.
MW-1B area – Contamination consists of halogenated aromatic, halogenated aliphatics and aromatic hydrocarbon.

Halogenated aromatic compounds have been shown to decompose under anaerobic conditions.[15] Aromatic hydrocarbons tend to decompose under aerobic conditions.[24] Biodegradation of 1,2-Dichloropropane is not observed and it is identified that volatilization is "likely to be the major route of loss from water."[29] Low level remediation in the 100 ppb range can be difficult, expensive and may not be achievable. Typical case studies show reduction from the parts per million (ppm) range to the parts per billion (ppb) range.

3.2 Institutional Controls

Several institutional control measures have been implemented to restrict and control access to the site and possible contact with contamination. Public access to the site is limited during operation hours. Heavy vegetation also limits access. Alexander County owns the majority of the property surrounding the facility. Public water is available to the surrounding area. Access to groundwater at the facility is controlled by locked monitoring wells.

3.3 Infiltration Controls

Prior to the facility becoming a C&D landfill, the western unit of the sanitary landfill was closed with a 24 inch soil cap and vegetative cover. The vegetative cover acts as an erosion control measure and also aides in the evapotranspiration process to reduce infiltration. "(T)he natural evapotranspiration process of vegetation has been recognized and harnessed as an alternative cover method to reduce landfill infiltration."[22][page 392] As with the western unit, side slopes of the eastern unit were closed with a 24 inch soil cap and vegetative cover. The top of the eastern unit was closed with a cohesive cap of 18 inches of soil with a permeability of 1 x 10^{-5} cm/sec, and 18 inches of erosive layer. Reduction of contamination following installation of the soil caps is expressed on the graphs in Appendix B. 1-1-Dichloroethane and Xylenes clearly show reduction following the installation of the caps. cis-1,2-Dichloroethylene shows an increasing in impact in 2003 associated with long-term seasonal high groundwater elevations. Surface water is diverted from the landfill and is not impounded on the landfill.

3.4 Landfill Gas Controls

Landfill gas is controlled on the eastern unit with a passive gas collection system. The gas collection system was installed during completion of the cohesive cap. Gas is collected in horizontal trenches and vented through vertical vents. Initial landfill gas collection that began in 1999 saw a heavy concentration of gas. Currently gas is not being detected in the system. The gas collection system in shown on Plate 3.

3.5 Groundwater Technologies

Various methods are available for remediation of contaminated groundwater. These methods include:

- Removal processes that physically remove the contamination or contamination medium.
- Extraction processes that remove the contamination from the impacted medium.
- Destructive process that chemically or biologically destroys the contaminant.
- Encapsulation processes that prevent the contamination from migrating.

Each type of remediation process has specific advantages and disadvantages. The process should be tailored to meet the site specific requirements of moderate to slow moving, degradation under anaerobic decomposition, and low Henry's constant.

A number of corrective measures meet the above requirements and will be examined herein. Several common methods were not addressed due to their limitations. Physical removal of the contaminated medium through the measure of pump and treat was not addressed. Pump and treat is limited in that it utilizes water as a carrier and is not effective at totally removing the contamination.[22]

3.5.1 Monitored Natural Attenuation

Monitored Natural Attenuation (MNA) consists of monitoring the natural attenuation process to demonstrate that contamination is degrading prior to reaching the relevant point of compliance. While MNA passively treats the contamination, it does not provide containment of contamination, nor does it address the source area of contamination. In addition MNA is not appropriate as a remediation alternative if there is a threat to human health. Natural Attenuation is achieved through processes of dilution, sorption, volatilization, dispersion and degradation of contamination. Contamination of concern has been shown to both degrade through aerobic conditions and anaerobic conditions.[22][10][15]

3.5.2 Vapor Extraction System/Bioventing

Vapor Extraction (VE) and Bioventing induce air flow in the subsurface to volatilize the contamination. Vapor Extraction actively treats the contamination medium. To adequately strip contamination from the groundwater, the constituents of concern need to be susceptible to volatilization. A low Henry's Constant is favorable. In addition, site soil conditions must be favorable to allow for air flow. Air flow can be limited in clayey soils. Implementation of the system requires a pilot testing to adequately engineer an effective system.

3.5.3 Air Sparging

Air Sparging directly volatilizes the contamination in situ and provides oxygen for biodegradation. Air sparging is performed by forcing air into the groundwater through injection wells. Typically, much of the mass removal of contamination occurs within the initial weeks/months of operation with biodegradation becoming more significant during long-term operation. As with VE systems, contamination and site soil conditions need to be favorable for sparging to be an adequate treatment alternative. Contamination of concern needs to readily volatilized and degraded under aerobic conditions. High clay content and tightly packed soils limit the effectiveness of air sparging requiring more air injection wells. The system needs to be finely tuned to achieve break out pressure in wells and control air flow. Implementation of the system requires pilot testing to adequately engineer an effective system.

3.5.4 Enhanced Bioremediation

Enhanced Bioremediation (EB) is a unique, evolving, in situ treatment technology. EB introduces chemical compounds and/or organisms to stimulate and enhance the biodegradation process. The uniqueness of EB is that it can be tailored to the constituents of concern. Typical application is with injection of the chemical into the substrate. Application can use single injection points or permanent injection points.

Typically injected compounds include HRC®, ORC®, emulsified edible oils (soy bean oil, molasses, EOS®), and hydrogen peroxide. As with VE and AS, site conditions need to be favorable for proper application. A

dense formation limits the injection density and may require multiple closely spaced injection points. The life expectancy of compounds is generally less than a year and periodic re-injections may be required to achieve desired results. Implementation of the system requires state regulation permitting prior to injection of chemicals.

3.5.5 Phytoremediation

Phytoremediation is the use of plants to remediate the contamination. Remediation is addressed through rizosphere biodegradation, phytoextraction, phytodegradation and phytostabilization. Rizosphere biodegradation is the microbiological breakdown of organic contamination in the soil. Phytoextraction is the uptake of organics and inorganics into the roots and above ground portions of the plants. Phytodegradation occurs within the plant where the contamination is either degraded within or volitalized from the plant. Phytostabilization immobilizes organic and inorganic contamination through adsorption and accumulation of roots and precipitation in the rhizosphere. Direct uptake of the plants is dependent on the relationship of the octanol-water partition coefficent (Kow), where uptake is achieved when the log of Kow ranges from 0.5 to 3.5.[22]

3.5.6 Constructed Wetland

Constructed wetlands have been used for treatment of municipal waste water, industrial waste water, agricultural waste water and stormwaters. While constructed wetlands can be used for treatment of contaminated groundwater, the groundwater must be shallow or channeled into the wetland. Constructed wetlands passively purify contaminants through enhancement of the natural processes of degradation, sorption, and phytoremediation.

4 SUMMARY CONCLUSIONS

4.1 Conclusions – Selection of Remedy

Remediation alternatives are shown in Table 18. A number of factors influenced selection of remediation alternatives.

- Contamination is at low levels - ppb.
- Contamination has migrated off site.
- Contamination is likely being controlled and influenced by landfill gas.
- There are no potable wells located within 2000 feet of the facility.
- Phytoremediation is occurring under natural conditions.
- Contamination is below risk exposure levels.
- Contamination is limited to the surficial aquifer.

MW-24 area – Stream dilution and natural phytoremediation are actively controlling this area. Down gradient is owned and controlled by Alexander County. Pilot study findings may be applied to this area.

MW-26 area – Stream dilution and natural phytoremediation are actively controlling this area. Down gradient is owned and controlled by Alexander County. Pilot study findings may be applied to this area.

MW-16 area – Contamination is migrating off-site. Stream dilution calculations indicate that if Alexander County owned this migration potential, remediation could be achieved through stream dilution and natural phytoremediation. Alexander County is actively pursuing purchase of the property associated with migration potential.

MW-1B area – Contamination is at the property line. Landfill gas appears to be affecting migration in this area. Alexander County is pursuing purchase of the property associated with migration.

Respectfully submitted
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Table 1: Well Construction Details

Monitoring Well	Date Installed	Ground Elevation	Datum Elevation	Northing	Easting	Well Diameter	Boring Diameter	Screen Interval (BGS)	TOR	Status
MW-1	09/14/1990	1077.98	1080.68	767134.0364	1363442.6050	2	6	25-40	31.00	Monitoring Well
MW-1A	09/30/1994	1083.28	1085.32	767200.3163	1363503.3553	2	-	32.5-47.5	41.00	Monitoring Well
MW-1B	05/21/2003	1079.56	1082.56	767195.2993	1363465.9606	2	6	46-61	-	Monitoring Well
MW-2	09/06/1990	1002.28	1004.48	766674.3685	1362089.6189	2	10	15-30	-	Monitoring Well
MW-3	09/19/1990	1024.23	1024.73	766250.3839	1362679.0876	2	6	13-33	23.10	Monitoring Well
MW-4R	09/30/1994	1008.54	1012.64	766301.7951	1363401.6259	2	-	5.5-20.5	18.00	Monitoring Well
MW-5	09/16/1994	1049.01	1051.26	766547.9303	1363808.9110	2	-	33.8-48.8	42.00	Monitoring Well
MW-6	09/29/1994	1008.29	1010.79	766433.2733	1361867.3868	2	-	26-41	24.00	Monitoring Well
MW-7	09/29/1994	1005.84	1009.24	766240.2892	1362135.0386	2	-	38-53	12.00	Monitoring Well
MW-8	09/29/1994	1019.01	1022.01	767017.6867	1362679.5452	2	-	12.5-27.5	14.00	Monitoring Well
MW-9	10/24/2000	993.76	996.27	766114.0184	1363340.8075	2	6	16.5-31.5	7.00	Monitoring Well
MW-10	10/25/2000	1037.83	1040.80	766278.6433	1363705.7044	2	6.5	76-91	36.00	Monitoring Well
MW-11	10/24/2000	1008.98	1011.96	766061.8888	1362636.9409	2	6.5	41-56	36.00	Monitoring Well
MW-12	10/23/2000	1004.46	1007.35	766005.5659	1362030.9237	2	6	51.5-66.5	66.00	Monitoring Well
MW-12D	06/09/2000	1006.03	1008.46	766005.1529	1362038.5108	2	3.88	90-100	-	Monitoring Well
MW-13	10/25/2000	1001.63	1004.56	766375.4660	1361820.1834	2	6.5	45.5-60.5	30.00	Monitoring Well
MW-14	10/26/2000	994.06	997.44	766663.1022	1362045.4545	2	6	25.0-40.5	37.50	Monitoring Well
MW-15	10/25/2000	1020.81	1023.44	766979.9418	1362543.9150	2	6	19-35	26.00	Monitoring Well
MW-16	12/20/2007	1034.94	1037.56	766458.4917	1363828.4046	2	7.75	25.25-40.25	-	Monitoring Well
MW-17	06/10/2003	988.36	991.16	767043.7701	1362461.2129	2	6	7.3-22.3	-	Monitoring Well
MW-18	12/19/2007	1081.52	1084.33	767212.2504	1363776.4901	2	6	41.7-56.7	20.50	Monitoring Well
MW-19	12/20/2007	1068.67	1071.48	767200.6858	1363194.7175	2	6	48.92-63.92	43.00	Monitoring Well
MW-20	12/20/2007	1044.19	1046.92	767200.0703	1362748.8204	2	6	48.55-63.55	38.00	Monitoring Well
MW-21	12/19/2007	987.08	990.00	767046.2058	1362368.8492	2	6	26.05-41.05	-	Monitoring Well
MW-22	12/19/2007	956.21	958.97	766871.4240	1362092.4590	2	6	8.12-18.12	-	Monitoring Well
MW-23	12/19/2007	947.83	950.48	766686.4251	1361922.3394	2	6	6.54-21.51	21.54	Monitoring Well
MW-24	12/20/2007	971.29	974.04	765972.4283	1361780.7942	2	6	20.35-35.35	35.35	Monitoring Well
MW-25	12/19/2007	979.93	981.93	765849.7417	1361936.5943	2	6	29.48-44.48	22.80	Monitoring Well
MW-26	12/20/2007	988.08	990.69	765876.1807	1362646.1678	2	6	34.8-49.8	31.85	Monitoring Well
MW-27	12/20/2007	989.19	992.19	765934.3152	1362968.1353	2	6	34.82-49.82	23.70	Monitoring Well

NOTE:

1. Ground, datum and TOR elevation are in units of feet, well and boring diameter are in units of inches.
2. TOR = Top of rock below ground surface

Table 2: Historical Groundwater Elevations

Name	01/31/1995	02/15/1995	03/08/1995	12/06/1995	05/06/1996	11/11/1996	06/24/1997	12/03/1997	03/23/1998	04/30/1998	06/04/1998
MW-1	1047.54	1047.89	1048.09	1045.20	1045.84	1044.96	1046.93	1044.93	1047.68	1047.09	1046.94
MW-1A	1039.92	1039.19	1040.47	1037.47	1038.47	1037.53	1042.22	1038.97	1041.36	1042.38	1042.76
MW-1B	-	-	-	-	-	-	-	-	-	-	-
MW-2	984.48	981.98	985.88	982.05	983.48	-	-	-	-	-	-
MW-3	1000.23	999.13	1000.08	999.05	999.33	998.97	999.38	999.10	988.11	999.37	999.44
MW-4R	1000.64	1001.44	1001.39	996.41	997.16	996.48	997.95	996.85	998.24	998.24	997.74
MW-5	1014.14	1013.73	1015.16	1011.38	1012.76	1011.10	1012.90	1011.83	1025.82	1014.49	1013.54
MW-6	986.29	984.02	989.74	980.97	982.44	979.79	981.97	977.87	987.31	986.26	982.91
MW-7	971.54	967.86	973.74	969.86	973.24	969.34	974.72	969.32	974.68	974.94	974.89
MW-8	1011.96	1011.91	1014.21	1008.52	1010.14	1009.56	1012.42	1009.16	1012.56	1011.56	1010.54
MW-9	-	-	-	-	-	-	-	-	-	-	-
MW-10	-	-	-	-	-	-	-	-	-	-	-
MW-11	-	-	-	-	-	-	-	-	-	-	-
MW-12	-	-	-	-	-	-	-	-	-	-	-
MW-12D	-	-	-	-	-	-	-	-	-	-	-
MW-13	-	-	-	-	-	-	-	-	-	-	-
MW-14	-	-	-	-	-	-	-	-	-	-	-
MW-15	-	-	-	-	-	-	-	-	-	-	-
MW-17	-	-	-	-	-	-	-	-	-	-	-

Name	11/18/1998	05/13/1999	12/06/1999	05/17/2000	12/11/2000	06/11/2001	12/27/2001	06/12/2002	01/02/2003	06/24/2003	12/11/2003
MW-1	1044.77	1044.98	1044.51	1044.82	1044.36	1044.66	1044.58	1044.73	1044.97	1047.76	1044.77
MW-1A	1037.78	-	-	-	1036.72	1036.30	1036.26	1036.14	1036.79	1042.56	1038.90
MW-1B	-	-	-	-	-	-	-	-	-	1046.21	1040.92
MW-2	-	-	977.04	-	-	-	-	-	-	-	-
MW-3	999.08	999.31	998.62	999.10	998.50	998.12	998.18	998.77	999.21	999.45	999.11
MW-4R	996.24	996.45	995.71	995.95	995.37	995.48	995.32	995.37	996.50	997.82	996.59
MW-5	1010.76	1011.36	1008.92	1010.91	1007.84	1008.53	1007.50	1008.10	1011.16	1014.07	1010.19
MW-6	975.71	983.04	975.47	980.85	973.63	975.74	973.83	976.93	982.55	987.07	976.69
MW-7	968.46	969.54	967.92	968.97	967.92	967.98	967.86	967.90	968.40	977.75	968.29
MW-8	1006.75	1009.37	1007.56	1009.30	1005.47	1007.66	1007.73	1007.16	1011.16	1012.26	1012.06
MW-9	-	-	-	-	982.86	983.04	983.48	982.96	984.94	984.71	984.26
MW-10	-	-	-	-	1001.75	1001.90	1001.30	1001.57	1002.78	1004.80	1003.05
MW-11	-	-	-	-	968.75	969.66	969.78	969.39	976.35	958.76	970.34
MW-12	-	-	-	-	951.83	952.72	951.62	952.85	957.04	966.65	954.07
MW-12D	-	-	-	-	-	-	-	-	-	963.97	958.06
MW-13	-	-	-	-	958.33	958.41	957.51	960.03	964.43	975.00	963.61
MW-14	-	-	-	-	956.03	956.94	956.23	957.47	959.44	961.32	957.99
MW-15	-	-	-	-	996.60	997.74	997.38	997.83	1001.52	1002.37	999.19
MW-17	-	-	-	-	-	-	-	-	-	979.50	977.96

Table 2: Historical Groundwater Elevations

Name	06/15/2004	12/29/2004	06/22/2005	01/12/2006	07/06/2006	12/14/2006	06/27/2007	12/19/07
MW-1	1044.65	1044.69	1044.62	1044.60	1044.25	1044.62	1044.47	1044.13
MW-1A	1036.72	-	-	-	-	-	-	-
MW-1B	1038.18	1038.16	1038.67	1038.00	1037.14	1037.52	1037.75	1036.10
MW-2	-	-	-	-	-	979.17	977.28	975.12
MW-3	999.13	999.31	999.23	999.29	999.10	999.31	999.24	998.82
MW-4R	996.25	996.77	996.39	996.96	996.77	996.19	995.93	995.56
MW-5	1009.61	1011.18	1009.85	1010.43	1009.02	1009.69	1009.14	1007.51
MW-6	979.11	983.49	979.72	984.52	979.52	983.07	977.36	975.63
MW-7	967.83	968.52	969.83	968.01	967.77	967.94	967.42	976.18
MW-8	1008.40	1011.21	1010.54	1013.56	1013.63	1009.86	1007.57	-
MW-9	984.03	984.92	983.86	985.68	985.57	984.32	983.42	983.54
MW-10	1002.86	1003.33	1003.25	1003.21	1002.89	1002.99	1003.00	1002.03
MW-11	969.97	973.56	970.52	973.57	971.14	971.46	969.55	969.05
MW-12	954.60	955.95	957.26	954.29	953.70	954.67	954.81	951.15
MW-12D	952.82	952.78	949.27	948.26	947.66	948.10	947.29	943.50
MW-13	966.55	970.00	967.41	968.67	965.14	968.76	965.10	958.99
MW-14	958.05	960.16	958.25	960.08	955.93	958.32	957.89	956.58
MW-15	998.61	1000.90	999.22	1001.79	1000.78	999.56	995.44	994.91
MW-17	974.55	976.48	975.91	978.55	979.39	975.49	981.03	973.31

Name	Observed High	Observed Low	Difference	Average
MW-1	1048.09	1044.13	3.96	1045.47
MW-1A	1042.76	1036.14	6.62	1038.95
MW-1B	1046.21	1036.10	10.11	1038.87
MW-2	985.88	975.12	10.76	980.72
MW-3	1000.23	988.11	12.12	998.77
MW-4R	1001.44	995.32	6.12	997.01
MW-5	1025.82	1007.50	18.32	1011.42
MW-6	989.74	973.63	16.11	980.78
MW-7	977.75	967.42	10.33	970.29
MW-8	1014.21	1005.47	8.74	1010.13
MW-9	985.68	982.86	2.82	984.11
MW-10	1004.80	1001.30	3.50	1002.71
MW-11	976.35	958.76	17.59	970.12
MW-12	966.65	951.15	15.50	954.88
MW-12D	963.97	943.50	20.47	951.17
MW-13	975.00	957.51	17.49	964.53
MW-14	961.32	955.93	5.39	958.05
MW-15	1002.37	994.91	7.46	998.92
MW-17	981.03	973.31	7.72	977.22

Name	01/07/2008
MW-16	1005.58
MW-18	1029.33
MW-19	1015.00
MW-20	1005.91
MW-21	959.49
MW-22	943.66
MW-23	932.88
MW-24	940.34
MW-25	948.88
MW-26	960.78
MW-27	971.81

Table 3: Summary of Slug Test Results

Well	Screen Interval (BGS)	Initial DTW (BTOP)	Initial Head Change	K (cm/sec)	Lithology
MW-1A	32.5-47.5	46.5	31.5	5.60E-05	Gneiss
MW-2	15-30	22.8	3.2	3.70E-06	Silty Sand
MW-3	13-33	25.5	25.5	3.90E-06	PWR/Gneiss
MW-4R	5.5-20.5	14.8	4.8	4.90E-04	Silty Clay/Gneiss
MW-5	33.8-48.8	39.9	39.9	6.40E-05	Saprolite
MW-6	26-41	33.2	33.2	2.40E-05	Gneiss
MW-7	38-53	40.6	40.6	1.60E-06	Gneiss
MW-8	12.5-27.5	14.2	14.2	1.30E-05	Gneiss
MW-16	25.25-40.25	31.97	3.82	8.72E-04	Silty Sand
MW-18	41.7-56.7	55.00	2.48	1.19E-04	Gneiss
MW-19	48.92-63.92	56.48	1.56	1.92E-06	Gneiss
MW-20	48.55-63.55	40.80	5.72	5.49E-05	Gneiss
MW-21	26.05-41.05	30.51	3.98	3.77E-03	Silty Sand
MW-22	8.12-18.12	15.31	4.16	6.04E-04	Silty Sand
MW-23	6.54-21.51	17.60	4.97	9.83E-04	Silty Sand
MW-24	20.35-35.35	33.71	1.39	1.33E-02	PWR
MW-25	29.48-44.48	33.05	5.13	5.41E-05	Gneiss
MW-26	34.8-49.8	29.91	9.02	1.16E-04	Gneiss
MW-27	34.82-49.82	20.38	4.97	2.83E-05	Gneiss

Summary Statistics			
Mean	1.08E-03	Maximum	1.33E-02
Median	5.60E-05	Minimum	1.60E-06
Sandard Deviation	3.08E-03	Count	19

Silty Sand			
Mean	1.25E-03	Maximum	3.77E-03
Median	8.72E-04	Minimum	3.70E-06

Gneiss			
Mean	8.02E-05	Maximum	4.90E-04
Median	4.12E-05	Minimum	1.60E-06

Table 4: Summary of Soil Geologic Properties

Well	Lithology	Reported Total Porosity (%)	Reported Effective Porosity (%)	Updated Total Porosity (%)	Updated Effective Porosity (%)
MW-1	Gneiss	37.0	1	20.0	10
MW-1A	Gneiss	37.0	15	20.0	10
MW-2	Silty Sand	30.0	1	48.5	28.1
MW-3	PWR/Gneiss	30.0	1	20.0	10
MW-4R	Silty Clay/Gneiss	37.0	15	20.0	10
MW-5	Saprolite	37.0	15	48.5	28.1
MW-6	Gneiss	30.0	1	20.0	10
MW-7	Gneiss	20.0	1	20.0	10
MW-8	Gneiss	37.0	1	20.0	10
MW-16	Silty Sand	-	-	49.9	25.7
MW-22	Silty Sand	-	-	47.0	30.5

NOTE:
1. Reported porosity values obtained from Alexander County Response to Review Comments.
2. Updated porosity values calculated in this report.

Table 5: Summary of Field Parameters

	Name	01/31/1995	02/15/1995	03/08/1995	12/06/1995	05/06/1996	11/11/1996	06/24/1997
MW-1	pH	6.3	6.6	7.9	6.5	7.8	5.97	5.82
	Temperature	13.9	12.9	14.5	10.7	14.1	14.5	19.3
	Conductivity	139	47	149.4	121	68	168	330
MW-1A	pH	6.74	6.3	7.7	5.6	7.7	4.9	5.22
	Temperature	12.8	12.2	13.5	9.9	13.8	14.3	25.5
	Conductivity	39.1	6	19.4	29	10	18	20
MW-1B	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-2	pH	5.8	6.8	7.84	5.2	6.1	-	-
	Temperature	11.4	10.7	13.3	13.5	18.5	-	-
	Conductivity	165	101	97	60	85	-	-
MW-3	pH	5.9	6.2	7.9	6.6	6.5	6.1	5.86
	Temperature	13.1	12.5	10.9	11.1	18.2	14.4	18.4
	Conductivity	210	81	284	236	521	381	240
MW-4R	pH	7.03	7.4	7.35	7	7.8	5.82	5.82
	Temperature	2.7	12.1	16	14.8	23.3	15.4	24.7
	Conductivity	240	193	146	141	243	203	250
MW-5	pH	6.2	7.4	7.3	5.8	7.7	6.04	6
	Temperature	11.3	12.8	14.8	9.8	26	14.1	21.4
	Conductivity	78	33	159	24	179	147	160
MW-6	pH	7	6.8	7.78	5.1	6.7	6	5.3
	Temperature	9	11.6	11.3	13.5	16.8	13.2	20.8
	Conductivity	61	15	45	29	40	42	50
MW-7	pH	6.86	7.3	8.05	7	7.1	6.31	6.45
	Temperature	8.7	11.3	8.3	16.4	17.7	14	23.7
	Conductivity	432	126	460	370	460	284	470
MW-8	pH	6.8	6	7.83	5.5	7.4	5.65	5.07
	Temperature	11.7	11.5	10.2	11.52	18.2	14.8	21
	Conductivity	56	17	69	39	60	5.65	70
MW-9	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-10	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-11	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-12	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-12D	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-13	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-14	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-15	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-17	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-

Table 5: Summary of Field Parameters

	Name	12/03/1997	03/23/1998	04/30/1998	06/04/1998	11/18/1998	05/13/1999	12/06/1999
MW-1	pH	6.2	-	5.19	6.7	5.88	-	5.77
	Temperature	15.5	-	15.5	22.7	18.3	-	16.1
	Conductivity	290	-	172	250	270	-	194
MW-1A	pH	5.45	-	6.1	6.4	-	-	-
	Temperature	15.1	-	15.8	22.6	-	-	-
	Conductivity	20	-	177	30	-	-	-
MW-1B	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-2	pH	-	-	-	-	-	-	6.24
	Temperature	-	-	-	-	-	-	15.3
	Conductivity	-	-	-	-	-	-	489
MW-3	pH	6.1	-	5.9	6.91	6.55	-	6.18
	Temperature	16.1	-	16.1	22	19.5	-	16.1
	Conductivity	340	-	180	260	440	-	474
MW-4R	pH	5.85	-	5.6	6.61	6.7	-	5.91
	Temperature	16.8	-	14.8	20.6	19.4	-	17.8
	Conductivity	330	-	217	300	390	-	327
MW-5	pH	6.19	-	5.7	6.42	6.45	-	6.53
	Temperature	15.4	-	15.4	20.1	18.4	-	15.4
	Conductivity	180	-	150	230	170	-	240
MW-6	pH	5.61	-	5.3	6.48	6.72	-	5.46
	Temperature	14.5	-	14.3	19.8	17.3	-	14.8
	Conductivity	80	-	43	50	140	-	127
MW-7	pH	6.61	-	64	6.82	7.5	-	6.83
	Temperature	14.7	-	15.5	31.6	18.4	-	15.8
	Conductivity	380	-	316	480	520	-	524
MW-8	pH	5.69	-	5.7	6.32	5.7	-	5.51
	Temperature	14.9	-	14	29.5	19.8	-	15.6
	Conductivity	70	-	143	60	100	-	87
MW-9	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-10	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-11	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-12	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-12D	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-13	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-14	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-15	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-17	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-

Table 5: Summary of Field Parameters

	Name	05/17/2000	12/11/2000	06/11/2001	12/27/2001	06/12/2002	01/02/2003	06/24/2003
MW-1	pH	5.93	5.97	5.86	6.02	6.07	-	6.93
	Temperature	16	12.8	-	15.5	15.6	-	15.6
	Conductivity	100	100	150	220	230	-	190
MW-1A	pH	-	5.48	5.28	6.21	-	6.23	7.03
	Temperature	-	12.3	-	12.7	-	12.3	14.9
	Conductivity	-	190	220	190	-	360	420
MW-1B	pH	-	-	-	-	-	-	7.02
	Temperature	-	-	-	-	-	-	14.9
	Conductivity	-	-	-	-	-	-	160
MW-2	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
MW-3	pH	6.6	6.53	6.51	6.58	6.52	-	7.01
	Temperature	16.8	12.5	-	12.1	14.1	-	15.3
	Conductivity	80	70	60	70	140	-	370
MW-4R	pH	6.55	6.51	6.5	6.51	6.52	6.51	6.61
	Temperature	17.3	12	-	12	12	12.1	15.1
	Conductivity	60	90	100	100	100	100	170
MW-5	pH	6.34	6.52	6.48	6.31	6.68	6.06	6.93
	Temperature	17.1	12.3	-	14.7	14.1	14.2	15.2
	Conductivity	90	80	90	100	120	60	160
MW-6	pH	5.81	5.93	5.88	5.99	5.89	6.21	6.86
	Temperature	17.3	12.1	-	12.1	14.2	12.7	15.1
	Conductivity	40	50	60	60	80	130	100
MW-7	pH	6.36	6.35	6.28	6.31	6.31	6.26	6.32
	Temperature	17.1	12.3	-	12.3	12.3	12.8	14.9
	Conductivity	40	40	60	50	100	90	100
MW-8	pH	6.46	6.51	6.48	6.5	6.4	6.48	6.46
	Temperature	17.3	12.1	-	12.2	13.8	12.2	15.1
	Conductivity	100	90	80	100	100	100	130
MW-9	pH	-	6.5	6.51	6.4	6.41	6.38	6.36
	Temperature	-	12.4	-	12.1	13.7	12.8	14.8
	Conductivity	-	130	150	130	110	110	130
MW-10	pH	-	6.49	6.52	6.45	6.46	6.41	7.01
	Temperature	-	12.2	-	12.1	12.8	12	14.9
	Conductivity	-	110	100	110	110	100	100
MW-11	pH	-	5.78	5.71	5.71	5.83	-	6.96
	Temperature	-	13.1	-	12.8	13.6	-	15.2
	Conductivity	-	120	110	110	100	-	120
MW-12	pH	-	5.9	5.88	5.82	5.81	6.71	6.73
	Temperature	-	11.9	-	11.75	13.81	12.3	12.2
	Conductivity	-	100	100	100	130	100	110
MW-12D	pH	-	-	-	-	-	-	6.38
	Temperature	-	-	-	-	-	-	13.6
	Conductivity	-	-	-	-	-	-	120
MW-13	pH	-	6.17	6.15	6.11	6.13	6.1	6.91
	Temperature	-	12.6	-	12.3	13.1	12.4	14.6
	Conductivity	-	140	160	120	120	110	110
MW-14	pH	-	6.12	6.1	6.1	6.06	6.12	6.63
	Temperature	-	12.5	-	12	13.7	12.7	12.7
	Conductivity	-	100	110	100	120	110	100
MW-15	pH	-	5.91	5.92	5.9	5.93	6.03	6.38
	Temperature	-	12	-	12	13.7	12.3	15.2
	Conductivity	-	100	120	110	130	210	200
MW-17	pH	-	-	-	-	-	-	7.03
	Temperature	-	-	-	-	-	-	13.9
	Conductivity	-	-	-	-	-	-	380

Table 5: Summary of Field Parameters

	Name	12/11/2003	06/15/2004	12/29/2004	06/22/2005	01/12/2006	07/06/2006	12/14/2006
MW-1	pH	6.93	6.98	6.93	6.3	6	6.7	5.6
	Temperature	16.7	16.9	15.8	16.9	16.9	16.8	16
	Conductivity	140	190	140	160	270	180	190
MW-1A	pH	7.01	7.01	-	-	-	-	-
	Temperature	16.4	16.2	-	-	-	-	-
	Conductivity	140	190	-	-	-	-	-
MW-1B	pH	7.02	7.03	6.97	5.2	6.9	6.5	5.8
	Temperature	16.3	16.1	15.7	17.9	15.8	16.9	15.8
	Conductivity	160	340	130	50	100	210	110
MW-2	pH	-	-	-	-	-	-	6.2
	Temperature	-	-	-	-	-	-	16.6
	Conductivity	-	-	-	-	-	-	190
MW-3	pH	7.01	7.02	6.96	5.7	6.1	6.5	5.8
	Temperature	17.4	15.8	16.3	19	15	16.5	17.3
	Conductivity	260	440	480	380	440	190	370
MW-4R	pH	6.73	6.63	6.99	6.9	6.6	6.9	6.7
	Temperature	16.3	16.3	15.9	16.9	16.1	16.5	16.9
	Conductivity	160	190	160	140	170	50	140
MW-5	pH	7.04	6.96	6.97	6.6	6.6	6.3	6.8
	Temperature	16.4	15.7	16	18	15.3	16.6	16.8
	Conductivity	160	180	190	430	90	170	270
MW-6	pH	6.88	6.89	6.93	6.8	5.4	6.6	6.6
	Temperature	16.9	15.2	15.4	18.2	15.6	16.6	16.6
	Conductivity	160	160	190	200	30	60	50
MW-7	pH	6.81	6.93	6.92	6.1	5.7	6.9	6.4
	Temperature	16.9	16	16.3	17.8	15.1	16.4	16.5
	Conductivity	140	100	360	290	390	200	100
MW-8	pH	7.03	6.93	6.99	5.8	5	6.6	6.8
	Temperature	16.2	20.3	16.4	17.6	16.7	16.8	16.6
	Conductivity	170	260	300	330	90	70	190
MW-9	pH		6.91	7.03	7	6.8	6.6	6.6
	Temperature	15.8	15.6	16	16.8	15.6	16.4	16.9
	Conductivity		130	180	280	100	80	160
MW-10	pH	7.03	7.02	6.97	7	6.7	6.5	7.1
	Temperature	16.6	15.1	15.8	17.2	16.1	16.6	16.3
	Conductivity	110	80	130	160	120	110	50
MW-11	pH	6.93	6.96	6.93	6.6	6.6	6.6	5.9
	Temperature	16.7	15.6	16.2	17.5	15	16.3	17.2
	Conductivity	240	110	360	350	360	320	360
MW-12	pH	6.74	6.96	6.97	7	6	6.6	5.5
	Temperature	17.3	15.7	16.1	16.8	15.2	16.3	16.1
	Conductivity	230	340	380	190	310	400	130
MW-12D	pH	6.53	6.93	6.91	6.9	6.2	6.5	6.6
	Temperature	16.9	15	15.6	16.3	14.6	16	15.8
	Conductivity	110	100	200	260	40	30	60
MW-13	pH	7	6.99	6.91	6.3	5.5	6.7	6.6
	Temperature	16.6	15.7	16.1	18.6	15.7	16.5	16.5
	Conductivity	130	180	170	210	20	100	70
MW-14	pH	6.99	6.93	6.9	7	6.1	6.7	6.5
	Temperature	16.7	15.7	15.9	17	15.1	16.7	16.5
	Conductivity	150	120	160	160	180	90	160
MW-15	pH	6.89	6.96	6.91	6.8	6.2	6.8	6.6
	Temperature	16.2	16.2	16.1	17.7	15.8	16.7	16.6
	Conductivity	180	110	160	100	160	100	80
MW-17	pH	6.91	7.01	6.97	6.9	6.1	6.6	6.7
	Temperature	16.3	15.6	16.1	17.3	16	17.1	16.6
	Conductivity	210	290	120	160	190	190	80

Table 5: Summary of Field Parameters

	Name	06/27/2007	12/19/2007			01/07/2008
MW-1	pH	6.3	6.4	MW-16	pH	5.8
	Temperature	14.8	14.9		Temperature	14.8
	Conductivity	80	140		Conductivity	110
MW-1A	pH	-	-	MW-18	pH	6.8
	Temperature	-	-		Temperature	14.6
	Conductivity	-	-		Conductivity	30
MW-1B	pH	6.7	6.1	MW-19	pH	6.7
	Temperature	14.7	14.8		Temperature	14.7
	Conductivity	90	180		Conductivity	20
MW-2	pH	6.2	5.8	MW-20	pH	6.3
	Temperature	14.5	14.9		Temperature	14.7
	Conductivity	290	340		Conductivity	30
MW-3	pH	6.3	6.4	MW-21	pH	5.3
	Temperature	14.1	15.1		Temperature	15.1
	Conductivity	420	410		Conductivity	190
MW-4R	pH	6.8	6.8	MW-22	pH	5.7
	Temperature	14.3	14.6		Temperature	14.9
	Conductivity	130	130		Conductivity	80
MW-5	pH	6.4	6.8	MW-23	pH	5.5
	Temperature	14.7	15.3		Temperature	14.8
	Conductivity	110	190		Conductivity	220
MW-6	pH	6.5	6.2	MW-24	pH	5.5
	Temperature	14.2	15.4		Temperature	15
	Conductivity	190	180		Conductivity	160
MW-7	pH	6.4	6.3	MW-25	pH	6.1
	Temperature	14.6	14.9		Temperature	14.8
	Conductivity	90	80		Conductivity	50
MW-8	pH	-	-	MW-26	pH	5.3
	Temperature	-	-		Temperature	15
	Conductivity	-	-		Conductivity	210
MW-9	pH	6.9	6.2	MW-27	pH	6.1
	Temperature	14.7	15.1		Temperature	14.5
	Conductivity	190	130		Conductivity	40
MW-10	pH	6.5	6.4			
	Temperature	14.1	14.2			
	Conductivity	40	60			
MW-11	pH	6.4	6.7			
	Temperature	14.3	14.3			
	Conductivity	180	220			
MW-12	pH	6.1	5.5			
	Temperature	14.5	14.7			
	Conductivity	380	390			
MW-12D	pH	6.5	6.6			
	Temperature	14.1	14.5			
	Conductivity	80	80			
MW-13	pH	-	6.1			
	Temperature	-	15.6			
	Conductivity	-	70			
MW-14	pH	6.1	6.3			
	Temperature	14.4	14.8			
	Conductivity	610	400			
MW-15	pH	6.4	6.6			
	Temperature	14.3	15.4			
	Conductivity	170	90			
MW-17	pH	-	6.9			
	Temperature	-	14.6			
	Conductivity	-	180			

Table 5: Summary of Field Parameters

	Name	01/31/1995	02/15/1995	03/08/1995	12/06/1995	05/06/1996	11/11/1996	06/24/1997
SW1	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW2	pH	-	-	-	6.2	-	-	-
	Temperature	-	-	-	8.9	-	-	-
	Conductivity	-	-	-	25	-	-	-
SW3	pH	6.4	7.3	7.34	6.3	7.3	6.58	6.49
	Temperature	5	7.3	17.1	9.1	22.7	10.6	27.8
	Conductivity	10	4	22	212	46	33	120
SW4	pH	-	-	-	6.1	-	-	-
	Temperature	-	-	-	7.5	-	-	-
	Conductivity	-	-	-	25	-	-	-
SW4R	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW5	pH	-	-	-	6.1	-	-	6.2
	Temperature	-	-	-	8.9	-	-	28.9
	Conductivity	-	-	-	28	-	-	100

	Name	12/03/1997	03/23/1998	04/30/1998	06/04/1998	11/18/1998	05/13/1999	12/06/1999
SW1	pH	-	-	-	6.85	-	-	7.09
	Temperature	-	-	-	21.5	-	-	12.9
	Conductivity	-	-	-	170	-	-	355
SW2	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW3	pH	6.84	-	-	-	7.8	-	6.3
	Temperature	12.4	-	-	-	16.8	-	12.5
	Conductivity	120	-	-	-	140	-	30
SW4	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW4R	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW5	pH	6.3	-	-	6.87	8.2	-	-
	Temperature	12.5	-	-	21.8	16.4	-	-
	Conductivity	120	-	-	100	110	-	-

Table 5: Summary of Field Parameters

	Name	05/17/2000	12/11/2000	06/11/2001	12/27/2001	06/12/2002	01/02/2003	06/24/2003
SW1	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW2	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW3	pH	5.98	6.13	6.23	6.11	6.21	6.11	7.01
	Temperature	19.6	15.3	-	14.8	14.6	14.1	20.9
	Conductivity	80	90	80	90	90	80	110
SW4	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW4R	pH	-	-	-	-	-	6.81	-
	Temperature	-	-	-	-	-	14	-
	Conductivity	-	-	-	-	-	90	-
SW5	pH	5.99	6	5.98	6.1	-	6.1	6.93
	Temperature	20.1	15.1	-	14.2	-	14.1	20.7
	Conductivity	80	70	60	80	-	80	120

	Name	12/11/2003	06/15/2004	12/29/2004	06/22/2005	01/12/2006	07/06/2006	12/14/2006
SW1	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW2	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW3	pH	6.99	7.01	7.02	6.9	7.2	7.1	7.2
	Temperature	3.2	20.7	10.3	26.9	4.1	20.6	10.1
	Conductivity	60	60	120	60	50	40	30
SW4	pH	-	-	-	-	-	-	-
	Temperature	-	-	-	-	-	-	-
	Conductivity	-	-	-	-	-	-	-
SW4R	pH	7.03	6.99	7.01	6.8	7	7	-
	Temperature	3.1	20.9	10.6	26.6	4.2	20.3	-
	Conductivity	100	80	80	60	60	30	-
SW5	pH	7	6.93	7.01	7	6.9	7.1	7.1
	Temperature	2.9	20.9	10.4	27.3	4	20.7	10.3
	Conductivity	80	100	100	100	60	40	30

	Name	06/27/2007	12/19/07
SW1	pH	-	-
	Temperature	-	-
	Conductivity	-	-
SW2	pH	-	-
	Temperature	-	-
	Conductivity	-	-
SW3	pH	-	-
	Temperature	-	-
	Conductivity	-	-
SW4	pH	-	-
	Temperature	-	-
	Conductivity	-	-
SW4R	pH	7	6.9
	Temperature	23.2	5.5
	Conductivity	30	30
SW5	pH	6.9	6.9
	Temperature	23.1	5.7
	Conductivity	30	20

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1	Antimony, total	05/17/2000	0.0087	mg/l	0.005		
MW-10	Antimony, total	06/27/2007	1.11	ug/l	0.68		
MW-13	Antimony, total	12/11/2000	0.0053	mg/l	0.005		
MW-15	Antimony, total	06/12/2001	0.0051	mg/l	0.005		
MW-15	Antimony, total	06/12/2002	0.0052	mg/l	0.005		
MW-3	Antimony, total	12/11/2000	0.005	mg/l	0.005		
MW-4R	Antimony, total	05/17/2000	0.0075	mg/l	0.005		
MW-4R	Antimony, total	12/11/2000	0.0059	mg/l	0.005		
MW-5	Antimony, total	12/11/2000	0.0057	mg/l	0.005		
MW-5	Antimony, total	06/13/2001	0.0054	mg/l	0.005		
MW-7	Antimony, total	05/17/2000	0.0068	mg/l	0.005		
MW-8	Antimony, total	05/17/2000	0.0054	mg/l	0.005		
MW-1	Arsenic	12/28/2001	0.0051	mg/l	0.005	0.05	
MW-10	Arsenic	12/27/2001	0.0058	mg/l	0.005	0.05	
MW-10	Arsenic	06/27/2007	0.0036	mg/l	0.0036	0.05	
MW-10	Arsenic	12/27/2007	4.1	ug/l	2	50	
MW-11	Arsenic	12/11/2000	0.01	mg/l	0.005	0.05	
MW-11	Arsenic	12/27/2007	4.1	ug/l	2	50	
MW-12	Arsenic	12/11/2000	0.0096	mg/l	0.005	0.05	
MW-12	Arsenic	12/28/2007	5.8	ug/l	2	50	
MW-12D	Arsenic	12/28/2007	2.9	ug/l	2	50	
MW-14	Arsenic	12/28/2007	2.6	ug/l	2	50	
MW-15	Arsenic	06/12/2001	0.0069	mg/l	0.005	0.05	
MW-15	Arsenic	06/12/2002	0.0071	mg/l	0.005	0.05	
MW-17	Arsenic	12/27/2007	3.3	ug/l	2	50	
MW-1A	Arsenic	12/11/2000	0.016	mg/l	0.005	0.05	
MW-1A	Arsenic	06/13/2001	0.0069	mg/l	0.005	0.05	
MW-1A	Arsenic	12/28/2001	0.012	mg/l	0.005	0.05	
MW-1A	Arsenic	06/25/2003	0.0067	mg/l	0.005	0.05	
MW-1B	Arsenic	12/28/2007	3.9	ug/l	2	50	
MW-2	Arsenic	12/28/2007	3.5	ug/l	2	50	
MW-24	Arsenic	01/08/2008	2.1	ug/l	2	50	
MW-3	Arsenic	12/28/2007	3.5	ug/l	2	50	
MW-5	Arsenic	12/03/1997	0.006	mg/l	0.005	0.05	
MW-5	Arsenic	06/04/1998	0.008	mg/l	0.005	0.05	
MW-5	Arsenic	11/18/1998	0.026	mg/l	0.02	0.05	
MW-5	Arsenic	05/13/1999	0.0056	mg/l	0.005	0.05	
MW-5	Arsenic	05/17/2000	0.0078	mg/l	0.005	0.05	
MW-5	Arsenic	12/11/2000	0.0088	mg/l	0.005	0.05	
MW-5	Arsenic	06/13/2001	0.0068	mg/l	0.005	0.05	
MW-5	Arsenic	12/27/2001	0.0055	mg/l	0.005	0.05	
MW-9	Arsenic	12/27/2001	0.0054	mg/l	0.005	0.05	
MW-1	Barium	11/11/1996	0.01	mg/l	0.01	2	
MW-1	Barium	06/24/1997	0.048	mg/l	0.01	2	
MW-1	Barium	12/03/1997	0.086	mg/l	0.01	2	
MW-1	Barium	06/04/1998	0.036	mg/l	0.01	2	
MW-1	Barium	11/18/1998	0.03	mg/l	0.01	2	
MW-1	Barium	05/13/1999	0.032	mg/l	0.005	2	
MW-1	Barium	12/06/1999	0.028	mg/l	0.005	2	
MW-1	Barium	05/17/2000	0.038	mg/l	0.005	2	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1	Barium	12/12/2000	0.042	mg/l	0.005	2	
MW-1	Barium	06/13/2001	0.032	mg/l	0.005	2	
MW-1	Barium	12/28/2001	0.042	mg/l	0.005	2	
MW-1	Barium	06/13/2002	0.041	mg/l	0.005	2	
MW-1	Barium	01/03/2003	0.044	mg/l	0.005	2	
MW-1	Barium	06/24/2003	0.058	mg/l	0.005	2	
MW-1	Barium	12/15/2006	0.036	mg/l	0.1	2	
MW-1	Barium	06/28/2007	0.0237	mg/l	0.001	2	
MW-1	Barium	12/27/2007	46.9	ug/l	0.2	2000	
MW-10	Barium	12/11/2000	0.03	mg/l	0.005	2	
MW-10	Barium	06/12/2001	0.045	mg/l	0.005	2	
MW-10	Barium	12/27/2001	0.018	mg/l	0.005	2	
MW-10	Barium	06/13/2002	0.0072	mg/l	0.005	2	
MW-10	Barium	01/02/2003	0.011	mg/l	0.005	2	
MW-10	Barium	06/24/2003	0.0072	mg/l	0.005	2	
MW-10	Barium	12/14/2006	0.0597	mg/l	0.1	2	
MW-10	Barium	06/27/2007	0.0255	mg/l	0.001	2	
MW-10	Barium	12/27/2007	32.2	ug/l	0.2	2000	
MW-11	Barium	12/11/2000	0.83	mg/l	0.005	2	
MW-11	Barium	06/12/2001	0.7	mg/l	0.005	2	
MW-11	Barium	12/27/2001	1	mg/l	0.005	2	
MW-11	Barium	06/13/2002	0.53	mg/l	0.005	2	
MW-11	Barium	01/03/2003	0.12	mg/l	0.005	2	
MW-11	Barium	06/24/2003	0.15	mg/l	0.005	2	
MW-11	Barium	12/14/2006	0.107	mg/l	0.1	2	
MW-11	Barium	06/27/2007	0.104	mg/l	0.001	2	
MW-11	Barium	12/27/2007	304	ug/l	0.2	2000	
MW-12	**Barium**	**12/11/2000**	**5.3**	**mg/l**	**0.005**	**2**	**3.3**
MW-12	Barium	06/13/2001	1.1	mg/l	0.005	2	
MW-12	**Barium**	**12/27/2001**	**2.3**	**mg/l**	**0.005**	**2**	**0.3**
MW-12	Barium	06/12/2002	0.88	mg/l	0.005	2	
MW-12	Barium	01/02/2003	0.5	mg/l	0.005	2	
MW-12	Barium	06/24/2003	0.22	mg/l	0.005	2	
MW-12	Barium	06/23/2005	0.53	mg/l	0.5	2	
MW-12	Barium	12/14/2006	0.103	mg/l	0.1	2	
MW-12	Barium	06/28/2007	0.0969	mg/l	0.001	2	
MW-12	Barium	12/28/2007	124	ug/l	0.2	2000	
MW-12D	Barium	06/24/2003	0.015	mg/l	0.005	2	
MW-12D	Barium	12/15/2006	0.0168	mg/l	0.1	2	
MW-12D	Barium	06/28/2007	0.001	mg/l	0.001	2	
MW-12D	Barium	12/28/2007	6.8	ug/l	0.2	2000	
MW-13	Barium	12/11/2000	0.11	mg/l	0.005	2	
MW-13	Barium	06/12/2001	0.2	mg/l	0.005	2	
MW-13	Barium	12/28/2001	0.05	mg/l	0.005	2	
MW-13	Barium	06/12/2002	0.12	mg/l	0.005	2	
MW-13	Barium	01/03/2003	0.022	mg/l	0.005	2	
MW-13	Barium	06/24/2003	0.014	mg/l	0.005	2	
MW-13	Barium	12/15/2006	0.0321	mg/l	0.1	2	
MW-13	Barium	06/28/2007	0.0273	mg/l	0.001	2	
MW-13	Barium	12/19/2007	22.6	ug/l	0.2	2000	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-14	Barium	12/12/2000	0.11	mg/l	0.005	2	
MW-14	Barium	06/13/2001	0.088	mg/l	0.005	2	
MW-14	Barium	12/28/2001	0.092	mg/l	0.005	2	
MW-14	Barium	06/13/2002	0.13	mg/l	0.005	2	
MW-14	Barium	01/03/2003	0.11	mg/l	0.005	2	
MW-14	Barium	06/24/2003	0.078	mg/l	0.005	2	
MW-14	Barium	12/15/2006	0.107	mg/l	0.1	2	
MW-14	Barium	06/28/2007	0.1	mg/l	0.001	2	
MW-14	Barium	12/28/2007	51.8	ug/l	0.2	2000	
MW-15	Barium	12/11/2000	0.11	mg/l	0.005	2	
MW-15	Barium	06/12/2001	0.26	mg/l	0.005	2	
MW-15	Barium	12/28/2001	0.049	mg/l	0.005	2	
MW-15	Barium	06/12/2002	0.2	mg/l	0.005	2	
MW-15	Barium	01/03/2003	0.079	mg/l	0.005	2	
MW-15	Barium	06/25/2003	0.064	mg/l	0.005	2	
MW-15	Barium	12/15/2006	0.0225	mg/l	0.1	2	
MW-15	Barium	06/28/2007	0.0146	mg/l	0.001	2	
MW-15	Barium	12/19/2007	36.6	ug/l	0.2	2000	
MW-16	Barium	01/08/2008	64.6	ug/l	0.2	2000	
MW-17	Barium	06/25/2003	0.058	mg/l	0.005	2	
MW-17	Barium	12/15/2006	0.0579	mg/l	0.1	2	
MW-17	Barium	06/28/2007	0.0615	mg/l	0.001	2	
MW-17	Barium	12/27/2007	86.7	ug/l	0.2	2000	
MW-18	Barium	01/07/2008	40.2	ug/l	0.2	2000	
MW-19	Barium	01/08/2008	44.2	ug/l	0.2	2000	
MW-1A	Barium	10/01/1994	0.72	mg/l	0.1	2	
MW-1A	Barium	01/31/1995	0.807	mg/l	0.5	2	
MW-1A	Barium	02/15/1995	0.678	mg/l	0.5	2	
MW-1A	Barium	11/11/1996	0.27	mg/l	0.01	2	
MW-1A	Barium	06/24/1997	0.029	mg/l	0.01	2	
MW-1A	Barium	12/03/1997	0.29	mg/l	0.01	2	
MW-1A	Barium	06/04/1998	1	mg/l	0.01	2	
MW-1A	Barium	11/18/1998	0.83	mg/l	0.01	2	
MW-1A	Barium	12/11/2000	0.96	mg/l	0.005	2	
MW-1A	Barium	06/13/2001	0.44	mg/l	0.005	2	
MW-1A	Barium	12/28/2001	0.73	mg/l	0.005	2	
MW-1A	Barium	06/25/2003	0.48	mg/l	0.005	2	
MW-1B	Barium	06/25/2003	0.045	mg/l	0.005	2	
MW-1B	Barium	12/15/2006	0.0666	mg/l	0.1	2	
MW-1B	Barium	06/28/2007	0.0443	mg/l	0.001	2	
MW-1B	Barium	12/28/2007	92	ug/l	0.2	2000	
MW-2	Barium	10/01/1994	0.38	mg/l	0.1	2	
MW-2	Barium	12/06/1999	0.15	mg/l	0.005	2	
MW-2	Barium	12/15/2006	0.151	mg/l	0.1	2	
MW-2	Barium	06/28/2007	0.152	mg/l	0.001	2	
MW-2	Barium	12/28/2007	40.5	ug/l	0.2	2000	
MW-20	Barium	01/08/2008	61	ug/l	0.2	2000	
MW-21	Barium	01/09/2008	43.1	ug/l	0.2	2000	
MW-22	Barium	01/07/2008	55.3	ug/l	0.2	2000	
MW-23	Barium	01/07/2008	92.4	ug/l	0.2	2000	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-24	Barium	01/08/2008	113	ug/l	0.2	2000	
MW-25	Barium	01/08/2008	54.7	ug/l	0.2	2000	
MW-26	Barium	01/09/2008	163	ug/l	0.2	2000	
MW-27	Barium	01/09/2008	123	ug/l	0.2	2000	
MW-3	Barium	10/01/1994	0.11	mg/l	0.1	2	
MW-3	Barium	11/11/1996	0.15	mg/l	0.01	2	
MW-3	Barium	06/24/1997	0.097	mg/l	0.01	2	
MW-3	Barium	12/03/1997	0.44	mg/l	0.01	2	
MW-3	Barium	06/04/1998	0.11	mg/l	0.01	2	
MW-3	Barium	11/18/1998	0.27	mg/l	0.01	2	
MW-3	Barium	05/13/1999	0.16	mg/l	0.005	2	
MW-3	Barium	12/06/1999	0.1	mg/l	0.005	2	
MW-3	Barium	05/17/2000	0.068	mg/l	0.005	2	
MW-3	Barium	12/11/2000	0.048	mg/l	0.005	2	
MW-3	Barium	06/12/2001	0.074	mg/l	0.005	2	
MW-3	Barium	12/27/2001	0.055	mg/l	0.005	2	
MW-3	Barium	06/13/2002	0.14	mg/l	0.005	2	
MW-3	Barium	01/03/2003	0.072	mg/l	0.005	2	
MW-3	Barium	06/24/2003	0.1	mg/l	0.005	2	
MW-3	Barium	12/14/2006	0.0645	mg/l	0.1	2	
MW-3	Barium	06/27/2007	0.16	mg/l	0.001	2	
MW-3	Barium	12/28/2007	46.2	ug/l	0.2	2000	
MW-4	Barium	10/01/1994	0.1	mg/l	0.1	2	
MW-4R	Barium	10/01/1994	1.5	mg/l	0.1	2	
MW-4R	Barium	11/11/1996	0.16	mg/l	0.01	2	
MW-4R	Barium	06/24/1997	0.12	mg/l	0.01	2	
MW-4R	Barium	12/03/1997	0.2	mg/l	0.01	2	
MW-4R	Barium	06/04/1998	0.15	mg/l	0.01	2	
MW-4R	Barium	11/18/1998	0.13	mg/l	0.01	2	
MW-4R	Barium	05/13/1999	0.11	mg/l	0.005	2	
MW-4R	Barium	12/06/1999	0.11	mg/l	0.005	2	
MW-4R	Barium	05/17/2000	0.11	mg/l	0.005	2	
MW-4R	Barium	12/11/2000	0.12	mg/l	0.005	2	
MW-4R	Barium	06/13/2001	0.096	mg/l	0.005	2	
MW-4R	Barium	12/28/2001	0.12	mg/l	0.005	2	
MW-4R	Barium	06/13/2002	0.11	mg/l	0.005	2	
MW-4R	Barium	01/02/2003	0.13	mg/l	0.005	2	
MW-4R	Barium	06/25/2003	0.12	mg/l	0.005	2	
MW-4R	Barium	12/14/2006	0.124	mg/l	0.1	2	
MW-4R	Barium	06/27/2007	0.0996	mg/l	0.001	2	
MW-4R	Barium	12/27/2007	119	ug/l	0.2	2000	
MW-5	**Barium**	**10/01/1994**	**3.49**	**mg/l**	**0.1**	**2**	**1.49**
MW-5	Barium	01/31/1995	1.98	mg/l	0.5	2	
MW-5	Barium	02/15/1995	1.45	mg/l	0.5	2	
MW-5	Barium	03/07/1995	1.82	mg/l	0.5	2	
MW-5	Barium	11/11/1996	1.6	mg/l	0.01	2	
MW-5	Barium	06/24/1997	0.18	mg/l	0.01	2	
MW-5	Barium	12/03/1997	0.72	mg/l	0.01	2	
MW-5	Barium	06/04/1998	1.8	mg/l	0.01	2	
MW-5	**Barium**	**11/18/1998**	**2.8**	**mg/l**	**0.05**	**2**	**0.8**

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-5	Barium	05/13/1999	0.32	mg/l	0.005	2	
MW-5	Barium	12/06/1999	0.094	mg/l	0.005	2	
MW-5	Barium	05/17/2000	0.38	mg/l	0.005	2	
MW-5	Barium	12/11/2000	0.31	mg/l	0.005	2	
MW-5	Barium	06/13/2001	0.32	mg/l	0.005	2	
MW-5	Barium	12/27/2001	0.19	mg/l	0.005	2	
MW-5	Barium	06/13/2002	0.22	mg/l	0.005	2	
MW-5	Barium	01/02/2003	0.15	mg/l	0.005	2	
MW-5	Barium	06/24/2003	0.14	mg/l	0.005	2	
MW-5	Barium	12/14/2006	0.0708	mg/l	0.1	2	
MW-5	Barium	06/27/2007	0.059	mg/l	0.001	2	
MW-5	Barium	12/19/2007	102	ug/l	0.2	2000	
MW-6	Barium	10/01/1994	0.42	mg/l	0.1	2	
MW-6	Barium	03/07/1995	0.554	mg/l	0.5	2	
MW-6	Barium	11/11/1996	0.19	mg/l	0.01	2	
MW-6	Barium	06/24/1997	0.049	mg/l	0.01	2	
MW-6	Barium	12/03/1997	1.3	mg/l	0.01	2	
MW-6	Barium	06/04/1998	1.1	mg/l	0.01	2	
MW-6	Barium	11/18/1998	0.87	mg/l	0.01	2	
MW-6	Barium	05/13/1999	0.34	mg/l	0.005	2	
MW-6	Barium	12/06/1999	0.2	mg/l	0.005	2	
MW-6	Barium	05/17/2000	0.21	mg/l	0.005	2	
MW-6	Barium	12/11/2000	0.1	mg/l	0.005	2	
MW-6	Barium	06/12/2001	0.12	mg/l	0.005	2	
MW-6	Barium	12/28/2001	0.12	mg/l	0.005	2	
MW-6	Barium	06/12/2002	0.11	mg/l	0.005	2	
MW-6	Barium	01/03/2003	0.069	mg/l	0.005	2	
MW-6	Barium	06/24/2003	0.066	mg/l	0.005	2	
MW-6	Barium	12/15/2006	0.0426	mg/l	0.1	2	
MW-6	Barium	06/28/2007	0.0329	mg/l	0.001	2	
MW-6	Barium	12/19/2007	67.3	ug/l	0.2	2000	
MW-7	Barium	10/01/1994	0.1	mg/l	0.1	2	
MW-7	Barium	11/11/1996	0.072	mg/l	0.01	2	
MW-7	Barium	06/24/1997	0.037	mg/l	0.01	2	
MW-7	Barium	12/03/1997	0.034	mg/l	0.01	2	
MW-7	Barium	06/04/1998	0.031	mg/l	0.01	2	
MW-7	Barium	11/18/1998	0.034	mg/l	0.01	2	
MW-7	Barium	05/13/1999	0.057	mg/l	0.005	2	
MW-7	Barium	12/06/1999	0.046	mg/l	0.005	2	
MW-7	Barium	05/17/2000	0.018	mg/l	0.005	2	
MW-7	Barium	12/12/2000	0.012	mg/l	0.005	2	
MW-7	Barium	06/13/2001	0.012	mg/l	0.005	2	
MW-7	Barium	12/28/2001	0.0082	mg/l	0.005	2	
MW-7	Barium	06/12/2002	0.012	mg/l	0.005	2	
MW-7	Barium	01/02/2003	0.0097	mg/l	0.005	2	
MW-7	Barium	06/25/2003	0.0071	mg/l	0.005	2	
MW-7	Barium	12/14/2006	0.0101	mg/l	0.1	2	
MW-7	Barium	06/27/2007	0.001	mg/l	0.001	2	
MW-7	Barium	12/27/2007	16.8	ug/l	0.2	2000	
MW-8	Barium	11/11/1996	0.066	mg/l	0.01	2	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-8	Barium	06/24/1997	0.17	mg/l	0.01	2	
MW-8	Barium	12/03/1997	0.2	mg/l	0.01	2	
MW-8	Barium	06/04/1998	0.1	mg/l	0.01	2	
MW-8	Barium	11/18/1998	0.12	mg/l	0.01	2	
MW-8	Barium	05/13/1999	0.089	mg/l	0.005	2	
MW-8	Barium	12/06/1999	0.054	mg/l	0.005	2	
MW-8	Barium	05/17/2000	0.12	mg/l	0.005	2	
MW-8	Barium	12/12/2000	0.11	mg/l	0.005	2	
MW-8	Barium	06/12/2001	0.11	mg/l	0.005	2	
MW-8	Barium	12/28/2001	0.087	mg/l	0.005	2	
MW-8	Barium	06/12/2002	0.18	mg/l	0.005	2	
MW-8	Barium	01/03/2003	0.1	mg/l	0.005	2	
MW-8	Barium	06/25/2003	0.12	mg/l	0.005	2	
MW-8	Barium	12/15/2006	0.0633	mg/l	0.1	2	
MW-8	Barium	06/28/2007	0.0439	mg/l	0.001	2	
MW-9	Barium	12/11/2000	0.18	mg/l	0.005	2	
MW-9	Barium	06/13/2001	0.2	mg/l	0.005	2	
MW-9	Barium	12/27/2001	0.17	mg/l	0.005	2	
MW-9	Barium	06/12/2002	0.17	mg/l	0.005	2	
MW-9	Barium	01/02/2003	0.097	mg/l	0.005	2	
MW-9	Barium	06/24/2003	0.11	mg/l	0.005	2	
MW-9	Barium	12/14/2006	0.108	mg/l	0.1	2	
MW-9	Barium	06/27/2007	0.0941	mg/l	0.001	2	
MW-9	Barium	12/19/2007	120	ug/l	0.2	2000	
Supply Well	Barium	06/28/2007	0.001	mg/l	0.001	2	
MW-11	Beryllium, total	12/11/2000	0.011	mg/l	0.001		
MW-11	Beryllium, total	06/12/2001	0.0077	mg/l	0.001		
MW-11	Beryllium, total	12/27/2001	0.0049	mg/l	0.001		
MW-11	Beryllium, total	06/13/2002	0.0028	mg/l	0.001		
MW-12	Beryllium, total	12/11/2000	0.045	mg/l	0.001		
MW-12	Beryllium, total	06/13/2001	0.0086	mg/l	0.001		
MW-12	Beryllium, total	12/27/2001	0.0076	mg/l	0.001		
MW-12	Beryllium, total	06/12/2002	0.0061	mg/l	0.001		
MW-12	Beryllium, total	01/02/2003	0.0028	mg/l	0.001		
MW-13	Beryllium, total	06/12/2001	0.0021	mg/l	0.001		
MW-15	Beryllium, total	06/12/2001	0.0032	mg/l	0.001		
MW-15	Beryllium, total	06/12/2002	0.002	mg/l	0.001		
MW-17	Beryllium, total	06/15/2004	0.0022	mg/l	0.002		
MW-1A	Beryllium, total	01/31/1995	0.003	mg/l	0.002		
MW-1A	Beryllium, total	12/03/1997	0.001	mg/l	0.001		
MW-1A	Beryllium, total	06/04/1998	0.005	mg/l	0.001		
MW-1A	Beryllium, total	11/18/1998	0.0043	mg/l	0.001		
MW-1A	Beryllium, total	12/11/2000	0.0069	mg/l	0.001		
MW-1A	Beryllium, total	06/13/2001	0.0018	mg/l	0.001		
MW-1A	Beryllium, total	12/28/2001	0.004	mg/l	0.001		
MW-1A	Beryllium, total	06/25/2003	0.002	mg/l	0.001		
MW-3	Beryllium, total	12/03/1997	0.005	mg/l	0.001		
MW-3	Beryllium, total	11/18/1998	0.0026	mg/l	0.001		
MW-4R	Beryllium, total	01/31/1995	0.004	mg/l	0.002		
MW-4R	Beryllium, total	03/07/1995	0.002	mg/l	0.002		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-4R	Beryllium, total	12/03/1997	0.002	mg/l	0.001		
MW-5	Beryllium, total	10/01/1994	0.08	mg/l	0.025		
MW-5	Beryllium, total	01/31/1995	0.019	mg/l	0.002		
MW-5	Beryllium, total	02/15/1995	0.016	mg/l	0.002		
MW-5	Beryllium, total	03/07/1995	0.016	mg/l	0.002		
MW-5	Beryllium, total	12/07/1995	0.005	mg/l	0.002		
MW-5	Beryllium, total	05/06/1996	0.004	mg/l	0.002		
MW-5	Beryllium, total	11/11/1996	0.009	mg/l	0.002		
MW-5	Beryllium, total	06/24/1997	0.002	mg/l	0.001		
MW-5	Beryllium, total	12/03/1997	0.016	mg/l	0.004		
MW-5	Beryllium, total	06/04/1998	0.013	mg/l	0.006		
MW-5	Beryllium, total	11/18/1998	0.078	mg/l	0.025		
MW-5	Beryllium, total	05/13/1999	0.006	mg/l	0.001		
MW-5	Beryllium, total	05/17/2000	0.0066	mg/l	0.001		
MW-5	Beryllium, total	12/11/2000	0.0076	mg/l	0.001		
MW-5	Beryllium, total	06/13/2001	0.0074	mg/l	0.001		
MW-5	Beryllium, total	12/27/2001	0.0044	mg/l	0.001		
MW-5	Beryllium, total	06/13/2002	0.0042	mg/l	0.001		
MW-5	Beryllium, total	01/02/2003	0.0018	mg/l	0.001		
MW-5	Beryllium, total	06/24/2003	0.0025	mg/l	0.001		
MW-5	Beryllium, total	06/15/2004	0.0036	mg/l	0.002		
MW-5	Beryllium, total	07/07/2006	0.0037	mg/l	0.002		
MW-6	Beryllium, total	12/03/1997	0.003	mg/l	0.001		
MW-6	Beryllium, total	06/04/1998	0.003	mg/l	0.001		
MW-6	Beryllium, total	11/18/1998	0.0025	mg/l	0.001		
MW-7	Beryllium, total	03/07/1995	0.002	mg/l	0.002		
MW-7	Beryllium, total	11/11/1996	0.008	mg/l	0.005		
MW-7	Beryllium, total	06/24/1997	0.001	mg/l	0.001		
MW-7	Beryllium, total	12/03/1997	0.001	mg/l	0.001		
MW-7	Beryllium, total	06/04/1998	0.002	mg/l	0.001		
MW-7	Beryllium, total	11/18/1998	0.0012	mg/l	0.001		
MW-7	Beryllium, total	05/13/1999	0.0025	mg/l	0.001		
MW-7	Beryllium, total	12/06/1999	0.0016	mg/l	0.001		
MW-9	Beryllium, total	06/13/2001	0.0012	mg/l	0.001		
MW-1	Cadmium, total	06/24/1997	0.001	mg/l	0.001	0.0018	
MW-10	Cadmium, total	12/12/2003	0.0013	mg/l	0.001	0.0018	
MW-10	Cadmium, total	12/14/2006	0.001	mg/l	0.001	0.0018	
MW-11	Cadmium, total	12/11/2003	0.001	mg/l	0.001	0.0018	
MW-12	Cadmium, total	12/28/2007	0.6	ug/l	0.5	1.75	
MW-13	**Cadmium, total**	**12/11/2003**	**0.002**	**mg/l**	**0.001**	**0.0018**	**0.0003**
MW-14	Cadmium, total	12/11/2003	0.001	mg/l	0.001	0.0018	
MW-15	**Cadmium, total**	**12/12/2003**	**0.0021**	**mg/l**	**0.001**	**0.0018**	**0.0004**
MW-17	Cadmium, total	06/28/2007	0.0017	mg/l	0.0004	0.0018	
MW-17	Cadmium, total	12/27/2007	0.6	ug/l	0.5	1.75	
MW-2	**Cadmium, total**	**10/01/1994**	**0.004**	**mg/l**	**0.001**	**0.0018**	**0.0023**
MW-2	**Cadmium, total**	**12/06/1999**	**0.006**	**mg/l**	**0.001**	**0.0018**	**0.0043**
MW-4R	**Cadmium, total**	**10/01/1994**	**0.002**	**mg/l**	**0.001**	**0.0018**	**0.0003**
MW-4R	**Cadmium, total**	**02/15/1995**	**0.005**	**mg/l**	**0.001**	**0.0018**	**0.0033**
MW-4R	**Cadmium, total**	**12/06/1995**	**0.002**	**mg/l**	**0.001**	**0.0018**	**0.0003**
MW-4R	**Cadmium, total**	**05/06/1996**	**0.003**	**mg/l**	**0.001**	**0.0018**	**0.0013**

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-4R	**Cadmium, total**	**11/11/1996**	**0.007**	**mg/l**	**0.002**	**0.0018**	**0.0053**
MW-4R	**Cadmium, total**	**06/24/1997**	**0.005**	**mg/l**	**0.001**	**0.0018**	**0.0033**
MW-4R	**Cadmium, total**	**12/03/1997**	**0.01**	**mg/l**	**0.002**	**0.0018**	**0.0083**
MW-4R	**Cadmium, total**	**06/04/1998**	**0.015**	**mg/l**	**0.002**	**0.0018**	**0.0133**
MW-4R	**Cadmium, total**	**11/18/1998**	**0.0029**	**mg/l**	**0.001**	**0.0018**	**0.0012**
MW-4R	**Cadmium, total**	**05/13/1999**	**0.0023**	**mg/l**	**0.001**	**0.0018**	**0.0006**
MW-4R	Cadmium, total	12/06/1999	0.0011	mg/l	0.001	0.0018	
MW-4R	**Cadmium, total**	**06/13/2002**	**0.0019**	**mg/l**	**0.001**	**0.0018**	**0.0002**
MW-4R	**Cadmium, total**	**06/25/2003**	**0.0021**	**mg/l**	**0.001**	**0.0018**	**0.0004**
MW-4R	**Cadmium, total**	**12/12/2003**	**0.0021**	**mg/l**	**0.001**	**0.0018**	**0.0004**
MW-5	Cadmium, total	10/01/1994	0.001	mg/l	0.001	0.0018	
MW-5	**Cadmium, total**	**11/11/1996**	**0.003**	**mg/l**	**0.001**	**0.0018**	**0.0013**
MW-5	Cadmium, total	12/03/1997	0.001	mg/l	0.001	0.0018	
MW-5	**Cadmium, total**	**06/04/1998**	**0.003**	**mg/l**	**0.001**	**0.0018**	**0.0013**
MW-5	**Cadmium, total**	**11/18/1998**	**0.005**	**mg/l**	**0.001**	**0.0018**	**0.0033**
MW-5	Cadmium, total	12/12/2003	0.001	mg/l	0.001	0.0018	
MW-6	Cadmium, total	06/23/2005	0.001	mg/l	0.001	0.0018	
MW-7	Cadmium, total	06/12/2002	0.0015	mg/l	0.001	0.0018	
MW-7	Cadmium, total	12/11/2003	0.0013	mg/l	0.001	0.0018	
MW-8	Cadmium, total	11/11/1996	0.001	mg/l	0.001	0.0018	
MW-9	Cadmium, total	12/12/2003	0.001	mg/l	0.001	0.0018	
MW-9	Cadmium, total	12/19/2007	0.7	ug/l	0.5	1.75	
MW-1	Chromium, total	10/01/1994	0.009	mg/l	0.005	0.05	
MW-1	Chromium, total	01/31/1995	0.014	mg/l	0.01	0.05	
MW-1	Chromium, total	03/07/1995	0.014	mg/l	0.01	0.05	
MW-1	Chromium, total	11/11/1996	0.003	mg/l	0.002	0.05	
MW-1	Chromium, total	06/24/1997	0.006	mg/l	0.002	0.05	
MW-1	Chromium, total	12/03/1997	0.025	mg/l	0.002	0.05	
MW-1	Chromium, total	06/04/1998	0.003	mg/l	0.002	0.05	
MW-1	Chromium, total	11/18/1998	0.0023	mg/l	0.002	0.05	
MW-1	Chromium, total	05/17/2000	0.0063	mg/l	0.002	0.05	
MW-1	Chromium, total	12/12/2000	0.0057	mg/l	0.002	0.05	
MW-1	Chromium, total	06/13/2001	0.0035	mg/l	0.002	0.05	
MW-1	Chromium, total	12/28/2001	0.0083	mg/l	0.002	0.05	
MW-1	Chromium, total	06/13/2002	0.01	mg/l	0.002	0.05	
MW-1	Chromium, total	01/03/2003	0.01	mg/l	0.002	0.05	
MW-1	Chromium, total	06/24/2003	0.0061	mg/l	0.002	0.05	
MW-10	Chromium, total	12/11/2000	0.0089	mg/l	0.002	0.05	
MW-10	Chromium, total	06/12/2001	0.018	mg/l	0.002	0.05	
MW-10	Chromium, total	12/27/2001	0.02	mg/l	0.002	0.05	
MW-10	Chromium, total	06/13/2002	0.0046	mg/l	0.002	0.05	
MW-10	Chromium, total	01/02/2003	0.01	mg/l	0.002	0.05	
MW-10	Chromium, total	06/24/2003	0.0028	mg/l	0.002	0.05	
MW-10	Chromium, total	01/12/2006	0.01	mg/l	0.01	0.05	
MW-11	**Chromium, total**	**12/11/2000**	**0.66**	**mg/l**	**0.002**	**0.05**	**0.61**
MW-11	**Chromium, total**	**06/12/2001**	**0.36**	**mg/l**	**0.002**	**0.05**	**0.31**
MW-11	**Chromium, total**	**12/27/2001**	**0.22**	**mg/l**	**0.002**	**0.05**	**0.17**
MW-11	**Chromium, total**	**06/13/2002**	**0.17**	**mg/l**	**0.002**	**0.05**	**0.12**
MW-11	Chromium, total	01/03/2003	0.024	mg/l	0.002	0.05	
MW-11	Chromium, total	06/24/2003	0.026	mg/l	0.002	0.05	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-11	Chromium, total	12/11/2003	0.01	mg/l	0.01	0.05	
MW-11	**Chromium, total**	**12/27/2007**	**67.1**	**ug/l**	**2**	**50**	**17.1**
MW-12	**Chromium, total**	**12/11/2000**	**1**	**mg/l**	**0.002**	**0.05**	**0.95**
MW-12	**Chromium, total**	**06/13/2001**	**0.15**	**mg/l**	**0.002**	**0.05**	**0.1**
MW-12	**Chromium, total**	**12/27/2001**	**0.094**	**mg/l**	**0.002**	**0.05**	**0.044**
MW-12	**Chromium, total**	**06/12/2002**	**0.14**	**mg/l**	**0.002**	**0.05**	**0.09**
MW-12	**Chromium, total**	**01/02/2003**	**0.11**	**mg/l**	**0.002**	**0.05**	**0.06**
MW-12	Chromium, total	06/24/2003	0.041	mg/l	0.002	0.05	
MW-12	Chromium, total	01/12/2006	0.02	mg/l	0.01	0.05	
MW-12	Chromium, total	12/28/2007	6.8	ug/l	2	50	
MW-12D	Chromium, total	06/24/2003	0.012	mg/l	0.002	0.05	
MW-13	Chromium, total	12/11/2000	0.04	mg/l	0.002	0.05	
MW-13	**Chromium, total**	**06/12/2001**	**0.063**	**mg/l**	**0.002**	**0.05**	**0.013**
MW-13	Chromium, total	12/28/2001	0.015	mg/l	0.002	0.05	
MW-13	Chromium, total	06/12/2002	0.042	mg/l	0.002	0.05	
MW-13	Chromium, total	01/03/2003	0.012	mg/l	0.002	0.05	
MW-13	Chromium, total	06/24/2003	0.0066	mg/l	0.002	0.05	
MW-14	Chromium, total	12/12/2000	0.019	mg/l	0.002	0.05	
MW-14	Chromium, total	06/13/2001	0.0082	mg/l	0.002	0.05	
MW-14	Chromium, total	12/28/2001	0.007	mg/l	0.002	0.05	
MW-14	Chromium, total	06/13/2002	0.019	mg/l	0.002	0.05	
MW-14	Chromium, total	01/03/2003	0.0053	mg/l	0.002	0.05	
MW-14	Chromium, total	06/24/2003	0.0097	mg/l	0.002	0.05	
MW-15	Chromium, total	12/11/2000	0.021	mg/l	0.002	0.05	
MW-15	**Chromium, total**	**06/12/2001**	**0.055**	**mg/l**	**0.002**	**0.05**	**0.005**
MW-15	Chromium, total	12/28/2001	0.0032	mg/l	0.002	0.05	
MW-15	Chromium, total	06/12/2002	0.049	mg/l	0.002	0.05	
MW-15	Chromium, total	01/03/2003	0.011	mg/l	0.002	0.05	
MW-15	Chromium, total	06/25/2003	0.0043	mg/l	0.002	0.05	
MW-17	Chromium, total	06/25/2003	0.004	mg/l	0.002	0.05	
MW-17	Chromium, total	12/12/2003	0.011	mg/l	0.01	0.05	
MW-17	Chromium, total	06/15/2004	0.019	mg/l	0.01	0.05	
MW-17	Chromium, total	12/27/2007	8.3	ug/l	2	50	
MW-1A	**Chromium, total**	**10/01/1994**	**0.12**	**mg/l**	**0.005**	**0.05**	**0.07**
MW-1A	**Chromium, total**	**01/31/1995**	**0.182**	**mg/l**	**0.01**	**0.05**	**0.132**
MW-1A	**Chromium, total**	**02/15/1995**	**0.082**	**mg/l**	**0.01**	**0.05**	**0.032**
MW-1A	Chromium, total	03/07/1995	0.025	mg/l	0.01	0.05	
MW-1A	Chromium, total	12/06/1995	0.021	mg/l	0.01	0.05	
MW-1A	Chromium, total	05/07/1996	0.033	mg/l	0.01	0.05	
MW-1A	Chromium, total	06/24/1997	0.003	mg/l	0.002	0.05	
MW-1A	**Chromium, total**	**12/03/1997**	**0.074**	**mg/l**	**0.004**	**0.05**	**0.024**
MW-1A	**Chromium, total**	**06/04/1998**	**0.4**	**mg/l**	**0.02**	**0.05**	**0.35**
MW-1A	**Chromium, total**	**11/18/1998**	**0.41**	**mg/l**	**0.02**	**0.05**	**0.36**
MW-1A	**Chromium, total**	**12/11/2000**	**0.34**	**mg/l**	**0.002**	**0.05**	**0.29**
MW-1A	**Chromium, total**	**06/13/2001**	**0.066**	**mg/l**	**0.002**	**0.05**	**0.016**
MW-1A	**Chromium, total**	**12/28/2001**	**0.2**	**mg/l**	**0.002**	**0.05**	**0.15**
MW-1A	**Chromium, total**	**06/25/2003**	**0.24**	**mg/l**	**0.002**	**0.05**	**0.19**
MW-1A	Chromium, total	12/11/2003	0.018	mg/l	0.01	0.05	
MW-1B	Chromium, total	06/25/2003	0.0044	mg/l	0.002	0.05	
MW-2	**Chromium, total**	**10/01/1994**	**0.064**	**mg/l**	**0.005**	**0.05**	**0.014**

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-2	Chromium, total	01/31/1995	0.02	mg/l	0.01	0.05	
MW-2	Chromium, total	02/15/1995	0.011	mg/l	0.01	0.05	
MW-2	Chromium, total	12/06/1999	0.0059	mg/l	0.002	0.05	
MW-20	Chromium, total	01/08/2008	7.9	ug/l	2	50	
MW-22	Chromium, total	01/07/2008	27.8	ug/l	2	50	
MW-23	**Chromium, total**	**01/07/2008**	**95.2**	**ug/l**	**2**	**50**	**45.2**
MW-24	Chromium, total	01/08/2008	12.2	ug/l	2	50	
MW-25	Chromium, total	01/08/2008	16.6	ug/l	2	50	
MW-26	Chromium, total	01/09/2008	26.7	ug/l	2	50	
MW-27	Chromium, total	01/09/2008	19.2	ug/l	2	50	
MW-3	Chromium, total	01/31/1995	0.038	mg/l	0.01	0.05	
MW-3	Chromium, total	02/15/1995	0.013	mg/l	0.01	0.05	
MW-3	Chromium, total	03/07/1995	0.017	mg/l	0.01	0.05	
MW-3	Chromium, total	11/11/1996	0.003	mg/l	0.002	0.05	
MW-3	Chromium, total	06/24/1997	0.008	mg/l	0.002	0.05	
MW-3	**Chromium, total**	**12/03/1997**	**0.14**	**mg/l**	**0.008**	**0.05**	**0.09**
MW-3	Chromium, total	06/04/1998	0.021	mg/l	0.002	0.05	
MW-3	**Chromium, total**	**11/18/1998**	**0.15**	**mg/l**	**0.008**	**0.05**	**0.1**
MW-3	**Chromium, total**	**05/13/1999**	**0.068**	**mg/l**	**0.002**	**0.05**	**0.018**
MW-3	Chromium, total	12/06/1999	0.0054	mg/l	0.002	0.05	
MW-3	Chromium, total	05/17/2000	0.0082	mg/l	0.002	0.05	
MW-3	Chromium, total	12/11/2000	0.0049	mg/l	0.002	0.05	
MW-3	Chromium, total	06/12/2001	0.0045	mg/l	0.002	0.05	
MW-3	Chromium, total	12/27/2001	0.008	mg/l	0.002	0.05	
MW-3	Chromium, total	06/13/2002	0.035	mg/l	0.002	0.05	
MW-3	Chromium, total	01/03/2003	0.013	mg/l	0.002	0.05	
MW-3	Chromium, total	06/24/2003	0.022	mg/l	0.002	0.05	
MW-4	Chromium, total	10/01/1994	0.015	mg/l	0.005	0.05	
MW-4R	**Chromium, total**	**10/01/1994**	**0.28**	**mg/l**	**0.005**	**0.05**	**0.23**
MW-4R	**Chromium, total**	**01/31/1995**	**0.09**	**mg/l**	**0.01**	**0.05**	**0.04**
MW-4R	Chromium, total	02/15/1995	0.017	mg/l	0.01	0.05	
MW-4R	Chromium, total	03/07/1995	0.019	mg/l	0.01	0.05	
MW-4R	Chromium, total	06/24/1997	0.008	mg/l	0.002	0.05	
MW-4R	Chromium, total	12/03/1997	0.03	mg/l	0.002	0.05	
MW-4R	Chromium, total	06/04/1998	0.015	mg/l	0.002	0.05	
MW-4R	Chromium, total	11/18/1998	0.012	mg/l	0.002	0.05	
MW-4R	Chromium, total	05/13/1999	0.0052	mg/l	0.002	0.05	
MW-4R	Chromium, total	05/17/2000	0.0043	mg/l	0.002	0.05	
MW-4R	Chromium, total	12/11/2000	0.0023	mg/l	0.002	0.05	
MW-4R	Chromium, total	12/28/2001	0.0042	mg/l	0.002	0.05	
MW-4R	Chromium, total	06/13/2002	0.013	mg/l	0.002	0.05	
MW-4R	Chromium, total	06/25/2003	0.0076	mg/l	0.002	0.05	
MW-5	**Chromium, total**	**10/01/1994**	**0.69**	**mg/l**	**0.1**	**0.05**	**0.64**
MW-5	**Chromium, total**	**01/31/1995**	**0.512**	**mg/l**	**0.01**	**0.05**	**0.462**
MW-5	**Chromium, total**	**02/15/1995**	**0.522**	**mg/l**	**0.01**	**0.05**	**0.472**
MW-5	**Chromium, total**	**03/07/1995**	**0.392**	**mg/l**	**0.01**	**0.05**	**0.342**
MW-5	**Chromium, total**	**12/07/1995**	**0.103**	**mg/l**	**0.01**	**0.05**	**0.053**
MW-5	**Chromium, total**	**05/06/1996**	**0.143**	**mg/l**	**0.01**	**0.05**	**0.093**
MW-5	Chromium, total	11/11/1996	0.008	mg/l	0.002	0.05	
MW-5	**Chromium, total**	**06/24/1997**	**0.067**	**mg/l**	**0.01**	**0.05**	**0.017**

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-5	**Chromium, total**	**12/03/1997**	**0.72**	**mg/l**	**0.04**	**0.05**	**0.67**
MW-5	**Chromium, total**	**06/04/1998**	**1.8**	**mg/l**	**0.04**	**0.05**	**1.75**
MW-5	**Chromium, total**	**11/18/1998**	**1.5**	**mg/l**	**0.1**	**0.05**	**1.45**
MW-5	**Chromium, total**	**05/13/1999**	**0.24**	**mg/l**	**0.002**	**0.05**	**0.19**
MW-5	Chromium, total	12/06/1999	0.024	mg/l	0.002	0.05	
MW-5	**Chromium, total**	**05/17/2000**	**0.23**	**mg/l**	**0.002**	**0.05**	**0.18**
MW-5	**Chromium, total**	**12/11/2000**	**0.26**	**mg/l**	**0.002**	**0.05**	**0.21**
MW-5	**Chromium, total**	**06/13/2001**	**0.21**	**mg/l**	**0.002**	**0.05**	**0.16**
MW-5	**Chromium, total**	**12/27/2001**	**0.1**	**mg/l**	**0.002**	**0.05**	**0.05**
MW-5	**Chromium, total**	**06/13/2002**	**0.13**	**mg/l**	**0.002**	**0.05**	**0.08**
MW-5	**Chromium, total**	**01/02/2003**	**0.053**	**mg/l**	**0.002**	**0.05**	**0.003**
MW-5	**Chromium, total**	**06/24/2003**	**0.076**	**mg/l**	**0.002**	**0.05**	**0.026**
MW-5	**Chromium, total**	**12/29/2004**	**0.34**	**mg/l**	**0.01**	**0.05**	**0.29**
MW-5	Chromium, total	01/12/2006	0.03	mg/l	0.01	0.05	
MW-5	Chromium, total	07/07/2006	0.0432	mg/l	0.01	0.05	
MW-5	Chromium, total	12/19/2007	38.9	ug/l	2	50	
MW-6	**Chromium, total**	**10/01/1994**	**0.115**	**mg/l**	**0.005**	**0.05**	**0.065**
MW-6	Chromium, total	01/31/1995	0.043	mg/l	0.01	0.05	
MW-6	Chromium, total	02/15/1995	0.028	mg/l	0.01	0.05	
MW-6	**Chromium, total**	**03/07/1995**	**0.088**	**mg/l**	**0.01**	**0.05**	**0.038**
MW-6	Chromium, total	12/06/1995	0.024	mg/l	0.01	0.05	
MW-6	Chromium, total	05/06/1996	0.019	mg/l	0.01	0.05	
MW-6	Chromium, total	11/11/1996	0.008	mg/l	0.002	0.05	
MW-6	**Chromium, total**	**12/03/1997**	**0.21**	**mg/l**	**0.008**	**0.05**	**0.16**
MW-6	**Chromium, total**	**06/04/1998**	**0.23**	**mg/l**	**0.01**	**0.05**	**0.18**
MW-6	**Chromium, total**	**11/18/1998**	**0.26**	**mg/l**	**0.01**	**0.05**	**0.21**
MW-6	**Chromium, total**	**05/13/1999**	**0.06**	**mg/l**	**0.002**	**0.05**	**0.01**
MW-6	Chromium, total	12/06/1999	0.026	mg/l	0.002	0.05	
MW-6	Chromium, total	05/17/2000	0.029	mg/l	0.002	0.05	
MW-6	Chromium, total	12/11/2000	0.011	mg/l	0.002	0.05	
MW-6	Chromium, total	06/12/2001	0.013	mg/l	0.002	0.05	
MW-6	Chromium, total	12/28/2001	0.017	mg/l	0.002	0.05	
MW-6	Chromium, total	06/12/2002	0.02	mg/l	0.002	0.05	
MW-6	Chromium, total	01/03/2003	0.0086	mg/l	0.002	0.05	
MW-7	Chromium, total	10/01/1994	0.015	mg/l	0.005	0.05	
MW-7	Chromium, total	01/31/1995	0.037	mg/l	0.01	0.05	
MW-7	Chromium, total	02/15/1995	0.022	mg/l	0.01	0.05	
MW-7	Chromium, total	03/07/1995	0.023	mg/l	0.01	0.05	
MW-7	Chromium, total	11/11/1996	0.013	mg/l	0.002	0.05	
MW-7	Chromium, total	06/24/1997	0.012	mg/l	0.002	0.05	
MW-7	Chromium, total	12/03/1997	0.012	mg/l	0.002	0.05	
MW-7	Chromium, total	06/04/1998	0.011	mg/l	0.002	0.05	
MW-7	Chromium, total	11/18/1998	0.019	mg/l	0.002	0.05	
MW-7	**Chromium, total**	**05/13/1999**	**0.056**	**mg/l**	**0.002**	**0.05**	**0.006**
MW-7	Chromium, total	12/06/1999	0.029	mg/l	0.002	0.05	
MW-7	Chromium, total	05/17/2000	0.0081	mg/l	0.002	0.05	
MW-7	Chromium, total	12/12/2000	0.01	mg/l	0.002	0.05	
MW-7	Chromium, total	06/13/2001	0.0069	mg/l	0.002	0.05	
MW-7	Chromium, total	12/28/2001	0.0072	mg/l	0.002	0.05	
MW-7	Chromium, total	06/12/2002	0.0077	mg/l	0.002	0.05	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-7	Chromium, total	01/02/2003	0.0045	mg/l	0.002	0.05	
MW-7	Chromium, total	06/25/2003	0.0023	mg/l	0.002	0.05	
MW-7	Chromium, total	12/27/2007	5.1	ug/l	2	50	
MW-8	Chromium, total	10/01/1994	0.026	mg/l	0.005	0.05	
MW-8	Chromium, total	01/31/1995	0.027	mg/l	0.01	0.05	
MW-8	Chromium, total	02/15/1995	0.012	mg/l	0.01	0.05	
MW-8	Chromium, total	03/07/1995	0.014	mg/l	0.01	0.05	
MW-8	Chromium, total	06/24/1997	0.016	mg/l	0.002	0.05	
MW-8	Chromium, total	12/03/1997	0.033	mg/l	0.002	0.05	
MW-8	Chromium, total	06/04/1998	0.006	mg/l	0.002	0.05	
MW-8	Chromium, total	11/18/1998	0.0068	mg/l	0.002	0.05	
MW-8	Chromium, total	05/13/1999	0.0052	mg/l	0.002	0.05	
MW-8	Chromium, total	12/06/1999	0.0028	mg/l	0.002	0.05	
MW-8	Chromium, total	05/17/2000	0.008	mg/l	0.002	0.05	
MW-8	Chromium, total	12/12/2000	0.0076	mg/l	0.002	0.05	
MW-8	Chromium, total	06/12/2001	0.007	mg/l	0.002	0.05	
MW-8	Chromium, total	12/28/2001	0.0032	mg/l	0.002	0.05	
MW-8	Chromium, total	06/12/2002	0.013	mg/l	0.002	0.05	
MW-8	Chromium, total	01/03/2003	0.0078	mg/l	0.002	0.05	
MW-8	Chromium, total	06/25/2003	0.0044	mg/l	0.002	0.05	
MW-9	Chromium, total	12/11/2000	0.032	mg/l	0.002	0.05	
MW-9	Chromium, total	06/13/2001	0.045	mg/l	0.002	0.05	
MW-9	Chromium, total	12/27/2001	0.032	mg/l	0.002	0.05	
MW-9	Chromium, total	06/12/2002	0.034	mg/l	0.002	0.05	
MW-9	Chromium, total	01/02/2003	0.016	mg/l	0.002	0.05	
MW-9	Chromium, total	06/24/2003	0.015	mg/l	0.002	0.05	
MW-1	Cobalt	11/11/1996	0.003	mg/l	0.002		
MW-1	Cobalt	06/24/1997	0.003	mg/l	0.003		
MW-1	Cobalt	12/03/1997	0.012	mg/l	0.002		
MW-1	Cobalt	06/04/1998	0.003	mg/l	0.002		
MW-1	Cobalt	11/18/1998	0.0088	mg/l	0.002		
MW-1	Cobalt	05/13/1999	0.012	mg/l	0.005		
MW-1	Cobalt	12/06/1999	0.014	mg/l	0.005		
MW-1	Cobalt	05/17/2000	0.017	mg/l	0.005		
MW-1	Cobalt	12/12/2000	0.014	mg/l	0.005		
MW-1	Cobalt	12/28/2001	0.014	mg/l	0.005		
MW-1	Cobalt	06/13/2002	0.018	mg/l	0.005		
MW-1	Cobalt	01/03/2003	0.018	mg/l	0.005		
MW-1	Cobalt	06/24/2003	0.0075	mg/l	0.005		
MW-1	Cobalt	12/11/2003	0.014	mg/l	0.01		
MW-1	Cobalt	06/16/2004	0.013	mg/l	0.01		
MW-1	Cobalt	12/30/2004	0.018	mg/l	0.01		
MW-1	Cobalt	06/23/2005	0.027	mg/l	0.01		
MW-1	Cobalt	01/13/2006	0.01	mg/l	0.01		
MW-1	Cobalt	07/06/2006	0.0252	mg/l	0.01		
MW-1	Cobalt	12/15/2006	0.0186	mg/l	0.01		
MW-1	Cobalt	06/28/2007	0.01	mg/l	0.0025		
MW-1	Cobalt	12/27/2007	23.7	ug/l	2		
MW-11	Cobalt	12/11/2000	0.34	mg/l	0.005		
MW-11	Cobalt	06/12/2001	0.13	mg/l	0.005		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-11	Cobalt	12/27/2001	0.14	mg/l	0.005		
MW-11	Cobalt	06/13/2002	0.12	mg/l	0.005		
MW-11	Cobalt	01/03/2003	0.14	mg/l	0.005		
MW-11	Cobalt	06/24/2003	0.16	mg/l	0.005		
MW-11	Cobalt	12/11/2003	0.12	mg/l	0.01		
MW-11	Cobalt	06/15/2004	0.12	mg/l	0.01		
MW-11	Cobalt	12/29/2004	0.12	mg/l	0.01		
MW-11	Cobalt	06/22/2005	0.11	mg/l	0.01		
MW-11	Cobalt	01/12/2006	0.1	mg/l	0.01		
MW-11	Cobalt	07/07/2006	0.11	mg/l	0.01		
MW-11	Cobalt	12/14/2006	0.117	mg/l	0.01		
MW-11	Cobalt	06/27/2007	0.0989	mg/l	0.0025		
MW-11	Cobalt	12/27/2007	107	ug/l	2		
MW-12	Cobalt	12/11/2000	0.37	mg/l	0.005		
MW-12	Cobalt	06/13/2001	0.024	mg/l	0.005		
MW-12	Cobalt	12/27/2001	0.039	mg/l	0.005		
MW-12	Cobalt	06/12/2002	0.019	mg/l	0.005		
MW-12	Cobalt	01/02/2003	0.016	mg/l	0.005		
MW-12	Cobalt	06/24/2003	0.0082	mg/l	0.005		
MW-12	Cobalt	12/28/2007	4.5	ug/l	2		
MW-13	Cobalt	12/11/2000	0.18	mg/l	0.005		
MW-13	Cobalt	06/12/2001	0.03	mg/l	0.005		
MW-13	Cobalt	06/12/2002	0.014	mg/l	0.005		
MW-13	Cobalt	12/19/2007	3.2	ug/l	2		
MW-14	Cobalt	12/12/2000	0.031	mg/l	0.005		
MW-14	Cobalt	06/13/2001	0.038	mg/l	0.005		
MW-14	Cobalt	12/28/2001	0.062	mg/l	0.005		
MW-14	Cobalt	06/13/2002	0.057	mg/l	0.005		
MW-14	Cobalt	01/03/2003	0.059	mg/l	0.005		
MW-14	Cobalt	06/24/2003	0.044	mg/l	0.005		
MW-14	Cobalt	12/11/2003	0.087	mg/l	0.01		
MW-14	Cobalt	06/16/2004	0.11	mg/l	0.01		
MW-14	Cobalt	12/29/2004	0.11	mg/l	0.01		
MW-14	Cobalt	06/23/2005	0.17	mg/l	0.01		
MW-14	Cobalt	01/12/2006	0.1	mg/l	0.01		
MW-14	Cobalt	07/07/2006	0.199	mg/l	0.01		
MW-14	Cobalt	12/15/2006	0.238	mg/l	0.01		
MW-14	Cobalt	06/28/2007	0.225	mg/l	0.0025		
MW-14	Cobalt	12/28/2007	94.9	ug/l	2		
MW-15	Cobalt	12/11/2000	0.065	mg/l	0.005		
MW-15	Cobalt	06/12/2001	0.03	mg/l	0.005		
MW-15	Cobalt	12/28/2001	0.0057	mg/l	0.005		
MW-15	Cobalt	06/12/2002	0.033	mg/l	0.005		
MW-15	Cobalt	01/03/2003	0.04	mg/l	0.005		
MW-15	Cobalt	06/25/2003	0.028	mg/l	0.005		
MW-16	Cobalt	01/08/2008	14.1	ug/l	2		
MW-17	Cobalt	06/25/2003	0.039	mg/l	0.005		
MW-17	Cobalt	12/12/2003	0.023	mg/l	0.01		
MW-17	Cobalt	06/15/2004	0.037	mg/l	0.01		
MW-17	Cobalt	12/30/2004	0.017	mg/l	0.01		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-17	Cobalt	06/23/2005	0.015	mg/l	0.01		
MW-17	Cobalt	01/13/2006	0.01	mg/l	0.01		
MW-17	Cobalt	07/07/2006	0.0103	mg/l	0.01		
MW-17	Cobalt	12/15/2006	0.0199	mg/l	0.01		
MW-17	Cobalt	06/28/2007	0.0237	mg/l	0.0025		
MW-17	Cobalt	12/27/2007	27.2	ug/l	2		
MW-18	Cobalt	01/07/2008	92.3	ug/l	2		
MW-1A	Cobalt	10/01/1994	0.22	mg/l	0.1		
MW-1A	Cobalt	01/31/1995	0.146	mg/l	0.01		
MW-1A	Cobalt	02/15/1995	0.128	mg/l	0.01		
MW-1A	Cobalt	03/07/1995	0.024	mg/l	0.01		
MW-1A	Cobalt	12/06/1995	0.031	mg/l	0.01		
MW-1A	Cobalt	05/07/1996	0.016	mg/l	0.01		
MW-1A	Cobalt	11/11/1996	0.006	mg/l	0.002		
MW-1A	Cobalt	06/24/1997	0.003	mg/l	0.003		
MW-1A	Cobalt	12/03/1997	0.036	mg/l	0.002		
MW-1A	Cobalt	06/04/1998	0.14	mg/l	0.008		
MW-1A	Cobalt	11/18/1998	0.083	mg/l	0.004		
MW-1A	Cobalt	12/11/2000	0.77	mg/l	0.005		
MW-1A	Cobalt	06/13/2001	0.023	mg/l	0.005		
MW-1A	Cobalt	12/28/2001	0.057	mg/l	0.005		
MW-1A	Cobalt	06/25/2003	0.079	mg/l	0.005		
MW-1A	Cobalt	12/11/2003	0.1	mg/l	0.01		
MW-1A	Cobalt	06/16/2004	0.066	mg/l	0.01		
MW-1B	Cobalt	06/25/2003	0.029	mg/l	0.005		
MW-1B	Cobalt	12/11/2003	0.038	mg/l	0.01		
MW-1B	Cobalt	06/16/2004	0.051	mg/l	0.01		
MW-1B	Cobalt	12/30/2004	0.12	mg/l	0.01		
MW-1B	Cobalt	06/23/2005	0.067	mg/l	0.01		
MW-1B	Cobalt	01/13/2006	0.06	mg/l	0.01		
MW-1B	Cobalt	07/06/2006	0.0651	mg/l	0.01		
MW-1B	Cobalt	12/15/2006	0.0698	mg/l	0.01		
MW-1B	Cobalt	06/28/2007	0.0426	mg/l	0.0025		
MW-1B	Cobalt	12/28/2007	59.7	ug/l	2		
MW-2	Cobalt	10/01/1994	0.25	mg/l	0.1		
MW-2	Cobalt	01/31/1995	0.154	mg/l	0.01		
MW-2	Cobalt	02/15/1995	0.149	mg/l	0.01		
MW-2	Cobalt	03/07/1995	0.223	mg/l	0.01		
MW-2	Cobalt	12/06/1995	0.135	mg/l	0.01		
MW-2	Cobalt	05/06/1996	0.133	mg/l	0.01		
MW-2	Cobalt	12/06/1999	0.4	mg/l	0.005		
MW-2	Cobalt	12/15/2006	0.448	mg/l	0.01		
MW-2	Cobalt	06/28/2007	0.548	mg/l	0.0025		
MW-2	Cobalt	12/28/2007	75	ug/l	2		
MW-20	Cobalt	01/08/2008	3.5	ug/l	2		
MW-21	Cobalt	01/09/2008	6	ug/l	2		
MW-23	Cobalt	01/07/2008	22.4	ug/l	2		
MW-24	Cobalt	01/08/2008	29.7	ug/l	2		
MW-25	Cobalt	01/08/2008	3.9	ug/l	2		
MW-26	Cobalt	01/09/2008	78.4	ug/l	2		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-27	Cobalt	01/09/2008	4.8	ug/l	2		
MW-3	Cobalt	01/31/1995	0.017	mg/l	0.01		
MW-3	Cobalt	02/15/1995	0.032	mg/l	0.01		
MW-3	Cobalt	03/07/1995	0.026	mg/l	0.01		
MW-3	Cobalt	12/07/1995	0.019	mg/l	0.01		
MW-3	Cobalt	05/06/1996	0.021	mg/l	0.01		
MW-3	Cobalt	11/11/1996	0.0107	mg/l	0.002		
MW-3	Cobalt	06/24/1997	0.003	mg/l	0.003		
MW-3	Cobalt	12/03/1997	0.037	mg/l	0.002		
MW-3	Cobalt	06/04/1998	0.018	mg/l	0.002		
MW-3	Cobalt	11/18/1998	0.023	mg/l	0.002		
MW-3	Cobalt	05/13/1999	0.012	mg/l	0.005		
MW-3	Cobalt	12/06/1999	0.0064	mg/l	0.005		
MW-3	Cobalt	05/17/2000	0.0075	mg/l	0.005		
MW-3	Cobalt	12/11/2000	0.0068	mg/l	0.005		
MW-3	Cobalt	12/27/2001	0.0085	mg/l	0.005		
MW-3	Cobalt	06/13/2002	0.0074	mg/l	0.005		
MW-3	Cobalt	01/03/2003	0.0091	mg/l	0.005		
MW-3	Cobalt	06/24/2003	0.008	mg/l	0.005		
MW-3	Cobalt	12/28/2007	12.3	ug/l	2		
MW-4	Cobalt	10/01/1994	0.32	mg/l	0.1		
MW-4R	Cobalt	10/01/1994	0.7	mg/l	0.1		
MW-4R	Cobalt	01/31/1995	0.262	mg/l	0.01		
MW-4R	Cobalt	02/15/1995	0.291	mg/l	0.01		
MW-4R	Cobalt	03/07/1995	0.225	mg/l	0.01		
MW-4R	Cobalt	12/06/1995	0.301	mg/l	0.01		
MW-4R	Cobalt	05/06/1996	0.278	mg/l	0.01		
MW-4R	Cobalt	11/11/1996	0.21	mg/l	0.02		
MW-4R	Cobalt	06/24/1997	0.12	mg/l	0.06		
MW-4R	Cobalt	12/03/1997	0.45	mg/l	0.02		
MW-4R	Cobalt	06/04/1998	0.39	mg/l	0.02		
MW-4R	Cobalt	11/18/1998	0.36	mg/l	0.02		
MW-4R	Cobalt	05/13/1999	0.21	mg/l	0.005		
MW-4R	Cobalt	12/06/1999	0.2	mg/l	0.005		
MW-4R	Cobalt	05/17/2000	0.2	mg/l	0.005		
MW-4R	Cobalt	12/11/2000	0.2	mg/l	0.005		
MW-4R	Cobalt	06/13/2001	0.16	mg/l	0.005		
MW-4R	Cobalt	12/28/2001	0.23	mg/l	0.005		
MW-4R	Cobalt	06/13/2002	0.21	mg/l	0.005		
MW-4R	Cobalt	01/02/2003	0.31	mg/l	0.005		
MW-4R	Cobalt	06/25/2003	0.29	mg/l	0.005		
MW-4R	Cobalt	12/12/2003	0.24	mg/l	0.01		
MW-4R	Cobalt	06/15/2004	0.2	mg/l	0.01		
MW-4R	Cobalt	12/29/2004	0.2	mg/l	0.01		
MW-4R	Cobalt	06/22/2005	0.19	mg/l	0.01		
MW-4R	Cobalt	01/12/2006	0.2	mg/l	0.01		
MW-4R	Cobalt	07/07/2006	0.177	mg/l	0.01		
MW-4R	Cobalt	12/14/2006	0.178	mg/l	0.01		
MW-4R	Cobalt	06/27/2007	0.159	mg/l	0.0025		
MW-4R	Cobalt	12/27/2007	145	ug/l	2		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-5	Cobalt	10/01/1994	0.9	mg/l	0.1		
MW-5	Cobalt	01/31/1995	0.496	mg/l	0.01		
MW-5	Cobalt	02/15/1995	0.454	mg/l	0.01		
MW-5	Cobalt	03/07/1995	0.32	mg/l	0.01		
MW-5	Cobalt	12/07/1995	0.088	mg/l	0.01		
MW-5	Cobalt	05/06/1996	0.157	mg/l	0.01		
MW-5	Cobalt	11/11/1996	0.076	mg/l	0.008		
MW-5	Cobalt	06/24/1997	0.036	mg/l	0.012		
MW-5	Cobalt	12/03/1997	0.35	mg/l	0.02		
MW-5	Cobalt	06/04/1998	1.4	mg/l	0.04		
MW-5	Cobalt	11/18/1998	0.85	mg/l	0.1		
MW-5	Cobalt	05/13/1999	0.081	mg/l	0.005		
MW-5	Cobalt	12/06/1999	0.016	mg/l	0.005		
MW-5	Cobalt	05/17/2000	0.064	mg/l	0.005		
MW-5	Cobalt	12/11/2000	0.071	mg/l	0.005		
MW-5	Cobalt	06/13/2001	0.07	mg/l	0.005		
MW-5	Cobalt	12/27/2001	0.028	mg/l	0.005		
MW-5	Cobalt	06/13/2002	0.031	mg/l	0.005		
MW-5	Cobalt	01/02/2003	0.012	mg/l	0.005		
MW-5	Cobalt	06/24/2003	0.016	mg/l	0.005		
MW-5	Cobalt	12/29/2004	0.011	mg/l	0.01		
MW-5	Cobalt	07/07/2006	0.0181	mg/l	0.01		
MW-5	Cobalt	12/19/2007	5.5	ug/l	2		
MW-6	Cobalt	01/31/1995	0.025	mg/l	0.01		
MW-6	Cobalt	02/15/1995	0.027	mg/l	0.01		
MW-6	Cobalt	03/07/1995	0.037	mg/l	0.01		
MW-6	Cobalt	12/06/1995	0.071	mg/l	0.01		
MW-6	Cobalt	05/06/1996	0.034	mg/l	0.01		
MW-6	Cobalt	11/11/1996	0.013	mg/l	0.002		
MW-6	Cobalt	06/24/1997	0.02	mg/l	0.006		
MW-6	Cobalt	12/03/1997	0.088	mg/l	0.004		
MW-6	Cobalt	06/04/1998	0.048	mg/l	0.002		
MW-6	Cobalt	11/18/1998	0.11	mg/l	0.004		
MW-6	Cobalt	05/13/1999	0.028	mg/l	0.005		
MW-6	Cobalt	12/06/1999	0.058	mg/l	0.005		
MW-6	Cobalt	05/17/2000	0.031	mg/l	0.005		
MW-6	Cobalt	12/11/2000	0.069	mg/l	0.005		
MW-6	Cobalt	06/12/2001	0.14	mg/l	0.005		
MW-6	Cobalt	12/28/2001	0.16	mg/l	0.005		
MW-6	Cobalt	06/12/2002	0.027	mg/l	0.005		
MW-6	Cobalt	01/03/2003	0.045	mg/l	0.005		
MW-6	Cobalt	06/24/2003	0.029	mg/l	0.005		
MW-6	Cobalt	12/11/2003	0.052	mg/l	0.01		
MW-6	Cobalt	06/16/2004	0.021	mg/l	0.01		
MW-6	Cobalt	12/29/2004	0.025	mg/l	0.01		
MW-6	Cobalt	06/23/2005	0.031	mg/l	0.01		
MW-6	Cobalt	01/12/2006	0.02	mg/l	0.01		
MW-6	Cobalt	07/07/2006	0.0205	mg/l	0.01		
MW-6	Cobalt	12/15/2006	0.0241	mg/l	0.01		
MW-6	Cobalt	06/28/2007	0.0184	mg/l	0.0025		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-6	Cobalt	12/19/2007	64.9	ug/l	2		
MW-7	Cobalt	01/31/1995	0.015	mg/l	0.01		
MW-7	Cobalt	02/15/1995	0.014	mg/l	0.01		
MW-7	Cobalt	03/07/1995	0.015	mg/l	0.01		
MW-7	Cobalt	11/11/1996	0.012	mg/l	0.002		
MW-7	Cobalt	06/24/1997	0.005	mg/l	0.003		
MW-7	Cobalt	12/03/1997	0.008	mg/l	0.002		
MW-7	Cobalt	06/04/1998	0.003	mg/l	0.002		
MW-7	Cobalt	11/18/1998	0.0077	mg/l	0.002		
MW-7	Cobalt	05/13/1999	0.0095	mg/l	0.005		
MW-7	Cobalt	12/06/1999	0.0092	mg/l	0.005		
MW-8	Cobalt	01/31/1995	0.019	mg/l	0.01		
MW-8	Cobalt	02/15/1995	0.016	mg/l	0.01		
MW-8	Cobalt	03/07/1995	0.014	mg/l	0.01		
MW-8	Cobalt	12/03/1997	0.015	mg/l	0.002		
MW-8	Cobalt	06/04/1998	0.005	mg/l	0.002		
MW-8	Cobalt	11/18/1998	0.0081	mg/l	0.002		
MW-8	Cobalt	05/13/1999	0.0056	mg/l	0.005		
MW-8	Cobalt	05/17/2000	0.0079	mg/l	0.005		
MW-8	Cobalt	12/12/2000	0.0068	mg/l	0.005		
MW-8	Cobalt	06/12/2001	0.0068	mg/l	0.005		
MW-8	Cobalt	12/28/2001	0.0066	mg/l	0.005		
MW-8	Cobalt	06/12/2002	0.0098	mg/l	0.005		
MW-8	Cobalt	01/03/2003	0.0086	mg/l	0.005		
MW-8	Cobalt	06/25/2003	0.012	mg/l	0.005		
MW-9	Cobalt	12/11/2000	0.028	mg/l	0.005		
MW-9	Cobalt	06/13/2001	0.021	mg/l	0.005		
MW-9	Cobalt	12/27/2001	0.037	mg/l	0.005		
MW-9	Cobalt	06/12/2002	0.018	mg/l	0.005		
MW-9	Cobalt	01/02/2003	0.029	mg/l	0.005		
MW-9	Cobalt	06/24/2003	0.016	mg/l	0.005		
MW-9	Cobalt	06/15/2004	0.017	mg/l	0.01		
MW-9	Cobalt	12/29/2004	0.068	mg/l	0.01		
MW-9	Cobalt	01/12/2006	0.02	mg/l	0.01		
MW-9	Cobalt	07/07/2006	0.0203	mg/l	0.01		
MW-9	Cobalt	12/19/2007	47.8	ug/l	2		
MW-1	Copper	06/24/1997	0.011	mg/l	0.01	1	
MW-1	Copper	12/03/1997	0.043	mg/l	0.01	1	
MW-1	Copper	12/12/2000	0.0024	mg/l	0.002	1	
MW-1	Copper	12/28/2001	0.0079	mg/l	0.002	1	
MW-1	Copper	06/13/2002	0.0075	mg/l	0.002	1	
MW-1	Copper	01/03/2003	0.0092	mg/l	0.002	1	
MW-1	Copper	06/24/2003	0.0065	mg/l	0.002	1	
MW-10	Copper	12/11/2000	0.003	mg/l	0.002	1	
MW-10	Copper	12/27/2001	0.0034	mg/l	0.002	1	
MW-10	Copper	01/02/2003	0.0029	mg/l	0.002	1	
MW-10	Copper	12/14/2006	0.196	mg/l	0.01	1	
MW-10	Copper	06/27/2007	0.0472	mg/l	0.0018	1	
MW-10	Copper	12/27/2007	1.8	ug/l	0.6	1000	
MW-11	Copper	12/11/2000	0.19	mg/l	0.002	1	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-11	Copper	06/12/2001	0.11	mg/l	0.002	1	
MW-11	Copper	12/27/2001	0.081	mg/l	0.002	1	
MW-11	Copper	06/13/2002	0.048	mg/l	0.002	1	
MW-11	Copper	01/03/2003	0.0066	mg/l	0.002	1	
MW-11	Copper	06/24/2003	0.01	mg/l	0.002	1	
MW-11	Copper	12/27/2007	6.4	ug/l	0.6	1000	
MW-12	Copper	12/11/2000	0.35	mg/l	0.002	1	
MW-12	Copper	06/13/2001	0.046	mg/l	0.002	1	
MW-12	Copper	12/27/2001	0.043	mg/l	0.002	1	
MW-12	Copper	06/12/2002	0.04	mg/l	0.002	1	
MW-12	Copper	01/02/2003	0.023	mg/l	0.002	1	
MW-12	Copper	06/24/2003	0.0092	mg/l	0.002	1	
MW-12	Copper	12/28/2007	2.2	ug/l	0.6	1000	
MW-12D	Copper	06/24/2003	0.0049	mg/l	0.002	1	
MW-13	Copper	12/11/2000	0.063	mg/l	0.002	1	
MW-13	Copper	06/12/2001	0.16	mg/l	0.002	1	
MW-13	Copper	12/28/2001	0.019	mg/l	0.002	1	
MW-13	Copper	06/12/2002	0.067	mg/l	0.002	1	
MW-13	Copper	01/03/2003	0.0025	mg/l	0.002	1	
MW-14	Copper	12/12/2000	0.032	mg/l	0.002	1	
MW-14	Copper	06/13/2001	0.0079	mg/l	0.002	1	
MW-14	Copper	12/28/2001	0.014	mg/l	0.002	1	
MW-14	Copper	06/13/2002	0.028	mg/l	0.002	1	
MW-14	Copper	01/03/2003	0.015	mg/l	0.002	1	
MW-14	Copper	06/24/2003	0.018	mg/l	0.002	1	
MW-14	Copper	06/28/2007	0.0018	mg/l	0.0018	1	
MW-14	Copper	12/28/2007	3.1	ug/l	0.6	1000	
MW-15	Copper	12/11/2000	0.042	mg/l	0.002	1	
MW-15	Copper	06/12/2001	0.17	mg/l	0.002	1	
MW-15	Copper	12/28/2001	0.0044	mg/l	0.002	1	
MW-15	Copper	06/12/2002	0.12	mg/l	0.002	1	
MW-15	Copper	01/03/2003	0.028	mg/l	0.002	1	
MW-15	Copper	06/25/2003	0.0057	mg/l	0.002	1	
MW-16	Copper	01/08/2008	4	ug/l	0.6	1000	
MW-17	Copper	06/25/2003	0.0072	mg/l	0.002	1	
MW-17	Copper	06/28/2007	0.0018	mg/l	0.0018	1	
MW-17	Copper	12/27/2007	9.9	ug/l	0.6	1000	
MW-18	Copper	01/07/2008	12.6	ug/l	0.6	1000	
MW-19	Copper	01/08/2008	4.2	ug/l	0.6	1000	
MW-1A	Copper	10/01/1994	0.26	mg/l	0.1	1	
MW-1A	Copper	11/11/1996	0.011	mg/l	0.01	1	
MW-1A	Copper	12/03/1997	0.068	mg/l	0.01	1	
MW-1A	Copper	06/04/1998	0.21	mg/l	0.01	1	
MW-1A	Copper	11/18/1998	0.16	mg/l	0.01	1	
MW-1A	Copper	12/11/2000	0.26	mg/l	0.002	1	
MW-1A	Copper	06/13/2001	0.055	mg/l	0.002	1	
MW-1A	Copper	12/28/2001	0.15	mg/l	0.002	1	
MW-1A	Copper	06/25/2003	0.16	mg/l	0.002	1	
MW-1B	Copper	06/25/2003	0.0024	mg/l	0.002	1	
MW-1B	Copper	06/28/2007	0.0121	mg/l	0.0018	1	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1B	Copper	12/28/2007	4.5	ug/l	0.6	1000	
MW-2	Copper	10/01/1994	0.22	mg/l	0.1	1	
MW-2	Copper	12/06/1999	0.046	mg/l	0.002	1	
MW-2	Copper	12/28/2007	1.1	ug/l	0.6	1000	
MW-20	Copper	01/08/2008	4.4	ug/l	0.6	1000	
MW-22	Copper	01/07/2008	3	ug/l	0.6	1000	
MW-23	Copper	01/07/2008	13.2	ug/l	0.6	1000	
MW-24	Copper	01/08/2008	3.6	ug/l	0.6	1000	
MW-25	Copper	01/08/2008	2.3	ug/l	0.6	1000	
MW-26	Copper	01/09/2008	5.6	ug/l	0.6	1000	
MW-27	Copper	01/09/2008	8.8	ug/l	0.6	1000	
MW-3	Copper	06/24/1997	0.01	mg/l	0.01	1	
MW-3	Copper	12/03/1997	0.1	mg/l	0.01	1	
MW-3	Copper	06/04/1998	0.022	mg/l	0.01	1	
MW-3	Copper	11/18/1998	0.07	mg/l	0.01	1	
MW-3	Copper	05/13/1999	0.021	mg/l	0.002	1	
MW-3	Copper	12/06/1999	0.0021	mg/l	0.002	1	
MW-3	Copper	12/27/2001	0.0025	mg/l	0.002	1	
MW-3	Copper	06/13/2002	0.017	mg/l	0.002	1	
MW-3	Copper	01/03/2003	0.0074	mg/l	0.002	1	
MW-3	Copper	06/24/2003	0.013	mg/l	0.002	1	
MW-4R	Copper	10/01/1994	0.24	mg/l	0.1	1	
MW-4R	Copper	06/24/1997	0.016	mg/l	0.01	1	
MW-4R	Copper	12/03/1997	0.037	mg/l	0.01	1	
MW-4R	Copper	06/04/1998	0.024	mg/l	0.01	1	
MW-4R	Copper	11/18/1998	0.014	mg/l	0.01	1	
MW-4R	Copper	05/17/2000	0.0044	mg/l	0.002	1	
MW-4R	Copper	12/28/2001	0.0027	mg/l	0.002	1	
MW-4R	Copper	06/13/2002	0.003	mg/l	0.002	1	
MW-4R	Copper	01/02/2003	0.006	mg/l	0.002	1	
MW-4R	Copper	06/25/2003	0.008	mg/l	0.002	1	
MW-5	**Copper**	**10/01/1994**	**1.07**	**mg/l**	**0.1**	**1**	**0.07**
MW-5	Copper	01/31/1995	0.757	mg/l	0.2	1	
MW-5	Copper	02/15/1995	0.464	mg/l	0.2	1	
MW-5	Copper	03/07/1995	0.676	mg/l	0.2	1	
MW-5	Copper	06/24/1997	0.038	mg/l	0.01	1	
MW-5	Copper	12/03/1997	0.27	mg/l	0.01	1	
MW-5	Copper	06/04/1998	0.49	mg/l	0.01	1	
MW-5	**Copper**	**11/18/1998**	**1.2**	**mg/l**	**0.05**	**1**	**0.2**
MW-5	Copper	05/13/1999	0.12	mg/l	0.002	1	
MW-5	Copper	12/06/1999	0.01	mg/l	0.002	1	
MW-5	Copper	05/17/2000	0.12	mg/l	0.002	1	
MW-5	Copper	12/11/2000	0.14	mg/l	0.002	1	
MW-5	Copper	06/13/2001	0.12	mg/l	0.002	1	
MW-5	Copper	12/27/2001	0.056	mg/l	0.002	1	
MW-5	Copper	06/13/2002	0.063	mg/l	0.002	1	
MW-5	Copper	01/02/2003	0.024	mg/l	0.002	1	
MW-5	Copper	06/24/2003	0.052	mg/l	0.002	1	
MW-5	Copper	12/19/2007	5.8	ug/l	0.6	1000	
MW-6	Copper	12/03/1997	0.065	mg/l	0.01	1	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-6	Copper	06/04/1998	0.064	mg/l	0.01	1	
MW-6	Copper	11/18/1998	0.091	mg/l	0.01	1	
MW-6	Copper	05/13/1999	0.029	mg/l	0.002	1	
MW-6	Copper	12/06/1999	0.0084	mg/l	0.002	1	
MW-6	Copper	05/17/2000	0.02	mg/l	0.002	1	
MW-6	Copper	12/11/2000	0.0029	mg/l	0.002	1	
MW-6	Copper	12/28/2001	0.0044	mg/l	0.002	1	
MW-6	Copper	06/12/2002	0.0079	mg/l	0.002	1	
MW-6	Copper	01/03/2003	0.003	mg/l	0.002	1	
MW-7	Copper	06/24/1997	0.019	mg/l	0.01	1	
MW-7	Copper	12/03/1997	0.011	mg/l	0.01	1	
MW-7	Copper	06/04/1998	0.013	mg/l	0.01	1	
MW-7	Copper	11/18/1998	0.018	mg/l	0.01	1	
MW-7	Copper	05/13/1999	0.032	mg/l	0.002	1	
MW-7	Copper	12/06/1999	0.02	mg/l	0.002	1	
MW-8	Copper	06/24/1997	0.022	mg/l	0.01	1	
MW-8	Copper	12/03/1997	0.059	mg/l	0.01	1	
MW-8	Copper	12/06/1999	0.0032	mg/l	0.002	1	
MW-8	Copper	05/17/2000	0.0056	mg/l	0.002	1	
MW-8	Copper	12/12/2000	0.0044	mg/l	0.002	1	
MW-8	Copper	12/28/2001	0.003	mg/l	0.002	1	
MW-8	Copper	06/12/2002	0.0073	mg/l	0.002	1	
MW-8	Copper	01/03/2003	0.0023	mg/l	0.002	1	
MW-8	Copper	06/25/2003	0.0042	mg/l	0.002	1	
MW-8	Copper	12/15/2006	0.0167	mg/l	0.01	1	
MW-9	Copper	12/11/2000	0.0071	mg/l	0.002	1	
MW-9	Copper	06/13/2001	0.044	mg/l	0.002	1	
MW-9	Copper	12/27/2001	0.015	mg/l	0.002	1	
MW-9	Copper	06/12/2002	0.029	mg/l	0.002	1	
MW-9	Copper	01/02/2003	0.0034	mg/l	0.002	1	
MW-9	Copper	06/24/2003	0.0077	mg/l	0.002	1	
MW-9	Copper	12/19/2007	2.2	ug/l	0.6	1000	
Supply Well	Copper	06/28/2007	0.0018	mg/l	0.0018	1	
MW-4R	Cyanide, total	03/23/1998	0.002	mg/l	0.002	0.07	
MW-1	Lead, total	12/03/1997	0.008	mg/l	0.005	0.015	
MW-1	Lead, total	06/04/1998	0.005	mg/l	0.005	0.015	
MW-1	Lead, total	12/27/2007	6.4	ug/l	2	15	
MW-10	**Lead, total**	**12/14/2006**	**0.0189**	**mg/l**	**0.01**	**0.015**	**0.0039**
MW-11	**Lead, total**	**12/11/2000**	**0.034**	**mg/l**	**0.005**	**0.015**	**0.019**
MW-11	**Lead, total**	**06/12/2001**	**0.024**	**mg/l**	**0.003**	**0.015**	**0.009**
MW-11	**Lead, total**	**12/27/2001**	**0.028**	**mg/l**	**0.003**	**0.015**	**0.013**
MW-11	**Lead, total**	**06/13/2002**	**0.017**	**mg/l**	**0.005**	**0.015**	**0.002**
MW-11	Lead, total	12/27/2007	8.1	ug/l	2	15	
MW-12	**Lead, total**	**12/11/2000**	**0.095**	**mg/l**	**0.005**	**0.015**	**0.08**
MW-12	Lead, total	06/13/2001	0.015	mg/l	0.003	0.015	
MW-12	**Lead, total**	**12/27/2001**	**0.02**	**mg/l**	**0.003**	**0.015**	**0.005**
MW-12	**Lead, total**	**06/12/2002**	**0.02**	**mg/l**	**0.005**	**0.015**	**0.005**
MW-12	Lead, total	01/02/2003	0.01	mg/l	0.005	0.015	
MW-13	**Lead, total**	**06/12/2001**	**0.019**	**mg/l**	**0.003**	**0.015**	**0.004**
MW-13	Lead, total	12/28/2001	0.0038	mg/l	0.003	0.015	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-13	Lead, total	06/12/2002	0.01	mg/l	0.005	0.015	
MW-15	**Lead, total**	**06/12/2001**	**0.029**	**mg/l**	**0.003**	**0.015**	**0.014**
MW-15	**Lead, total**	**06/12/2002**	**0.026**	**mg/l**	**0.005**	**0.015**	**0.011**
MW-15	Lead, total	01/03/2003	0.0056	mg/l	0.005	0.015	
MW-15	Lead, total	12/12/2003	0.013	mg/l	0.01	0.015	
MW-17	Lead, total	12/12/2003	0.014	mg/l	0.01	0.015	
MW-17	**Lead, total**	**06/15/2004**	**0.02**	**mg/l**	**0.01**	**0.015**	**0.005**
MW-1A	**Lead, total**	**10/01/1994**	**0.058**	**mg/l**	**0.01**	**0.015**	**0.043**
MW-1A	**Lead, total**	**01/31/1995**	**0.053**	**mg/l**	**0.01**	**0.015**	**0.038**
MW-1A	**Lead, total**	**02/15/1995**	**0.037**	**mg/l**	**0.01**	**0.015**	**0.022**
MW-1A	Lead, total	11/11/1996	0.007	mg/l	0.005	0.015	
MW-1A	**Lead, total**	**12/03/1997**	**0.025**	**mg/l**	**0.005**	**0.015**	**0.01**
MW-1A	**Lead, total**	**06/04/1998**	**0.07**	**mg/l**	**0.005**	**0.015**	**0.055**
MW-1A	**Lead, total**	**11/18/1998**	**0.075**	**mg/l**	**0.005**	**0.015**	**0.06**
MW-1A	**Lead, total**	**12/11/2000**	**0.058**	**mg/l**	**0.005**	**0.015**	**0.043**
MW-1A	Lead, total	06/13/2001	0.015	mg/l	0.003	0.015	
MW-1A	**Lead, total**	**12/28/2001**	**0.042**	**mg/l**	**0.003**	**0.015**	**0.027**
MW-1A	**Lead, total**	**06/25/2003**	**0.033**	**mg/l**	**0.005**	**0.015**	**0.018**
MW-1A	**Lead, total**	**12/11/2003**	**0.019**	**mg/l**	**0.01**	**0.015**	**0.004**
MW-1A	Lead, total	06/16/2004	0.013	mg/l	0.01	0.015	
MW-1B	Lead, total	12/11/2003	0.011	mg/l	0.01	0.015	
MW-1B	Lead, total	06/16/2004	0.01	mg/l	0.01	0.015	
MW-1B	Lead, total	06/28/2007	0.0031	mg/l	0.0031	0.015	
MW-2	**Lead, total**	**10/01/1994**	**0.024**	**mg/l**	**0.01**	**0.015**	**0.009**
MW-2	Lead, total	12/06/1999	0.014	mg/l	0.005	0.015	
MW-25	Lead, total	01/08/2008	2.7	ug/l	2	15	
MW-26	Lead, total	01/09/2008	4.7	ug/l	2	15	
MW-27	Lead, total	01/09/2008	3.4	ug/l	2	15	
MW-3	**Lead, total**	**01/31/1995**	**0.016**	**mg/l**	**0.01**	**0.015**	**0.001**
MW-3	Lead, total	11/11/1996	0.009	mg/l	0.005	0.015	
MW-3	**Lead, total**	**12/03/1997**	**0.1**	**mg/l**	**0.01**	**0.015**	**0.085**
MW-3	**Lead, total**	**06/04/1998**	**0.021**	**mg/l**	**0.005**	**0.015**	**0.006**
MW-3	**Lead, total**	**11/18/1998**	**0.14**	**mg/l**	**0.01**	**0.015**	**0.125**
MW-3	**Lead, total**	**05/13/1999**	**0.11**	**mg/l**	**0.005**	**0.015**	**0.095**
MW-3	**Lead, total**	**12/06/1999**	**0.039**	**mg/l**	**0.005**	**0.015**	**0.024**
MW-3	**Lead, total**	**06/13/2002**	**0.043**	**mg/l**	**0.005**	**0.015**	**0.028**
MW-3	Lead, total	01/03/2003	0.0081	mg/l	0.005	0.015	
MW-3	Lead, total	06/24/2003	0.013	mg/l	0.005	0.015	
MW-3	**Lead, total**	**06/15/2004**	**0.032**	**mg/l**	**0.01**	**0.015**	**0.017**
MW-3	**Lead, total**	**12/29/2004**	**0.025**	**mg/l**	**0.01**	**0.015**	**0.01**
MW-3	Lead, total	06/22/2005	0.015	mg/l	0.01	0.015	
MW-3	**Lead, total**	**06/27/2007**	**0.0404**	**mg/l**	**0.0031**	**0.015**	**0.0254**
MW-4R	**Lead, total**	**10/01/1994**	**0.1**	**mg/l**	**0.01**	**0.015**	**0.085**
MW-4R	**Lead, total**	**01/31/1995**	**0.034**	**mg/l**	**0.01**	**0.015**	**0.019**
MW-4R	Lead, total	11/11/1996	0.006	mg/l	0.005	0.015	
MW-4R	**Lead, total**	**12/03/1997**	**0.016**	**mg/l**	**0.005**	**0.015**	**0.001**
MW-4R	Lead, total	06/04/1998	0.012	mg/l	0.005	0.015	
MW-4R	Lead, total	11/18/1998	0.0066	mg/l	0.005	0.015	
MW-4R	Lead, total	05/13/1999	0.0099	mg/l	0.005	0.015	
MW-4R	Lead, total	01/02/2003	0.0081	mg/l	0.005	0.015	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-4R	Lead, total	06/25/2003	0.0084	mg/l	0.005	0.015	
MW-5	**Lead, total**	**10/01/1994**	**0.082**	**mg/l**	**0.01**	**0.015**	**0.067**
MW-5	**Lead, total**	**01/31/1995**	**0.118**	**mg/l**	**0.01**	**0.015**	**0.103**
MW-5	**Lead, total**	**02/15/1995**	**0.1**	**mg/l**	**0.01**	**0.015**	**0.085**
MW-5	**Lead, total**	**03/07/1995**	**0.085**	**mg/l**	**0.01**	**0.015**	**0.07**
MW-5	**Lead, total**	**12/07/1995**	**0.025**	**mg/l**	**0.01**	**0.015**	**0.01**
MW-5	**Lead, total**	**05/06/1996**	**0.02**	**mg/l**	**0.01**	**0.015**	**0.005**
MW-5	**Lead, total**	**11/11/1996**	**0.017**	**mg/l**	**0.005**	**0.015**	**0.002**
MW-5	**Lead, total**	**12/03/1997**	**0.05**	**mg/l**	**0.005**	**0.015**	**0.035**
MW-5	**Lead, total**	**06/04/1998**	**0.078**	**mg/l**	**0.005**	**0.015**	**0.063**
MW-5	**Lead, total**	**11/18/1998**	**0.28**	**mg/l**	**0.02**	**0.015**	**0.265**
MW-5	**Lead, total**	**05/13/1999**	**0.024**	**mg/l**	**0.005**	**0.015**	**0.009**
MW-5	**Lead, total**	**05/17/2000**	**0.018**	**mg/l**	**0.005**	**0.015**	**0.003**
MW-5	**Lead, total**	**12/11/2000**	**0.022**	**mg/l**	**0.005**	**0.015**	**0.007**
MW-5	**Lead, total**	**06/13/2001**	**0.02**	**mg/l**	**0.003**	**0.015**	**0.005**
MW-5	Lead, total	12/27/2001	0.0099	mg/l	0.003	0.015	
MW-5	Lead, total	06/13/2002	0.015	mg/l	0.005	0.015	
MW-5	Lead, total	01/02/2003	0.007	mg/l	0.005	0.015	
MW-5	Lead, total	06/24/2003	0.01	mg/l	0.005	0.015	
MW-5	**Lead, total**	**12/29/2004**	**0.027**	**mg/l**	**0.01**	**0.015**	**0.012**
MW-5	Lead, total	01/12/2006	0.01	mg/l	0.01	0.015	
MW-5	**Lead, total**	**07/07/2006**	**0.0153**	**mg/l**	**0.01**	**0.015**	**0.0003**
MW-5	Lead, total	12/19/2007	8.3	ug/l	2	15	
MW-6	Lead, total	10/01/1994	0.014	mg/l	0.01	0.015	
MW-6	Lead, total	01/31/1995	0.011	mg/l	0.01	0.015	
MW-6	Lead, total	03/07/1995	0.013	mg/l	0.01	0.015	
MW-6	**Lead, total**	**12/03/1997**	**0.023**	**mg/l**	**0.005**	**0.015**	**0.008**
MW-6	**Lead, total**	**06/04/1998**	**0.016**	**mg/l**	**0.005**	**0.015**	**0.001**
MW-6	**Lead, total**	**11/18/1998**	**0.025**	**mg/l**	**0.005**	**0.015**	**0.01**
MW-6	Lead, total	05/13/1999	0.0062	mg/l	0.005	0.015	
MW-7	Lead, total	11/11/1996	0.012	mg/l	0.005	0.015	
MW-7	Lead, total	12/03/1997	0.006	mg/l	0.005	0.015	
MW-7	Lead, total	06/04/1998	0.008	mg/l	0.005	0.015	
MW-7	Lead, total	05/13/1999	0.0084	mg/l	0.005	0.015	
MW-7	Lead, total	12/06/1999	0.008	mg/l	0.005	0.015	
MW-7	Lead, total	12/27/2007	2	ug/l	2	15	
MW-8	Lead, total	12/03/1997	0.013	mg/l	0.005	0.015	
MW-8	Lead, total	06/04/1998	0.006	mg/l	0.005	0.015	
MW-9	Lead, total	12/27/2001	0.0033	mg/l	0.003	0.015	
MW-9	Lead, total	06/12/2002	0.0065	mg/l	0.005	0.015	
MW-9	Lead, total	12/29/2004	0.01	mg/l	0.01	0.015	
Supply Well	Lead, total	06/28/2007	0.0031	mg/l	0.0031	0.015	
MW-1	**Manganese**	**06/28/2007**	**764**	**ug/l**	**1.4**	**50**	**714**
MW-11	**Manganese**	**06/27/2007**	**8180**	**ug/l**	**1.4**	**50**	**8130**
MW-12	**Manganese**	**06/28/2007**	**232**	**ug/l**	**1.4**	**50**	**182**
MW-12D	**Manganese**	**06/28/2007**	**74.4**	**ug/l**	**1.4**	**50**	**24.4**
MW-13	**Manganese**	**06/28/2007**	**303**	**ug/l**	**1.4**	**50**	**253**
MW-1B	**Manganese**	**06/28/2007**	**960**	**ug/l**	**1.4**	**50**	**910**
MW-2	**Manganese**	**06/28/2007**	**15500**	**ug/l**	**1.4**	**50**	**15450**
MW-3	**Manganese**	**06/27/2007**	**1450**	**ug/l**	**1.4**	**50**	**1400**

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-6	**Manganese**	**06/28/2007**	**1000**	**ug/l**	**1.4**	**50**	**950**
MW-7	**Manganese**	**06/27/2007**	**87.1**	**ug/l**	**1.4**	**50**	**37.1**
MW-1	Mercury	03/23/1998	0.0003	mg/l	0.0002	0.0011	
MW-12	Mercury	12/11/2000	0.0005	mg/l	0.0002	0.0011	
MW-14	Mercury	06/28/2007	0.41	ug/l	0.11	1.1	
MW-15	Mercury	12/11/2000	0.0004	mg/l	0.0002	0.0011	
MW-15	Mercury	06/28/2007	0.15	ug/l	0.11	1.1	
MW-17	**Mercury**	**06/28/2007**	**1.49**	**ug/l**	**0.11**	**1.1**	**0.39**
MW-1A	Mercury	12/03/1997	0.0004	mg/l	0.0002	0.0011	
MW-1A	**Mercury**	**03/23/1998**	**0.0017**	**mg/l**	**0.0002**	**0.0011**	**0.0006**
MW-1A	**Mercury**	**04/30/1998**	**0.0013**	**mg/l**	**0.0002**	**0.0011**	**0.0002**
MW-1A	**Mercury**	**06/04/1998**	**0.0013**	**mg/l**	**0.0002**	**0.0011**	**0.0002**
MW-1A	**Mercury**	**12/11/2000**	**0.02**	**mg/l**	**0.0002**	**0.0011**	**0.0189**
MW-1B	**Mercury**	**06/28/2007**	**1.21**	**ug/l**	**0.11**	**1.1**	**0.11**
MW-2	Mercury	12/06/1999	0.0003	mg/l	0.0002	0.0011	
MW-2	Mercury	06/28/2007	0.3	ug/l	0.11	1.1	
MW-4R	Mercury	03/23/1998	0.0003	mg/l	0.0002	0.0011	
MW-4R	Mercury	06/04/1998	0.0004	mg/l	0.0002	0.0011	
MW-6	**Mercury**	**05/06/1996**	**0.002**	**mg/l**	**0.001**	**0.0011**	**0.0009**
MW-6	Mercury	12/03/1997	0.0007	mg/l	0.0002	0.0011	
MW-6	**Mercury**	**03/23/1998**	**0.0068**	**mg/l**	**0.0002**	**0.0011**	**0.0057**
MW-6	**Mercury**	**04/30/1998**	**0.0039**	**mg/l**	**0.0002**	**0.0011**	**0.0028**
MW-6	**Mercury**	**06/04/1998**	**0.013**	**mg/l**	**0.0004**	**0.0011**	**0.0119**
MW-6	**Mercury**	**05/13/1999**	**0.0065**	**mg/l**	**0.0002**	**0.0011**	**0.0054**
MW-6	Mercury	12/06/1999	0.0011	mg/l	0.0002	0.0011	
MW-6	Mercury	12/11/2000	0.001	mg/l	0.0002	0.0011	
MW-8	**Mercury**	**05/06/1996**	**0.002**	**mg/l**	**0.001**	**0.0011**	**0.0009**
MW-8	**Mercury**	**03/23/1998**	**0.0063**	**mg/l**	**0.0002**	**0.0011**	**0.0052**
MW-8	**Mercury**	**04/30/1998**	**0.0052**	**mg/l**	**0.0002**	**0.0011**	**0.0041**
MW-8	**Mercury**	**06/04/1998**	**0.0024**	**mg/l**	**0.0002**	**0.0011**	**0.0013**
MW-8	Mercury	05/13/1999	0.0007	mg/l	0.0002	0.0011	
MW-8	Mercury	12/06/1999	0.0003	mg/l	0.0002	0.0011	
MW-8	**Mercury**	**12/12/2000**	**0.0021**	**mg/l**	**0.0002**	**0.0011**	**0.001**
MW-8	Mercury	06/28/2007	0.22	ug/l	0.11	1.1	
MW-1	Nickel	05/13/1999	0.014	mg/l	0.005	0.1	
MW-1	Nickel	12/06/1999	0.014	mg/l	0.005	0.1	
MW-1	Nickel	05/17/2000	0.019	mg/l	0.005	0.1	
MW-1	Nickel	12/12/2000	0.015	mg/l	0.005	0.1	
MW-1	Nickel	06/13/2001	0.0063	mg/l	0.005	0.1	
MW-1	Nickel	12/28/2001	0.015	mg/l	0.005	0.1	
MW-1	Nickel	06/13/2002	0.016	mg/l	0.005	0.1	
MW-1	Nickel	01/03/2003	0.015	mg/l	0.005	0.1	
MW-1	Nickel	06/24/2003	0.009	mg/l	0.005	0.1	
MW-1	Nickel	12/27/2007	9.9	ug/l	2	100	
MW-10	Nickel	12/11/2000	0.0074	mg/l	0.005	0.1	
MW-10	Nickel	06/12/2001	0.012	mg/l	0.005	0.1	
MW-10	Nickel	12/27/2001	0.012	mg/l	0.005	0.1	
MW-10	Nickel	12/14/2006	0.0104	mg/l	0.05	0.1	
MW-10	Nickel	06/27/2007	0.0013	mg/l	0.0013	0.1	
MW-10	Nickel	12/27/2007	2.9	ug/l	2	100	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-11	**Nickel**	**12/11/2000**	**0.38**	**mg/l**	**0.005**	**0.1**	**0.28**
MW-11	**Nickel**	**06/12/2001**	**0.22**	**mg/l**	**0.005**	**0.1**	**0.12**
MW-11	**Nickel**	**12/27/2001**	**0.14**	**mg/l**	**0.005**	**0.1**	**0.04**
MW-11	**Nickel**	**06/13/2002**	**0.12**	**mg/l**	**0.005**	**0.1**	**0.02**
MW-11	Nickel	01/03/2003	0.038	mg/l	0.005	0.1	
MW-11	Nickel	06/24/2003	0.04	mg/l	0.005	0.1	
MW-11	Nickel	12/14/2006	0.0164	mg/l	0.05	0.1	
MW-11	Nickel	06/27/2007	0.0304	mg/l	0.0013	0.1	
MW-11	Nickel	12/27/2007	55.6	ug/l	2	100	
MW-12	**Nickel**	**12/11/2000**	**0.84**	**mg/l**	**0.005**	**0.1**	**0.74**
MW-12	**Nickel**	**06/13/2001**	**0.13**	**mg/l**	**0.005**	**0.1**	**0.03**
MW-12	Nickel	12/27/2001	0.075	mg/l	0.005	0.1	
MW-12	**Nickel**	**06/12/2002**	**0.13**	**mg/l**	**0.005**	**0.1**	**0.03**
MW-12	Nickel	01/02/2003	0.078	mg/l	0.005	0.1	
MW-12	Nickel	06/24/2003	0.03	mg/l	0.005	0.1	
MW-12	Nickel	06/28/2007	0.0013	mg/l	0.0013	0.1	
MW-12	Nickel	12/28/2007	5.2	ug/l	2	100	
MW-12D	Nickel	06/24/2003	0.0068	mg/l	0.005	0.1	
MW-13	Nickel	12/11/2000	0.052	mg/l	0.005	0.1	
MW-13	Nickel	06/12/2001	0.087	mg/l	0.005	0.1	
MW-13	Nickel	12/28/2001	0.02	mg/l	0.005	0.1	
MW-13	Nickel	06/12/2002	0.05	mg/l	0.005	0.1	
MW-13	Nickel	01/03/2003	0.011	mg/l	0.005	0.1	
MW-13	Nickel	06/24/2003	0.006	mg/l	0.005	0.1	
MW-13	Nickel	12/15/2006	0.013	mg/l	0.05	0.1	
MW-13	Nickel	06/28/2007	0.0013	mg/l	0.0013	0.1	
MW-13	Nickel	12/19/2007	7.9	ug/l	2	100	
MW-14	Nickel	12/12/2000	0.03	mg/l	0.005	0.1	
MW-14	Nickel	06/13/2001	0.014	mg/l	0.005	0.1	
MW-14	Nickel	12/28/2001	0.012	mg/l	0.005	0.1	
MW-14	Nickel	06/13/2002	0.021	mg/l	0.005	0.1	
MW-14	Nickel	01/03/2003	0.016	mg/l	0.005	0.1	
MW-14	Nickel	06/24/2003	0.0084	mg/l	0.005	0.1	
MW-14	Nickel	12/15/2006	0.0121	mg/l	0.05	0.1	
MW-14	Nickel	06/28/2007	0.011	mg/l	0.0013	0.1	
MW-14	Nickel	12/28/2007	5.2	ug/l	2	100	
MW-15	Nickel	12/11/2000	0.021	mg/l	0.005	0.1	
MW-15	Nickel	06/12/2001	0.051	mg/l	0.005	0.1	
MW-15	Nickel	06/12/2002	0.043	mg/l	0.005	0.1	
MW-15	Nickel	01/03/2003	0.011	mg/l	0.005	0.1	
MW-15	Nickel	06/25/2003	0.0065	mg/l	0.005	0.1	
MW-15	Nickel	12/19/2007	2.5	ug/l	2	100	
MW-16	Nickel	01/08/2008	6.2	ug/l	2	100	
MW-17	Nickel	06/25/2003	0.015	mg/l	0.005	0.1	
MW-17	Nickel	06/28/2007	0.0013	mg/l	0.0013	0.1	
MW-17	Nickel	12/27/2007	13.5	ug/l	2	100	
MW-18	Nickel	01/07/2008	39.1	ug/l	2	100	
MW-19	Nickel	01/08/2008	5.8	ug/l	2	100	
MW-1A	**Nickel**	**10/01/1994**	**0.19**	**mg/l**	**0.1**	**0.1**	**0.09**
MW-1A	**Nickel**	**01/31/1995**	**0.103**	**mg/l**	**0.05**	**0.1**	**0.003**

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1A	Nickel	02/15/1995	0.091	mg/l	0.05	0.1	
MW-1A	Nickel	12/03/1997	0.053	mg/l	0.05	0.1	
MW-1A	**Nickel**	**06/04/1998**	**0.13**	**mg/l**	**0.05**	**0.1**	**0.03**
MW-1A	**Nickel**	**11/18/1998**	**0.19**	**mg/l**	**0.05**	**0.1**	**0.09**
MW-1A	**Nickel**	**12/11/2000**	**0.26**	**mg/l**	**0.005**	**0.1**	**0.16**
MW-1A	Nickel	06/13/2001	0.049	mg/l	0.005	0.1	
MW-1A	**Nickel**	**12/28/2001**	**0.15**	**mg/l**	**0.005**	**0.1**	**0.05**
MW-1A	**Nickel**	**06/25/2003**	**0.12**	**mg/l**	**0.005**	**0.1**	**0.02**
MW-1B	Nickel	06/25/2003	0.0051	mg/l	0.005	0.1	
MW-1B	Nickel	12/15/2006	0.0103	mg/l	0.05	0.1	
MW-1B	Nickel	06/28/2007	0.0013	mg/l	0.0013	0.1	
MW-1B	Nickel	12/28/2007	8.8	ug/l	2	100	
MW-2	Nickel	12/06/1999	0.0094	mg/l	0.005	0.1	
MW-2	Nickel	12/28/2007	4	ug/l	2	100	
MW-20	Nickel	01/08/2008	9.6	ug/l	2	100	
MW-21	Nickel	01/09/2008	4.2	ug/l	2	100	
MW-22	Nickel	01/07/2008	14.9	ug/l	2	100	
MW-23	Nickel	01/07/2008	91.7	ug/l	2	100	
MW-24	Nickel	01/08/2008	12.6	ug/l	2	100	
MW-25	Nickel	01/08/2008	22	ug/l	2	100	
MW-26	Nickel	01/09/2008	49	ug/l	2	100	
MW-27	Nickel	01/09/2008	20.3	ug/l	2	100	
MW-3	**Nickel**	**10/01/1994**	**0.18**	**mg/l**	**0.1**	**0.1**	**0.08**
MW-3	**Nickel**	**01/31/1995**	**0.474**	**mg/l**	**0.05**	**0.1**	**0.374**
MW-3	**Nickel**	**02/15/1995**	**0.243**	**mg/l**	**0.05**	**0.1**	**0.143**
MW-3	**Nickel**	**03/07/1995**	**0.24**	**mg/l**	**0.05**	**0.1**	**0.14**
MW-3	Nickel	05/06/1996	0.072	mg/l	0.05	0.1	
MW-3	**Nickel**	**11/11/1996**	**0.2**	**mg/l**	**0.05**	**0.1**	**0.1**
MW-3	**Nickel**	**06/24/1997**	**0.13**	**mg/l**	**0.05**	**0.1**	**0.03**
MW-3	**Nickel**	**12/03/1997**	**1.2**	**mg/l**	**0.05**	**0.1**	**1.1**
MW-3	**Nickel**	**06/04/1998**	**0.21**	**mg/l**	**0.05**	**0.1**	**0.11**
MW-3	**Nickel**	**11/18/1998**	**0.7**	**mg/l**	**0.05**	**0.1**	**0.6**
MW-3	**Nickel**	**05/13/1999**	**0.25**	**mg/l**	**0.005**	**0.1**	**0.15**
MW-3	Nickel	12/06/1999	0.098	mg/l	0.005	0.1	
MW-3	Nickel	05/17/2000	0.063	mg/l	0.005	0.1	
MW-3	Nickel	12/11/2000	0.016	mg/l	0.005	0.1	
MW-3	Nickel	06/12/2001	0.026	mg/l	0.005	0.1	
MW-3	Nickel	12/27/2001	0.023	mg/l	0.005	0.1	
MW-3	**Nickel**	**06/13/2002**	**0.11**	**mg/l**	**0.005**	**0.1**	**0.01**
MW-3	Nickel	01/03/2003	0.051	mg/l	0.005	0.1	
MW-3	Nickel	06/24/2003	0.1	mg/l	0.005	0.1	
MW-3	Nickel	12/11/2003	0.064	mg/l	0.05	0.1	
MW-3	Nickel	12/29/2004	0.053	mg/l	0.05	0.1	
MW-3	Nickel	06/22/2005	0.062	mg/l	0.05	0.1	
MW-3	Nickel	01/12/2006	0.08	mg/l	0.05	0.1	
MW-3	Nickel	07/07/2006	0.0556	mg/l	0.05	0.1	
MW-3	Nickel	12/14/2006	0.0204	mg/l	0.05	0.1	
MW-3	**Nickel**	**06/27/2007**	**0.162**	**mg/l**	**0.0013**	**0.1**	**0.062**
MW-3	Nickel	12/28/2007	8.1	ug/l	2	100	
MW-4R	**Nickel**	**10/01/1994**	**0.56**	**mg/l**	**0.1**	**0.1**	**0.46**

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-4R	**Nickel**	**01/31/1995**	**0.105**	**mg/l**	**0.05**	**0.1**	**0.005**
MW-4R	Nickel	02/15/1995	0.067	mg/l	0.05	0.1	
MW-4R	Nickel	12/06/1995	0.056	mg/l	0.05	0.1	
MW-4R	Nickel	05/06/1996	0.055	mg/l	0.05	0.1	
MW-4R	Nickel	12/03/1997	0.05	mg/l	0.05	0.1	
MW-4R	Nickel	05/13/1999	0.02	mg/l	0.005	0.1	
MW-4R	Nickel	12/06/1999	0.014	mg/l	0.005	0.1	
MW-4R	Nickel	05/17/2000	0.017	mg/l	0.005	0.1	
MW-4R	Nickel	12/11/2000	0.014	mg/l	0.005	0.1	
MW-4R	Nickel	06/13/2001	0.011	mg/l	0.005	0.1	
MW-4R	Nickel	12/28/2001	0.016	mg/l	0.005	0.1	
MW-4R	Nickel	06/13/2002	0.02	mg/l	0.005	0.1	
MW-4R	Nickel	01/02/2003	0.018	mg/l	0.005	0.1	
MW-4R	Nickel	06/25/2003	0.021	mg/l	0.005	0.1	
MW-4R	Nickel	06/27/2007	0.0013	mg/l	0.0013	0.1	
MW-5	**Nickel**	**10/01/1994**	**1.51**	**mg/l**	**0.1**	**0.1**	**1.41**
MW-5	**Nickel**	**01/31/1995**	**0.826**	**mg/l**	**0.05**	**0.1**	**0.726**
MW-5	**Nickel**	**02/15/1995**	**0.508**	**mg/l**	**0.05**	**0.1**	**0.408**
MW-5	**Nickel**	**03/07/1995**	**0.82**	**mg/l**	**0.05**	**0.1**	**0.72**
MW-5	**Nickel**	**12/07/1995**	**0.18**	**mg/l**	**0.05**	**0.1**	**0.08**
MW-5	**Nickel**	**05/06/1996**	**0.118**	**mg/l**	**0.05**	**0.1**	**0.018**
MW-5	**Nickel**	**12/03/1997**	**0.3**	**mg/l**	**0.05**	**0.1**	**0.2**
MW-5	**Nickel**	**06/04/1998**	**0.52**	**mg/l**	**0.05**	**0.1**	**0.42**
MW-5	**Nickel**	**11/18/1998**	**1.5**	**mg/l**	**0.25**	**0.1**	**1.4**
MW-5	**Nickel**	**05/13/1999**	**0.15**	**mg/l**	**0.005**	**0.1**	**0.05**
MW-5	Nickel	12/06/1999	0.015	mg/l	0.005	0.1	
MW-5	**Nickel**	**05/17/2000**	**0.13**	**mg/l**	**0.005**	**0.1**	**0.03**
MW-5	**Nickel**	**12/11/2000**	**0.15**	**mg/l**	**0.005**	**0.1**	**0.05**
MW-5	**Nickel**	**06/13/2001**	**0.13**	**mg/l**	**0.005**	**0.1**	**0.03**
MW-5	Nickel	12/27/2001	0.057	mg/l	0.005	0.1	
MW-5	Nickel	06/13/2002	0.073	mg/l	0.005	0.1	
MW-5	Nickel	01/02/2003	0.027	mg/l	0.005	0.1	
MW-5	Nickel	06/24/2003	0.028	mg/l	0.005	0.1	
MW-5	Nickel	12/29/2004	0.055	mg/l	0.05	0.1	
MW-5	Nickel	12/19/2007	16.6	ug/l	2	100	
MW-6	Nickel	12/06/1995	0.052	mg/l	0.05	0.1	
MW-6	Nickel	05/06/1996	0.069	mg/l	0.05	0.1	
MW-6	**Nickel**	**12/03/1997**	**0.13**	**mg/l**	**0.05**	**0.1**	**0.03**
MW-6	Nickel	06/04/1998	0.088	mg/l	0.05	0.1	
MW-6	**Nickel**	**11/18/1998**	**0.16**	**mg/l**	**0.05**	**0.1**	**0.06**
MW-6	Nickel	05/13/1999	0.04	mg/l	0.005	0.1	
MW-6	Nickel	12/06/1999	0.024	mg/l	0.005	0.1	
MW-6	Nickel	05/17/2000	0.022	mg/l	0.005	0.1	
MW-6	Nickel	12/11/2000	0.016	mg/l	0.005	0.1	
MW-6	Nickel	06/12/2001	0.016	mg/l	0.005	0.1	
MW-6	Nickel	12/28/2001	0.021	mg/l	0.005	0.1	
MW-6	Nickel	06/12/2002	0.018	mg/l	0.005	0.1	
MW-6	Nickel	01/03/2003	0.011	mg/l	0.005	0.1	
MW-6	Nickel	06/24/2003	0.0078	mg/l	0.005	0.1	
MW-6	Nickel	06/28/2007	0.0107	mg/l	0.0013	0.1	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-6	Nickel	12/19/2007	12.9	ug/l	2	100	
MW-7	Nickel	05/13/1999	0.038	mg/l	0.005	0.1	
MW-7	Nickel	12/06/1999	0.022	mg/l	0.005	0.1	
MW-7	Nickel	05/17/2000	0.005	mg/l	0.005	0.1	
MW-8	Nickel	05/13/1999	0.0085	mg/l	0.005	0.1	
MW-8	Nickel	05/17/2000	0.0095	mg/l	0.005	0.1	
MW-8	Nickel	12/12/2000	0.01	mg/l	0.005	0.1	
MW-8	Nickel	06/12/2001	0.0093	mg/l	0.005	0.1	
MW-8	Nickel	12/28/2001	0.0076	mg/l	0.005	0.1	
MW-8	Nickel	06/12/2002	0.012	mg/l	0.005	0.1	
MW-8	Nickel	01/03/2003	0.0086	mg/l	0.005	0.1	
MW-8	Nickel	06/25/2003	0.011	mg/l	0.005	0.1	
MW-8	Nickel	06/28/2007	0.0013	mg/l	0.0013	0.1	
MW-9	Nickel	12/11/2000	0.084	mg/l	0.005	0.1	
MW-9	Nickel	06/13/2001	0.068	mg/l	0.005	0.1	
MW-9	Nickel	12/27/2001	0.051	mg/l	0.005	0.1	
MW-9	Nickel	06/12/2002	0.047	mg/l	0.005	0.1	
MW-9	Nickel	01/02/2003	0.029	mg/l	0.005	0.1	
MW-9	Nickel	06/24/2003	0.023	mg/l	0.005	0.1	
MW-9	Nickel	12/14/2006	0.0124	mg/l	0.05	0.1	
MW-9	Nickel	06/27/2007	0.0107	mg/l	0.0013	0.1	
MW-9	Nickel	12/19/2007	38.3	ug/l	2	100	
MW-11	Selenium, total	01/03/2003	0.0054	mg/l	0.005	0.05	
MW-4R	Selenium, total	12/11/2000	0.0057	mg/l	0.005	0.05	
MW-4R	Selenium, total	01/02/2003	0.0091	mg/l	0.005	0.05	
MW-4R	Selenium, total	06/25/2003	0.0076	mg/l	0.005	0.05	
MW-9	Selenium, total	12/11/2000	0.0078	mg/l	0.005	0.05	
MW-9	Selenium, total	12/27/2001	0.0082	mg/l	0.005	0.05	
MW-9	Selenium, total	01/02/2003	0.0078	mg/l	0.005	0.05	
MW-12	Silver	12/28/2007	2.3	ug/l	2	18	
MW-12D	Silver	12/28/2007	2.2	ug/l	2	18	
MW-2	Silver	12/28/2007	2.1	ug/l	2	18	
MW-4R	Silver	05/17/2000	0.0025	mg/l	0.002	0.018	
MW-5	Silver	10/01/1994	0.01	mg/l	0.01	0.018	
MW-6	Silver	12/11/2000	0.0022	mg/l	0.002	0.018	
MW-1	Sulfate	06/28/2007	22	mg/l	0.03	250	
MW-11	Sulfate	06/27/2007	2.7	mg/l	0.03	250	
MW-12	Sulfate	06/28/2007	1.1	mg/l	0.03	250	
MW-12D	Sulfate	06/28/2007	1.7	mg/l	0.03	250	
MW-13	Sulfate	06/28/2007	27	mg/l	0.03	250	
MW-1B	Sulfate	06/28/2007	4.1	mg/l	0.03	250	
MW-2	Sulfate	06/28/2007	4.8	mg/l	0.03	250	
MW-3	Sulfate	06/27/2007	0.78	mg/l	0.03	250	
MW-6	Sulfate	06/28/2007	2.5	mg/l	0.03	250	
MW-7	Sulfate	06/27/2007	1.7	mg/l	0.03	250	
MW-1	Thallium	12/27/2007	0.064	ug/l	0.036		
MW-11	Thallium	06/12/2001	0.0023	mg/l	0.002		
MW-11	Thallium	06/22/2005	0.021	mg/l	0.01		
MW-11	Thallium	01/12/2006	0.02	mg/l	0.01		
MW-11	Thallium	07/07/2006	0.0253	mg/l	0.01		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-11	Thallium	06/27/2007	0.205	ug/l	0.036		
MW-11	Thallium	12/27/2007	0.998	ug/l	0.036		
MW-12	Thallium	06/28/2007	0.071	ug/l	0.036		
MW-12	Thallium	12/28/2007	0.09	ug/l	0.036		
MW-13	Thallium	06/28/2007	0.084	ug/l	0.036		
MW-14	Thallium	06/13/2001	0.0022	mg/l	0.002		
MW-14	Thallium	06/23/2005	0.017	mg/l	0.01		
MW-14	Thallium	07/07/2006	0.0225	mg/l	0.01		
MW-14	Thallium	06/28/2007	0.136	ug/l	0.036		
MW-14	Thallium	12/28/2007	0.102	ug/l	0.036		
MW-16	Thallium	01/08/2008	0.108	ug/l	0.036		
MW-17	Thallium	06/28/2007	0.085	ug/l	0.036		
MW-17	Thallium	12/27/2007	0.119	ug/l	0.036		
MW-18	Thallium	01/07/2008	0.413	ug/l	0.036		
MW-19	Thallium	01/08/2008	0.043	ug/l	0.036		
MW-1B	Thallium	06/28/2007	0.161	ug/l	0.036		
MW-1B	Thallium	12/28/2007	0.117	ug/l	0.036		
MW-2	Thallium	06/28/2007	18.7	ug/l	0.036		
MW-2	Thallium	12/28/2007	0.074	ug/l	0.036		
MW-20	Thallium	01/08/2008	0.056	ug/l	0.036		
MW-21	Thallium	01/09/2008	0.06	ug/l	0.036		
MW-23	Thallium	01/07/2008	0.101	ug/l	0.036		
MW-24	Thallium	01/08/2008	0.107	ug/l	0.036		
MW-25	Thallium	01/08/2008	0.058	ug/l	0.036		
MW-26	Thallium	01/09/2008	0.12	ug/l	0.036		
MW-27	Thallium	01/09/2008	0.093	ug/l	0.036		
MW-3	Thallium	07/07/2006	0.0172	mg/l	0.01		
MW-4R	Thallium	06/25/2003	0.0036	mg/l	0.002		
MW-4R	Thallium	06/22/2005	0.025	mg/l	0.01		
MW-4R	Thallium	01/12/2006	0.03	mg/l	0.01		
MW-4R	Thallium	07/07/2006	0.0331	mg/l	0.01		
MW-4R	Thallium	06/27/2007	0.043	ug/l	0.036		
MW-5	Thallium	11/11/1996	0.002	mg/l	0.001		
MW-5	Thallium	11/18/1998	0.006	mg/l	0.002		
MW-5	Thallium	06/27/2007	0.054	ug/l	0.036		
MW-5	Thallium	12/19/2007	0.073	ug/l	0.036		
MW-6	Thallium	06/28/2007	0.065	ug/l	0.036		
MW-9	Thallium	06/22/2005	0.017	mg/l	0.01		
MW-9	Thallium	01/12/2006	0.03	mg/l	0.01		
MW-9	Thallium	07/07/2006	0.0427	mg/l	0.01		
MW-9	Thallium	12/19/2007	0.054	ug/l	0.036		
MW-10	Tin, total	12/11/2000	0.0051	mg/l	0.005		
MW-13	Tin, total	12/11/2000	0.011	mg/l	0.005		
MW-1	Vanadium	11/11/1996	0.006	mg/l	0.005		
MW-1	Vanadium	12/03/1997	0.034	mg/l	0.005		
MW-1	Vanadium	06/04/1998	0.008	mg/l	0.005		
MW-1	Vanadium	11/18/1998	0.0075	mg/l	0.005		
MW-10	Vanadium	06/12/2001	0.0056	mg/l	0.005		
MW-11	Vanadium	12/11/2000	0.34	mg/l	0.005		
MW-11	Vanadium	06/12/2001	0.2	mg/l	0.005		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-11	Vanadium	12/27/2001	0.14	mg/l	0.005		
MW-11	Vanadium	06/13/2002	0.085	mg/l	0.005		
MW-11	Vanadium	01/03/2003	0.0083	mg/l	0.005		
MW-11	Vanadium	06/24/2003	0.012	mg/l	0.005		
MW-12	Vanadium	12/11/2000	0.83	mg/l	0.005		
MW-12	Vanadium	06/13/2001	0.14	mg/l	0.005		
MW-12	Vanadium	12/27/2001	0.11	mg/l	0.005		
MW-12	Vanadium	06/12/2002	0.11	mg/l	0.005		
MW-12	Vanadium	01/02/2003	0.057	mg/l	0.005		
MW-12	Vanadium	06/24/2003	0.024	mg/l	0.005		
MW-12	Vanadium	12/28/2007	3.8	ug/l	1		
MW-13	Vanadium	12/11/2000	0.033	mg/l	0.005		
MW-13	Vanadium	06/12/2001	0.065	mg/l	0.005		
MW-13	Vanadium	12/28/2001	0.012	mg/l	0.005		
MW-13	Vanadium	06/12/2002	0.034	mg/l	0.005		
MW-14	Vanadium	12/12/2000	0.018	mg/l	0.005		
MW-14	Vanadium	06/13/2001	0.0068	mg/l	0.005		
MW-14	Vanadium	12/28/2001	0.0058	mg/l	0.005		
MW-14	Vanadium	06/13/2002	0.011	mg/l	0.005		
MW-14	Vanadium	01/03/2003	0.0051	mg/l	0.005		
MW-14	Vanadium	06/24/2003	0.0089	mg/l	0.005		
MW-15	Vanadium	12/11/2000	0.037	mg/l	0.005		
MW-15	Vanadium	06/12/2001	0.11	mg/l	0.005		
MW-15	Vanadium	06/12/2002	0.082	mg/l	0.005		
MW-15	Vanadium	01/03/2003	0.01	mg/l	0.005		
MW-15	Vanadium	06/25/2003	0.0055	mg/l	0.005		
MW-17	Vanadium	06/25/2003	0.0052	mg/l	0.005		
MW-17	Vanadium	12/27/2007	4.2	ug/l	1		
MW-19	Vanadium	01/08/2008	3.2	ug/l	1		
MW-1A	Vanadium	10/01/1994	0.33	mg/l	0.05		
MW-1A	Vanadium	01/31/1995	0.165	mg/l	0.04		
MW-1A	Vanadium	02/15/1995	0.11	mg/l	0.04		
MW-1A	Vanadium	11/11/1996	0.006	mg/l	0.005		
MW-1A	Vanadium	12/03/1997	0.085	mg/l	0.01		
MW-1A	Vanadium	06/04/1998	0.2	mg/l	0.05		
MW-1A	Vanadium	11/18/1998	0.27	mg/l	0.05		
MW-1A	Vanadium	12/11/2000	0.32	mg/l	0.005		
MW-1A	Vanadium	06/13/2001	0.072	mg/l	0.005		
MW-1A	Vanadium	12/28/2001	0.19	mg/l	0.005		
MW-1A	Vanadium	06/25/2003	0.14	mg/l	0.005		
MW-2	Vanadium	10/01/1994	0.14	mg/l	0.05		
MW-2	Vanadium	12/06/1999	0.0091	mg/l	0.005		
MW-20	Vanadium	01/08/2008	6.7	ug/l	1		
MW-25	Vanadium	01/08/2008	8.5	ug/l	1		
MW-27	Vanadium	01/09/2008	7.7	ug/l	1		
MW-3	Vanadium	11/11/1996	0.01	mg/l	0.005		
MW-3	Vanadium	06/24/1997	0.015	mg/l	0.005		
MW-3	Vanadium	12/03/1997	0.11	mg/l	0.015		
MW-3	Vanadium	06/04/1998	0.017	mg/l	0.05		
MW-3	Vanadium	11/18/1998	0.063	mg/l	0.01		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-3	Vanadium	05/13/1999	0.021	mg/l	0.005		
MW-3	Vanadium	06/13/2002	0.014	mg/l	0.005		
MW-3	Vanadium	06/24/2003	0.0068	mg/l	0.005		
MW-4R	Vanadium	10/01/1994	0.59	mg/l	0.05		
MW-4R	Vanadium	01/31/1995	0.099	mg/l	0.04		
MW-4R	Vanadium	02/15/1995	0.057	mg/l	0.04		
MW-4R	Vanadium	03/07/1995	0.061	mg/l	0.04		
MW-4R	Vanadium	11/11/1996	0.01	mg/l	0.005		
MW-4R	Vanadium	06/24/1997	0.014	mg/l	0.005		
MW-4R	Vanadium	12/03/1997	0.045	mg/l	0.005		
MW-4R	Vanadium	06/04/1998	0.019	mg/l	0.005		
MW-4R	Vanadium	11/18/1998	0.014	mg/l	0.005		
MW-5	Vanadium	10/01/1994	1.77	mg/l	0.05		
MW-5	Vanadium	01/31/1995	0.489	mg/l	0.04		
MW-5	Vanadium	02/15/1995	0.392	mg/l	0.04		
MW-5	Vanadium	03/07/1995	0.533	mg/l	0.04		
MW-5	Vanadium	12/07/1995	0.137	mg/l	0.04		
MW-5	Vanadium	05/06/1996	0.112	mg/l	0.04		
MW-5	Vanadium	11/11/1996	0.052	mg/l	0.005		
MW-5	Vanadium	06/24/1997	0.16	mg/l	0.005		
MW-5	Vanadium	12/03/1997	0.48	mg/l	0.05		
MW-5	Vanadium	06/04/1998	0.52	mg/l	0.1		
MW-5	Vanadium	11/18/1998	1.7	mg/l	0.3		
MW-5	Vanadium	05/13/1999	0.17	mg/l	0.005		
MW-5	Vanadium	12/06/1999	0.019	mg/l	0.005		
MW-5	Vanadium	05/17/2000	0.19	mg/l	0.005		
MW-5	Vanadium	12/11/2000	0.18	mg/l	0.005		
MW-5	Vanadium	06/13/2001	0.16	mg/l	0.005		
MW-5	Vanadium	12/27/2001	0.074	mg/l	0.005		
MW-5	Vanadium	06/13/2002	0.092	mg/l	0.005		
MW-5	Vanadium	01/02/2003	0.033	mg/l	0.005		
MW-5	Vanadium	06/24/2003	0.047	mg/l	0.005		
MW-5	Vanadium	07/07/2006	0.0442	mg/l	0.04		
MW-5	Vanadium	12/19/2007	29.6	ug/l	1		
MW-6	Vanadium	03/07/1995	0.1	mg/l	0.04		
MW-6	Vanadium	11/11/1996	0.009	mg/l	0.005		
MW-6	Vanadium	06/24/1997	0.008	mg/l	0.005		
MW-6	Vanadium	12/03/1997	0.018	mg/l	0.025		
MW-6	Vanadium	06/04/1998	0.1	mg/l	0.01		
MW-6	Vanadium	11/18/1998	0.13	mg/l	0.02		
MW-6	Vanadium	05/13/1999	0.026	mg/l	0.005		
MW-6	Vanadium	12/06/1999	0.015	mg/l	0.005		
MW-6	Vanadium	05/17/2000	0.015	mg/l	0.005		
MW-6	Vanadium	12/11/2000	0.0058	mg/l	0.005		
MW-6	Vanadium	06/12/2002	0.0074	mg/l	0.005		
MW-7	Vanadium	03/07/1995	0.058	mg/l	0.04		
MW-7	Vanadium	11/11/1996	0.039	mg/l	0.015		
MW-7	Vanadium	06/24/1997	0.02	mg/l	0.005		
MW-7	Vanadium	12/03/1997	0.017	mg/l	0.005		
MW-7	Vanadium	06/04/1998	0.016	mg/l	0.05		

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-7	Vanadium	11/18/1998	0.02	mg/l	0.005		
MW-7	Vanadium	05/13/1999	0.034	mg/l	0.005		
MW-7	Vanadium	12/06/1999	0.024	mg/l	0.005		
MW-8	Vanadium	11/11/1996	0.006	mg/l	0.005		
MW-8	Vanadium	06/24/1997	0.057	mg/l	0.005		
MW-8	Vanadium	12/03/1997	0.055	mg/l	0.005		
MW-8	Vanadium	06/04/1998	0.012	mg/l	0.005		
MW-8	Vanadium	11/18/1998	0.0096	mg/l	0.005		
MW-8	Vanadium	05/17/2000	0.008	mg/l	0.005		
MW-8	Vanadium	12/12/2000	0.0064	mg/l	0.005		
MW-8	Vanadium	06/12/2001	0.0091	mg/l	0.005		
MW-8	Vanadium	06/12/2002	0.013	mg/l	0.005		
MW-9	Vanadium	12/11/2000	0.015	mg/l	0.005		
MW-9	Vanadium	06/13/2001	0.028	mg/l	0.005		
MW-9	Vanadium	12/27/2001	0.013	mg/l	0.005		
MW-9	Vanadium	06/12/2002	0.017	mg/l	0.005		
MW-9	Vanadium	06/24/2003	0.0084	mg/l	0.005		
MW-1	Zinc, total	10/01/1994	0.08	mg/l	0.05	1.05	
MW-1	Zinc, total	03/07/1995	0.051	mg/l	0.05	1.05	
MW-1	Zinc, total	05/07/1996	0.05	mg/l	0.05	1.05	
MW-1	Zinc, total	11/11/1996	0.029	mg/l	0.01	1.05	
MW-1	Zinc, total	06/24/1997	0.14	mg/l	0.01	1.05	
MW-1	Zinc, total	12/03/1997	0.08	mg/l	0.01	1.05	
MW-1	Zinc, total	06/04/1998	0.041	mg/l	0.01	1.05	
MW-1	Zinc, total	05/13/1999	0.023	mg/l	0.01	1.05	
MW-1	Zinc, total	12/06/1999	0.019	mg/l	0.01	1.05	
MW-1	Zinc, total	05/17/2000	0.046	mg/l	0.01	1.05	
MW-1	Zinc, total	12/12/2000	0.047	mg/l	0.01	1.05	
MW-1	Zinc, total	06/13/2001	0.038	mg/l	0.01	1.05	
MW-1	Zinc, total	12/28/2001	0.038	mg/l	0.01	1.05	
MW-1	Zinc, total	06/13/2002	0.051	mg/l	0.01	1.05	
MW-1	Zinc, total	01/03/2003	0.048	mg/l	0.01	1.05	
MW-1	Zinc, total	06/24/2003	0.044	mg/l	0.01	1.05	
MW-1	Zinc, total	12/11/2003	0.14	mg/l	0.05	1.05	
MW-1	Zinc, total	12/30/2004	0.15	mg/l	0.05	1.05	
MW-1	Zinc, total	06/23/2005	0.2	mg/l	0.05	1.05	
MW-1	Zinc, total	01/13/2006	0.1	mg/l	0.05	1.05	
MW-1	Zinc, total	12/15/2006	0.0103	mg/l	0.01	1.05	
MW-1	Zinc, total	12/27/2007	83.5	ug/l	1	1050	
MW-10	Zinc, total	12/11/2000	0.024	mg/l	0.01	1.05	
MW-10	Zinc, total	06/12/2001	0.093	mg/l	0.01	1.05	
MW-10	Zinc, total	12/27/2001	0.038	mg/l	0.01	1.05	
MW-10	Zinc, total	06/13/2002	0.02	mg/l	0.01	1.05	
MW-10	Zinc, total	01/02/2003	0.032	mg/l	0.01	1.05	
MW-10	Zinc, total	06/24/2003	0.026	mg/l	0.01	1.05	
MW-10	Zinc, total	12/14/2006	0.252	mg/l	0.01	1.05	
MW-10	Zinc, total	06/27/2007	0.043	mg/l	0.0034	1.05	
MW-10	Zinc, total	12/27/2007	9	ug/l	1	1050	
MW-11	Zinc, total	12/11/2000	0.56	mg/l	0.01	1.05	
MW-11	Zinc, total	06/12/2001	0.41	mg/l	0.01	1.05	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-11	Zinc, total	12/27/2001	0.25	mg/l	0.01	1.05	
MW-11	Zinc, total	06/13/2002	0.19	mg/l	0.01	1.05	
MW-11	Zinc, total	01/03/2003	0.062	mg/l	0.01	1.05	
MW-11	Zinc, total	06/24/2003	0.093	mg/l	0.01	1.05	
MW-11	Zinc, total	12/11/2003	0.07	mg/l	0.05	1.05	
MW-11	Zinc, total	06/15/2004	0.098	mg/l	0.05	1.05	
MW-11	Zinc, total	12/14/2006	0.0325	mg/l	0.01	1.05	
MW-11	Zinc, total	06/27/2007	0.0407	mg/l	0.0034	1.05	
MW-11	Zinc, total	12/27/2007	246	ug/l	1	1050	
MW-12	**Zinc, total**	**12/11/2000**	**1.3**	**mg/l**	**0.01**	**1.05**	**0.25**
MW-12	Zinc, total	06/13/2001	0.24	mg/l	0.01	1.05	
MW-12	Zinc, total	12/27/2001	0.18	mg/l	0.01	1.05	
MW-12	Zinc, total	06/12/2002	0.21	mg/l	0.01	1.05	
MW-12	Zinc, total	01/02/2003	0.16	mg/l	0.01	1.05	
MW-12	Zinc, total	06/24/2003	0.12	mg/l	0.01	1.05	
MW-12	Zinc, total	06/15/2004	0.09	mg/l	0.05	1.05	
MW-12	Zinc, total	06/23/2005	0.07	mg/l	0.05	1.05	
MW-12	Zinc, total	06/28/2007	0.0034	mg/l	0.0034	1.05	
MW-12	Zinc, total	12/28/2007	19.4	ug/l	1	1050	
MW-12D	Zinc, total	06/24/2003	0.046	mg/l	0.01	1.05	
MW-12D	Zinc, total	12/15/2006	0.0156	mg/l	0.01	1.05	
MW-12D	Zinc, total	06/28/2007	0.0034	mg/l	0.0034	1.05	
MW-12D	Zinc, total	12/28/2007	7.9	ug/l	1	1050	
MW-13	Zinc, total	12/11/2000	0.074	mg/l	0.01	1.05	
MW-13	Zinc, total	06/12/2001	0.12	mg/l	0.01	1.05	
MW-13	Zinc, total	12/28/2001	0.032	mg/l	0.01	1.05	
MW-13	Zinc, total	06/12/2002	0.078	mg/l	0.01	1.05	
MW-13	Zinc, total	01/03/2003	0.034	mg/l	0.01	1.05	
MW-13	Zinc, total	06/24/2003	0.053	mg/l	0.01	1.05	
MW-13	Zinc, total	12/11/2003	0.07	mg/l	0.05	1.05	
MW-13	Zinc, total	12/15/2006	0.0112	mg/l	0.01	1.05	
MW-13	Zinc, total	06/28/2007	0.0148	mg/l	0.0034	1.05	
MW-13	Zinc, total	12/19/2007	8.1	ug/l	1	1050	
MW-14	Zinc, total	12/12/2000	0.12	mg/l	0.01	1.05	
MW-14	Zinc, total	06/13/2001	0.048	mg/l	0.01	1.05	
MW-14	Zinc, total	12/28/2001	0.03	mg/l	0.01	1.05	
MW-14	Zinc, total	06/13/2002	0.044	mg/l	0.01	1.05	
MW-14	Zinc, total	01/03/2003	0.038	mg/l	0.01	1.05	
MW-14	Zinc, total	06/24/2003	0.034	mg/l	0.01	1.05	
MW-14	Zinc, total	12/15/2006	0.0209	mg/l	0.01	1.05	
MW-14	Zinc, total	06/28/2007	0.0218	mg/l	0.0034	1.05	
MW-14	Zinc, total	12/28/2007	18.1	ug/l	1	1050	
MW-15	Zinc, total	12/11/2000	0.054	mg/l	0.01	1.05	
MW-15	Zinc, total	06/12/2001	0.11	mg/l	0.01	1.05	
MW-15	Zinc, total	12/28/2001	0.022	mg/l	0.01	1.05	
MW-15	Zinc, total	06/12/2002	0.1	mg/l	0.01	1.05	
MW-15	Zinc, total	01/03/2003	0.036	mg/l	0.01	1.05	
MW-15	Zinc, total	06/25/2003	0.044	mg/l	0.01	1.05	
MW-15	Zinc, total	06/28/2007	0.0034	mg/l	0.0034	1.05	
MW-15	Zinc, total	12/19/2007	12.7	ug/l	1	1050	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-16	Zinc, total	01/08/2008	11.7	ug/l	1	1050	
MW-17	Zinc, total	06/25/2003	0.021	mg/l	0.01	1.05	
MW-17	Zinc, total	12/15/2006	0.01	mg/l	0.01	1.05	
MW-17	Zinc, total	06/28/2007	0.0108	mg/l	0.0034	1.05	
MW-17	Zinc, total	12/27/2007	25.3	ug/l	1	1050	
MW-18	Zinc, total	01/07/2008	12.2	ug/l	1	1050	
MW-19	Zinc, total	01/08/2008	3.8	ug/l	1	1050	
MW-1A	Zinc, total	10/01/1994	0.29	mg/l	0.05	1.05	
MW-1A	Zinc, total	01/31/1995	0.265	mg/l	0.05	1.05	
MW-1A	Zinc, total	02/15/1995	0.287	mg/l	0.05	1.05	
MW-1A	Zinc, total	03/07/1995	0.056	mg/l	0.05	1.05	
MW-1A	Zinc, total	05/07/1996	0.061	mg/l	0.05	1.05	
MW-1A	Zinc, total	11/11/1996	0.01	mg/l	0.01	1.05	
MW-1A	Zinc, total	06/24/1997	0.059	mg/l	0.01	1.05	
MW-1A	Zinc, total	12/03/1997	0.093	mg/l	0.01	1.05	
MW-1A	Zinc, total	06/04/1998	0.32	mg/l	0.01	1.05	
MW-1A	Zinc, total	11/18/1998	0.25	mg/l	0.01	1.05	
MW-1A	Zinc, total	12/11/2000	0.31	mg/l	0.01	1.05	
MW-1A	Zinc, total	06/13/2001	0.093	mg/l	0.01	1.05	
MW-1A	Zinc, total	12/28/2001	0.2	mg/l	0.01	1.05	
MW-1A	Zinc, total	06/25/2003	0.26	mg/l	0.01	1.05	
MW-1A	Zinc, total	12/11/2003	0.05	mg/l	0.05	1.05	
MW-1A	Zinc, total	06/16/2004	0.74	mg/l	0.05	1.05	
MW-1B	Zinc, total	06/25/2003	0.023	mg/l	0.01	1.05	
MW-1B	Zinc, total	12/11/2003	0.15	mg/l	0.05	1.05	
MW-1B	Zinc, total	12/15/2006	0.0151	mg/l	0.01	1.05	
MW-1B	Zinc, total	06/28/2007	0.0289	mg/l	0.0034	1.05	
MW-1B	Zinc, total	12/28/2007	22.5	ug/l	1	1050	
MW-2	Zinc, total	10/01/1994	0.21	mg/l	0.05	1.05	
MW-2	Zinc, total	02/15/1995	0.06	mg/l	0.05	1.05	
MW-2	Zinc, total	05/06/1996	0.073	mg/l	0.05	1.05	
MW-2	Zinc, total	12/06/1999	0.34	mg/l	0.01	1.05	
MW-2	Zinc, total	12/15/2006	0.0157	mg/l	0.01	1.05	
MW-2	Zinc, total	06/28/2007	0.674	mg/l	0.0034	1.05	
MW-2	Zinc, total	12/28/2007	13.2	ug/l	1	1050	
MW-20	Zinc, total	01/08/2008	10.4	ug/l	1	1050	
MW-21	Zinc, total	01/09/2008	7.3	ug/l	1	1050	
MW-22	Zinc, total	01/07/2008	3.9	ug/l	1	1050	
MW-23	Zinc, total	01/07/2008	9.6	ug/l	1	1050	
MW-24	Zinc, total	01/08/2008	19.3	ug/l	1	1050	
MW-25	Zinc, total	01/08/2008	15.3	ug/l	1	1050	
MW-26	Zinc, total	01/09/2008	40.7	ug/l	1	1050	
MW-27	Zinc, total	01/09/2008	16.5	ug/l	1	1050	
MW-3	Zinc, total	01/31/1995	0.116	mg/l	0.05	1.05	
MW-3	Zinc, total	11/11/1996	0.028	mg/l	0.01	1.05	
MW-3	Zinc, total	06/24/1997	0.11	mg/l	0.01	1.05	
MW-3	Zinc, total	12/03/1997	0.14	mg/l	0.01	1.05	
MW-3	Zinc, total	06/04/1998	0.036	mg/l	0.01	1.05	
MW-3	Zinc, total	11/18/1998	0.078	mg/l	0.01	1.05	
MW-3	Zinc, total	05/13/1999	0.045	mg/l	0.01	1.05	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-3	Zinc, total	05/17/2000	0.038	mg/l	0.01	1.05	
MW-3	Zinc, total	12/11/2000	0.035	mg/l	0.01	1.05	
MW-3	Zinc, total	06/12/2001	0.014	mg/l	0.01	1.05	
MW-3	Zinc, total	12/27/2001	0.022	mg/l	0.01	1.05	
MW-3	Zinc, total	06/13/2002	0.062	mg/l	0.01	1.05	
MW-3	Zinc, total	01/03/2003	0.022	mg/l	0.01	1.05	
MW-3	Zinc, total	06/24/2003	0.048	mg/l	0.01	1.05	
MW-3	Zinc, total	12/14/2006	0.0117	mg/l	0.01	1.05	
MW-3	Zinc, total	06/27/2007	0.029	mg/l	0.0034	1.05	
MW-3	Zinc, total	12/28/2007	49.5	ug/l	1	1050	
MW-4R	Zinc, total	10/01/1994	0.77	mg/l	0.05	1.05	
MW-4R	Zinc, total	01/31/1995	0.155	mg/l	0.05	1.05	
MW-4R	Zinc, total	02/15/1995	0.128	mg/l	0.05	1.05	
MW-4R	Zinc, total	03/07/1995	0.112	mg/l	0.05	1.05	
MW-4R	Zinc, total	05/06/1996	0.062	mg/l	0.05	1.05	
MW-4R	Zinc, total	11/11/1996	0.029	mg/l	0.01	1.05	
MW-4R	Zinc, total	06/24/1997	0.078	mg/l	0.01	1.05	
MW-4R	Zinc, total	12/03/1997	0.1	mg/l	0.01	1.05	
MW-4R	Zinc, total	06/04/1998	0.063	mg/l	0.01	1.05	
MW-4R	Zinc, total	11/18/1998	0.046	mg/l	0.01	1.05	
MW-4R	Zinc, total	05/13/1999	0.038	mg/l	0.01	1.05	
MW-4R	Zinc, total	12/06/1999	0.023	mg/l	0.01	1.05	
MW-4R	Zinc, total	05/17/2000	0.077	mg/l	0.01	1.05	
MW-4R	Zinc, total	12/11/2000	0.046	mg/l	0.01	1.05	
MW-4R	Zinc, total	06/13/2001	0.045	mg/l	0.01	1.05	
MW-4R	Zinc, total	12/28/2001	0.058	mg/l	0.01	1.05	
MW-4R	Zinc, total	06/13/2002	0.061	mg/l	0.01	1.05	
MW-4R	Zinc, total	01/02/2003	0.078	mg/l	0.01	1.05	
MW-4R	Zinc, total	06/25/2003	0.1	mg/l	0.01	1.05	
MW-5	**Zinc, total**	**10/01/1994**	**3.91**	**mg/l**	**0.05**	**1.05**	**2.86**
MW-5	**Zinc, total**	**01/31/1995**	**2.48**	**mg/l**	**0.05**	**1.05**	**1.43**
MW-5	**Zinc, total**	**02/15/1995**	**1.65**	**mg/l**	**0.05**	**1.05**	**0.6**
MW-5	**Zinc, total**	**03/07/1995**	**2.19**	**mg/l**	**0.05**	**1.05**	**1.14**
MW-5	Zinc, total	12/07/1995	0.51	mg/l	0.05	1.05	
MW-5	Zinc, total	05/06/1996	0.363	mg/l	0.05	1.05	
MW-5	Zinc, total	11/11/1996	0.23	mg/l	0.01	1.05	
MW-5	Zinc, total	06/24/1997	0.17	mg/l	0.01	1.05	
MW-5	Zinc, total	12/03/1997	0.86	mg/l	0.01	1.05	
MW-5	**Zinc, total**	**06/04/1998**	**1.5**	**mg/l**	**0.01**	**1.05**	**0.45**
MW-5	**Zinc, total**	**11/18/1998**	**2.1**	**mg/l**	**0.05**	**1.05**	**1.05**
MW-5	Zinc, total	05/13/1999	0.35	mg/l	0.01	1.05	
MW-5	Zinc, total	12/06/1999	0.053	mg/l	0.01	1.05	
MW-5	Zinc, total	05/17/2000	0.35	mg/l	0.01	1.05	
MW-5	Zinc, total	12/11/2000	0.39	mg/l	0.01	1.05	
MW-5	Zinc, total	06/13/2001	0.39	mg/l	0.01	1.05	
MW-5	Zinc, total	12/27/2001	0.17	mg/l	0.01	1.05	
MW-5	Zinc, total	06/13/2002	0.21	mg/l	0.01	1.05	
MW-5	Zinc, total	01/02/2003	0.08	mg/l	0.01	1.05	
MW-5	Zinc, total	06/24/2003	0.15	mg/l	0.01	1.05	
MW-5	Zinc, total	06/15/2004	0.08	mg/l	0.05	1.05	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-5	Zinc, total	12/29/2004	0.082	mg/l	0.05	1.05	
MW-5	Zinc, total	07/07/2006	0.163	mg/l	0.05	1.05	
MW-5	Zinc, total	06/27/2007	0.0034	mg/l	0.0034	1.05	
MW-5	Zinc, total	12/19/2007	81.9	ug/l	1	1050	
MW-6	Zinc, total	10/01/1994	0.13	mg/l	0.05	1.05	
MW-6	Zinc, total	03/07/1995	0.121	mg/l	0.05	1.05	
MW-6	Zinc, total	11/11/1996	0.015	mg/l	0.01	1.05	
MW-6	Zinc, total	06/24/1997	0.067	mg/l	0.01	1.05	
MW-6	Zinc, total	12/03/1997	0.18	mg/l	0.01	1.05	
MW-6	Zinc, total	06/04/1998	0.14	mg/l	0.01	1.05	
MW-6	Zinc, total	11/18/1998	0.14	mg/l	0.01	1.05	
MW-6	Zinc, total	05/13/1999	0.057	mg/l	0.01	1.05	
MW-6	Zinc, total	12/06/1999	0.046	mg/l	0.01	1.05	
MW-6	Zinc, total	05/17/2000	0.047	mg/l	0.01	1.05	
MW-6	Zinc, total	12/11/2000	0.021	mg/l	0.01	1.05	
MW-6	Zinc, total	06/12/2001	0.064	mg/l	0.01	1.05	
MW-6	Zinc, total	12/28/2001	0.047	mg/l	0.01	1.05	
MW-6	Zinc, total	06/12/2002	0.048	mg/l	0.01	1.05	
MW-6	Zinc, total	01/03/2003	0.046	mg/l	0.01	1.05	
MW-6	Zinc, total	06/24/2003	0.021	mg/l	0.01	1.05	
MW-6	Zinc, total	12/15/2006	0.0162	mg/l	0.01	1.05	
MW-6	Zinc, total	06/28/2007	0.0183	mg/l	0.0034	1.05	
MW-6	Zinc, total	12/19/2007	19.7	ug/l	1	1050	
MW-7	Zinc, total	10/01/1994	0.06	mg/l	0.05	1.05	
MW-7	Zinc, total	01/31/1995	0.077	mg/l	0.05	1.05	
MW-7	Zinc, total	02/15/1995	0.189	mg/l	0.05	1.05	
MW-7	Zinc, total	03/07/1995	0.076	mg/l	0.05	1.05	
MW-7	Zinc, total	11/11/1996	0.05	mg/l	0.01	1.05	
MW-7	Zinc, total	06/24/1997	0.094	mg/l	0.01	1.05	
MW-7	Zinc, total	12/03/1997	0.058	mg/l	0.01	1.05	
MW-7	Zinc, total	06/04/1998	0.044	mg/l	0.01	1.05	
MW-7	Zinc, total	11/18/1998	0.044	mg/l	0.01	1.05	
MW-7	Zinc, total	05/13/1999	0.1	mg/l	0.01	1.05	
MW-7	Zinc, total	12/06/1999	0.07	mg/l	0.01	1.05	
MW-7	Zinc, total	05/17/2000	0.03	mg/l	0.01	1.05	
MW-7	Zinc, total	12/12/2000	0.029	mg/l	0.01	1.05	
MW-7	Zinc, total	06/13/2001	0.02	mg/l	0.01	1.05	
MW-7	Zinc, total	12/28/2001	0.013	mg/l	0.01	1.05	
MW-7	Zinc, total	06/12/2002	0.056	mg/l	0.01	1.05	
MW-7	Zinc, total	01/02/2003	0.015	mg/l	0.01	1.05	
MW-7	Zinc, total	06/25/2003	0.018	mg/l	0.01	1.05	
MW-7	Zinc, total	12/14/2006	0.0101	mg/l	0.01	1.05	
MW-7	Zinc, total	12/27/2007	8	ug/l	1	1050	
MW-8	Zinc, total	10/01/1994	0.07	mg/l	0.05	1.05	
MW-8	Zinc, total	01/31/1995	0.093	mg/l	0.05	1.05	
MW-8	Zinc, total	02/15/1995	0.105	mg/l	0.05	1.05	
MW-8	Zinc, total	12/06/1995	0.1	mg/l	0.05	1.05	
MW-8	Zinc, total	11/11/1996	0.01	mg/l	0.01	1.05	
MW-8	Zinc, total	06/24/1997	0.13	mg/l	0.01	1.05	
MW-8	Zinc, total	12/03/1997	0.079	mg/l	0.01	1.05	

Table 6: Historical Inorganic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-8	Zinc, total	06/04/1998	0.052	mg/l	0.01	1.05	
MW-8	Zinc, total	11/18/1998	0.019	mg/l	0.01	1.05	
MW-8	Zinc, total	12/06/1999	0.021	mg/l	0.01	1.05	
MW-8	Zinc, total	05/17/2000	0.048	mg/l	0.01	1.05	
MW-8	Zinc, total	12/12/2000	0.032	mg/l	0.01	1.05	
MW-8	Zinc, total	06/12/2001	0.045	mg/l	0.01	1.05	
MW-8	Zinc, total	12/28/2001	0.019	mg/l	0.01	1.05	
MW-8	Zinc, total	06/12/2002	0.044	mg/l	0.01	1.05	
MW-8	Zinc, total	01/03/2003	0.021	mg/l	0.01	1.05	
MW-8	Zinc, total	06/25/2003	0.039	mg/l	0.01	1.05	
MW-8	Zinc, total	12/15/2006	0.0189	mg/l	0.01	1.05	
MW-8	Zinc, total	06/28/2007	0.0034	mg/l	0.0034	1.05	
MW-9	Zinc, total	12/11/2000	0.027	mg/l	0.01	1.05	
MW-9	Zinc, total	06/13/2001	0.049	mg/l	0.01	1.05	
MW-9	Zinc, total	12/27/2001	0.035	mg/l	0.01	1.05	
MW-9	Zinc, total	06/12/2002	0.038	mg/l	0.01	1.05	
MW-9	Zinc, total	01/02/2003	0.03	mg/l	0.01	1.05	
MW-9	Zinc, total	06/24/2003	0.027	mg/l	0.01	1.05	
MW-9	Zinc, total	12/29/2004	0.088	mg/l	0.05	1.05	
MW-9	Zinc, total	12/19/2007	10.6	ug/l	1	1050	
Supply Well	Zinc, total	06/28/2007	0.187	mg/l	0.0034	1.05	

[1] Table only contains detected constituents.

[2] PQL = Practical Quantitation Limit

[3] NCGW2L = North Carolina Ground Water 2L Standard

Table 7: Historical Inorganic Surface Water Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	SWSTD [3]	Exceedance
SW-5	Antimony, total	12/12/2000	0.0056	mg/l	0.005		
SW-4R	Arsenic	12/28/2007	6.1	ug/l	2	50	
SW-5	Arsenic	12/12/2000	0.031	mg/l	0.005	0.05	
SW-5	Arsenic	12/27/2007	4.1	ug/l	2	50	
SW-1	Barium	12/06/1999	0.1	mg/l	0.005	2	
SW-3	Barium	10/01/1994	0.54	mg/l	0.1	2	
SW-3	Barium	11/11/1996	0.02	mg/l	0.01	2	
SW-3	Barium	06/24/1997	0.041	mg/l	0.01	2	
SW-3	Barium	12/03/1997	0.036	mg/l	0.01	2	
SW-3	Barium	06/04/1998	0.041	mg/l	0.01	2	
SW-3	Barium	11/18/1998	0.031	mg/l	0.01	2	
SW-3	Barium	05/13/1999	0.065	mg/l	0.005	2	
SW-3	Barium	12/06/1999	0.059	mg/l	0.005	2	
SW-3	Barium	05/17/2000	0.032	mg/l	0.005	2	
SW-3	Barium	12/12/2000	0.032	mg/l	0.005	2	
SW-3	Barium	06/12/2001	0.028	mg/l	0.005	2	
SW-3	Barium	12/28/2001	0.024	mg/l	0.005	2	
SW-3	Barium	06/13/2002	0.037	mg/l	0.005	2	
SW-3	Barium	01/02/2003	0.031	mg/l	0.005	2	
SW-3	Barium	06/24/2003	0.026	mg/l	0.005	2	
SW-3	Barium	12/14/2006	0.03	mg/l	0.1	2	
SW-4	Barium	06/25/2003	0.029	mg/l	0.005	2	
SW-4R	Barium	01/02/2003	0.027	mg/l	0.005	2	
SW-4R	Barium	06/25/2003	0.027	mg/l	0.005	2	
SW-4R	Barium	12/15/2006	0.0161	mg/l	0.1	2	
SW-4R	Barium	06/28/2007	0.017	mg/l	0.001	2	
SW-4R	Barium	12/28/2007	16.1	ug/l	0.2	2000	
SW-5	Barium	06/24/1997	0.04	mg/l	0.01	2	
SW-5	Barium	12/03/1997	0.043	mg/l	0.01	2	
SW-5	Barium	06/04/1998	0.038	mg/l	0.01	2	
SW-5	Barium	11/18/1998	0.033	mg/l	0.01	2	
SW-5	Barium	05/13/1999	0.042	mg/l	0.005	2	
SW-5	Barium	05/17/2000	0.056	mg/l	0.005	2	
SW-5	Barium	12/12/2000	1.1	mg/l	0.005	2	
SW-5	Barium	06/13/2001	0.064	mg/l	0.005	2	
SW-5	Barium	12/28/2001	0.087	mg/l	0.005	2	
SW-5	Barium	01/02/2003	0.05	mg/l	0.005	2	
SW-5	Barium	06/25/2003	0.043	mg/l	0.005	2	
SW-5	Barium	12/14/2006	0.135	mg/l	0.1	2	
SW-5	Barium	06/27/2007	0.0258	mg/l	0.001	2	
SW-5	Barium	12/27/2007	15.3	ug/l	0.2	2000	
SW-5	Beryllium, total	12/12/2000	0.01	mg/l	0.001		
SW-3	Cadmium, total	12/12/2003	0.001	mg/l	0.001	0.0018	
SW-4R	Cadmium, total	12/28/2007	0.8	ug/l	0.5	1.75	
SW-5	Cadmium, total	12/27/2007	0.5	ug/l	0.5	1.75	
SW-1	Chromium, total	12/06/1999	0.0091	mg/l	0.002	0.05	
SW-3	Chromium, total	05/13/1999	0.014	mg/l	0.002	0.05	
SW-3	Chromium, total	12/06/1999	0.02	mg/l	0.002	0.05	
SW-4R	Chromium, total	12/28/2007	2.9	ug/l	2	50	
SW-5	**Chromium, total**	**12/12/2000**	**0.47**	**mg/l**	**0.002**	**0.05**	**0.42**

Table 7: Historical Inorganic Surface Water Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	SWSTD [3]	Exceedance
SW-5	Chromium, total	12/28/2001	0.012	mg/l	0.002	0.05	
SW-5	Chromium, total	12/27/2007	2	ug/l	2	50	
SW-1	Cobalt	12/06/1999	0.14	mg/l	0.005		
SW-3	Cobalt	10/01/1994	0.16	mg/l	0.1		
SW-3	Cobalt	03/07/1995	0.011	mg/l	0.01		
SW-3	Cobalt	12/07/1995	0.143	mg/l	0.01		
SW-3	Cobalt	06/04/1998	0.003	mg/l	0.002		
SW-3	Cobalt	11/18/1998	0.0036	mg/l	0.002		
SW-3	Cobalt	05/13/1999	0.0071	mg/l	0.005		
SW-3	Cobalt	05/17/2000	0.011	mg/l	0.005		
SW-3	Cobalt	12/12/2000	0.013	mg/l	0.005		
SW-3	Cobalt	06/12/2001	0.0081	mg/l	0.005		
SW-3	Cobalt	12/28/2001	0.0054	mg/l	0.005		
SW-3	Cobalt	06/13/2002	0.014	mg/l	0.005		
SW-3	Cobalt	01/02/2003	0.0094	mg/l	0.005		
SW-3	Cobalt	06/24/2003	0.016	mg/l	0.005		
SW-3	Cobalt	06/15/2004	0.025	mg/l	0.01		
SW-3	Cobalt	12/29/2004	0.017	mg/l	0.01		
SW-3	Cobalt	06/22/2005	0.025	mg/l	0.01		
SW-3	Cobalt	07/07/2006	0.122	mg/l	0.01		
SW-3	Cobalt	12/14/2006	0.0241	mg/l	0.01		
SW-4R	Cobalt	06/22/2005	0.025	mg/l	0.01		
SW-4R	Cobalt	12/28/2007	3.6	ug/l	2		
SW-5	Cobalt	06/24/1997	0.027	mg/l	0.006		
SW-5	Cobalt	12/03/1997	0.014	mg/l	0.002		
SW-5	Cobalt	06/04/1998	0.005	mg/l	0.002		
SW-5	Cobalt	11/18/1998	0.0072	mg/l	0.002		
SW-5	Cobalt	05/13/1999	0.0063	mg/l	0.005		
SW-5	Cobalt	05/17/2000	0.0084	mg/l	0.005		
SW-5	Cobalt	12/12/2000	0.15	mg/l	0.005		
SW-5	Cobalt	06/13/2001	0.01	mg/l	0.005		
SW-5	Cobalt	12/28/2001	0.022	mg/l	0.005		
SW-5	Cobalt	06/25/2003	0.017	mg/l	0.005		
SW-5	Cobalt	12/12/2003	0.012	mg/l	0.01		
SW-5	Cobalt	06/16/2004	0.012	mg/l	0.01		
SW-5	Cobalt	12/29/2004	0.018	mg/l	0.01		
SW-5	Cobalt	06/22/2005	0.024	mg/l	0.01		
SW-5	Cobalt	01/12/2006	0.07	mg/l	0.01		
SW-5	Cobalt	12/14/2006	0.168	mg/l	0.01		
SW-5	Cobalt	06/27/2007	0.0025	mg/l	0.0025		
SW-5	Cobalt	12/27/2007	4.6	ug/l	2		
SW-3	Copper	12/06/1999	0.01	mg/l	0.002	1	
SW-4R	Copper	12/28/2007	0.7	ug/l	0.6	1000	
SW-5	Copper	12/12/2000	0.076	mg/l	0.002	1	
SW-5	Copper	12/28/2001	0.0035	mg/l	0.002	1	
SW-3	Lead, total	05/13/1999	0.0052	mg/l	0.005	0.015	
SW-3	Lead, total	12/06/1999	0.006	mg/l	0.005	0.015	
SW-5	Lead, total	06/04/1998	0.011	mg/l	0.005	0.015	
SW-5	**Lead, total**	**12/12/2000**	**0.056**	**mg/l**	**0.005**	**0.015**	**0.041**
SW-3	Mercury	05/13/1999	0.0003	mg/l	0.0002	0.0011	

Table 7: Historical Inorganic Surface Water Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	SWSTD [3]	Exceedance
SW-1	Nickel	12/06/1999	0.009	mg/l	0.005	0.1	
SW-3	Nickel	05/13/1999	0.0092	mg/l	0.005	0.1	
SW-3	Nickel	12/06/1999	0.0082	mg/l	0.005	0.1	
SW-4	Nickel	12/07/1995	0.067	mg/l	0.05	0.1	
SW-4R	Nickel	12/28/2007	2.3	ug/l	2	100	
SW-5	**Nickel**	**12/12/2000**	**0.14**	**mg/l**	**0.005**	**0.1**	**0.04**
SW-5	Nickel	12/28/2001	0.007	mg/l	0.005	0.1	
SW-4R	Silver	12/28/2007	3.9	ug/l	2	18	
SW-5	Silver	12/27/2007	2.5	ug/l	2	18	
SW-3	Thallium	07/07/2006	0.0294	mg/l	0.01		
SW-5	Thallium	01/12/2006	0.02	mg/l	0.01		
SW-1	Vanadium	12/06/1999	0.0092	mg/l	0.005		
SW-3	Vanadium	05/13/1999	0.012	mg/l	0.005		
SW-3	Vanadium	12/06/1999	0.024	mg/l	0.005		
SW-4R	Vanadium	12/28/2007	3.3	ug/l	1		
SW-5	Vanadium	12/12/2000	0.25	mg/l	0.005		
SW-5	Vanadium	12/28/2001	0.0081	mg/l	0.005		
SW-5	Vanadium	12/27/2007	1.6	ug/l	1		
SW-1	Zinc, total	12/06/1999	0.033	mg/l	0.01	1.05	
SW-3	Zinc, total	10/01/1994	0.06	mg/l	0.05	1.05	
SW-3	Zinc, total	05/06/1996	0.055	mg/l	0.05	1.05	
SW-3	Zinc, total	06/24/1997	0.028	mg/l	0.01	1.05	
SW-3	Zinc, total	12/03/1997	0.01	mg/l	0.01	1.05	
SW-3	Zinc, total	06/04/1998	0.01	mg/l	0.01	1.05	
SW-3	Zinc, total	05/13/1999	0.02	mg/l	0.01	1.05	
SW-3	Zinc, total	12/06/1999	0.031	mg/l	0.01	1.05	
SW-3	Zinc, total	06/13/2002	0.028	mg/l	0.01	1.05	
SW-3	Zinc, total	06/24/2003	0.023	mg/l	0.01	1.05	
SW-4R	Zinc, total	12/28/2007	3.5	ug/l	1	1050	
SW-5	Zinc, total	06/24/1997	0.061	mg/l	0.01	1.05	
SW-5	Zinc, total	12/03/1997	0.43	mg/l	0.01	1.05	
SW-5	Zinc, total	06/04/1998	0.019	mg/l	0.01	1.05	
SW-5	Zinc, total	12/12/2000	0.47	mg/l	0.01	1.05	
SW-5	Zinc, total	06/13/2001	0.019	mg/l	0.01	1.05	
SW-5	Zinc, total	12/28/2001	0.011	mg/l	0.01	1.05	
SW-5	Zinc, total	12/27/2007	3	ug/l	1	1050	

[1] Table only contains detected constituents.

[2] PQL = Practical Quantitation Limit

[3] SWSTD = North Carolina Surface Water Class C or Class IV as applicable

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1	1,1-Dichloroethane	10/01/1994	19	ug/l	5	70	
MW-1	1,1-Dichloroethane	01/31/1995	17	ug/l	5	70	
MW-1	1,1-Dichloroethane	02/15/1995	17	ug/l	5	70	
MW-1	1,1-Dichloroethane	03/07/1995	15	ug/l	5	70	
MW-1	1,1-Dichloroethane	12/06/1995	13	ug/l	5	70	
MW-1	1,1-Dichloroethane	05/07/1996	16	ug/l	5	70	
MW-1	1,1-Dichloroethane	11/11/1996	15	ug/l	5	70	
MW-1	1,1-Dichloroethane	06/24/1997	22	ug/l	5	70	
MW-1	1,1-Dichloroethane	12/03/1997	19	ug/l	2	70	
MW-1	1,1-Dichloroethane	06/04/1998	19	ug/l	5	70	
MW-1	1,1-Dichloroethane	11/18/1998	15.1	ug/l	2	70	
MW-1	1,1-Dichloroethane	05/13/1999	20	ug/l	5	70	
MW-1	1,1-Dichloroethane	12/06/1999	18	ug/l	5	70	
MW-1	1,1-Dichloroethane	05/17/2000	17	ug/l	5	70	
MW-1	1,1-Dichloroethane	12/12/2000	17	ug/l	5	70	
MW-1	1,1-Dichloroethane	06/13/2001	15	ug/l	5	70	
MW-1	1,1-Dichloroethane	12/28/2001	13	ug/l	5	70	
MW-1	1,1-Dichloroethane	06/13/2002	17	ug/l	5	70	
MW-1	1,1-Dichloroethane	01/03/2003	8	ug/l	5	70	
MW-1	1,1-Dichloroethane	06/24/2003	8.3	ug/l	5	70	
MW-1	1,1-Dichloroethane	12/11/2003	6.2	ug/l	5	70	
MW-1	1,1-Dichloroethane	06/16/2004	5.4	ug/l	5	70	
MW-1	1,1-Dichloroethane	12/15/2006	2.1	ug/l	5	70	
MW-1	1,1-Dichloroethane	06/28/2007	2.2	ug/l	0.09	70	
MW-1	1,1-Dichloroethane	12/27/2007	2.5	ug/l	0.09	70	
MW-10	1,1-Dichloroethane	06/27/2007	0.09	ug/l	0.09	70	
MW-10	1,1-Dichloroethane	12/27/2007	0.91	ug/l	0.09	70	
MW-11	1,1-Dichloroethane	12/11/2000	11	ug/l	5	70	
MW-11	1,1-Dichloroethane	06/12/2001	10	ug/l	5	70	
MW-11	1,1-Dichloroethane	12/27/2001	9.8	ug/l	5	70	
MW-11	1,1-Dichloroethane	06/13/2002	7	ug/l	5	70	
MW-11	1,1-Dichloroethane	12/14/2006	1.1	ug/l	5	70	
MW-11	1,1-Dichloroethane	06/27/2007	1.4	ug/l	0.09	70	
MW-11	1,1-Dichloroethane	12/27/2007	2.9	ug/l	0.09	70	
MW-12	1,1-Dichloroethane	12/11/2000	17	ug/l	5	70	
MW-12	1,1-Dichloroethane	06/13/2001	17	ug/l	5	70	
MW-12	1,1-Dichloroethane	12/27/2001	17	ug/l	5	70	
MW-12	1,1-Dichloroethane	06/12/2002	11	ug/l	5	70	
MW-12	1,1-Dichloroethane	01/02/2003	7.5	ug/l	5	70	
MW-12	1,1-Dichloroethane	06/24/2003	8.7	ug/l	5	70	
MW-12	1,1-Dichloroethane	12/11/2003	5.4	ug/l	5	70	
MW-12	1,1-Dichloroethane	01/12/2006	5.9	ug/l	5	70	
MW-12	1,1-Dichloroethane	12/14/2006	3.7	ug/l	5	70	
MW-12	1,1-Dichloroethane	06/28/2007	2.9	ug/l	0.09	70	
MW-12	1,1-Dichloroethane	12/28/2007	5	ug/l	0.09	70	
MW-12D	1,1-Dichloroethane	06/28/2007	0.09	ug/l	0.09	70	
MW-12D	1,1-Dichloroethane	12/28/2007	0.89	ug/l	0.09	70	
MW-13	1,1-Dichloroethane	06/28/2007	0.09	ug/l	0.09	70	
MW-13	1,1-Dichloroethane	12/19/2007	0.56	ug/l	0.09	70	
MW-14	1,1-Dichloroethane	12/12/2000	9.4	ug/l	5	70	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-14	1,1-Dichloroethane	06/13/2001	9.5	ug/l	5	70	
MW-14	1,1-Dichloroethane	12/28/2001	9	ug/l	5	70	
MW-14	1,1-Dichloroethane	06/13/2002	11	ug/l	5	70	
MW-14	1,1-Dichloroethane	12/15/2006	1.4	ug/l	5	70	
MW-14	1,1-Dichloroethane	06/28/2007	1.3	ug/l	0.09	70	
MW-14	1,1-Dichloroethane	12/28/2007	2.2	ug/l	0.09	70	
MW-15	1,1-Dichloroethane	12/11/2000	27	ug/l	5	70	
MW-15	1,1-Dichloroethane	06/12/2001	41	ug/l	5	70	
MW-15	1,1-Dichloroethane	12/28/2001	17	ug/l	5	70	
MW-15	1,1-Dichloroethane	06/12/2002	28	ug/l	5	70	
MW-15	1,1-Dichloroethane	01/03/2003	24	ug/l	5	70	
MW-15	1,1-Dichloroethane	06/25/2003	53	ug/l	5	70	
MW-15	1,1-Dichloroethane	12/12/2003	13	ug/l	5	70	
MW-15	1,1-Dichloroethane	06/15/2004	9.2	ug/l	5	70	
MW-15	1,1-Dichloroethane	12/30/2004	26	ug/l	5	70	
MW-15	1,1-Dichloroethane	06/23/2005	6	ug/l	5	70	
MW-15	1,1-Dichloroethane	01/12/2006	9.1	ug/l	5	70	
MW-15	1,1-Dichloroethane	07/07/2006	5.8	ug/l	5	70	
MW-15	1,1-Dichloroethane	12/15/2006	4.6	ug/l	5	70	
MW-15	1,1-Dichloroethane	06/28/2007	4.2	ug/l	0.09	70	
MW-15	1,1-Dichloroethane	12/19/2007	3.7	ug/l	0.09	70	
MW-16	1,1-Dichloroethane	01/08/2008	21	ug/l	0.09	70	
MW-17	1,1-Dichloroethane	06/25/2003	17	ug/l	5	70	
MW-17	1,1-Dichloroethane	12/12/2003	12	ug/l	5	70	
MW-17	1,1-Dichloroethane	06/15/2004	9.1	ug/l	5	70	
MW-17	1,1-Dichloroethane	12/30/2004	6.3	ug/l	5	70	
MW-17	1,1-Dichloroethane	06/23/2005	7	ug/l	5	70	
MW-17	1,1-Dichloroethane	12/15/2006	3.2	ug/l	5	70	
MW-17	1,1-Dichloroethane	06/28/2007	3	ug/l	0.09	70	
MW-17	1,1-Dichloroethane	12/27/2007	3.3	ug/l	0.09	70	
MW-1A	1,1-Dichloroethane	12/03/1997	2	ug/l	1	70	
MW-1A	1,1-Dichloroethane	12/28/2001	6.5	ug/l	5	70	
MW-1A	1,1-Dichloroethane	06/25/2003	6.2	ug/l	5	70	
MW-1B	1,1-Dichloroethane	12/15/2006	1.6	ug/l	5	70	
MW-1B	1,1-Dichloroethane	06/28/2007	1.8	ug/l	0.09	70	
MW-1B	1,1-Dichloroethane	12/28/2007	2.8	ug/l	0.09	70	
MW-2	1,1-Dichloroethane	10/01/1994	33	ug/l	5	70	
MW-2	1,1-Dichloroethane	01/31/1995	26	ug/l	5	70	
MW-2	1,1-Dichloroethane	02/15/1995	26	ug/l	5	70	
MW-2	1,1-Dichloroethane	03/07/1995	26	ug/l	5	70	
MW-2	1,1-Dichloroethane	12/06/1995	19	ug/l	5	70	
MW-2	1,1-Dichloroethane	05/06/1996	11	ug/l	5	70	
MW-2	1,1-Dichloroethane	12/06/1999	12	ug/l	5	70	
MW-2	1,1-Dichloroethane	12/15/2006	2	ug/l	5	70	
MW-2	1,1-Dichloroethane	06/28/2007	1.9	ug/l	0.09	70	
MW-2	1,1-Dichloroethane	12/28/2007	1.5	ug/l	0.09	70	
MW-20	1,1-Dichloroethane	01/08/2008	0.94	ug/l	0.09	70	
MW-21	1,1-Dichloroethane	01/09/2008	2.4	ug/l	0.09	70	
MW-23	1,1-Dichloroethane	01/07/2008	1.2	ug/l	0.09	70	
MW-24	1,1-Dichloroethane	01/08/2008	1.1	ug/l	0.09	70	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-25	1,1-Dichloroethane	01/08/2008	3.4	ug/l	0.09	70	
MW-26	1,1-Dichloroethane	01/09/2008	1.7	ug/l	0.09	70	
MW-27	1,1-Dichloroethane	01/09/2008	0.99	ug/l	0.09	70	
MW-3	1,1-Dichloroethane	10/01/1994	22	ug/l	5	70	
MW-3	1,1-Dichloroethane	01/31/1995	13	ug/l	5	70	
MW-3	1,1-Dichloroethane	02/15/1995	18	ug/l	5	70	
MW-3	1,1-Dichloroethane	03/07/1995	13	ug/l	5	70	
MW-3	1,1-Dichloroethane	12/07/1995	9	ug/l	5	70	
MW-3	1,1-Dichloroethane	05/06/1996	9	ug/l	5	70	
MW-3	1,1-Dichloroethane	11/11/1996	8.8	ug/l	5	70	
MW-3	1,1-Dichloroethane	06/24/1997	5.2	ug/l	5	70	
MW-3	1,1-Dichloroethane	12/03/1997	6	ug/l	1	70	
MW-3	1,1-Dichloroethane	06/27/2007	0.09	ug/l	0.09	70	
MW-3	1,1-Dichloroethane	12/28/2007	1.1	ug/l	0.09	70	
MW-4	1,1-Dichloroethane	10/01/1994	14	ug/l	5	70	
MW-4	1,1-Dichloroethane	12/03/1997	16	ug/l	1	70	
MW-4R	1,1-Dichloroethane	10/01/1994	14	ug/l	5	70	
MW-4R	1,1-Dichloroethane	01/31/1995	17	ug/l	5	70	
MW-4R	1,1-Dichloroethane	02/15/1995	17	ug/l	5	70	
MW-4R	1,1-Dichloroethane	03/07/1995	14	ug/l	5	70	
MW-4R	1,1-Dichloroethane	12/06/1995	11	ug/l	5	70	
MW-4R	1,1-Dichloroethane	05/06/1996	13	ug/l	5	70	
MW-4R	1,1-Dichloroethane	11/11/1996	16	ug/l	5	70	
MW-4R	1,1-Dichloroethane	06/24/1997	13	ug/l	5	70	
MW-4R	1,1-Dichloroethane	06/04/1998	10	ug/l	5	70	
MW-4R	1,1-Dichloroethane	11/18/1998	10.1	ug/l	2	70	
MW-4R	1,1-Dichloroethane	05/13/1999	15	ug/l	5	70	
MW-4R	1,1-Dichloroethane	12/06/1999	18	ug/l	5	70	
MW-4R	1,1-Dichloroethane	05/17/2000	12	ug/l	5	70	
MW-4R	1,1-Dichloroethane	12/11/2000	15	ug/l	5	70	
MW-4R	1,1-Dichloroethane	06/13/2001	13	ug/l	5	70	
MW-4R	1,1-Dichloroethane	12/28/2001	16	ug/l	5	70	
MW-4R	1,1-Dichloroethane	06/13/2002	7.4	ug/l	5	70	
MW-4R	1,1-Dichloroethane	06/25/2003	7	ug/l	5	70	
MW-4R	1,1-Dichloroethane	12/12/2003	7.4	ug/l	5	70	
MW-4R	1,1-Dichloroethane	06/15/2004	7.4	ug/l	5	70	
MW-4R	1,1-Dichloroethane	12/29/2004	7.5	ug/l	5	70	
MW-4R	1,1-Dichloroethane	06/22/2005	7	ug/l	5	70	
MW-4R	1,1-Dichloroethane	01/12/2006	14.6	ug/l	5	70	
MW-4R	1,1-Dichloroethane	07/07/2006	6	ug/l	5	70	
MW-4R	1,1-Dichloroethane	12/14/2006	4.3	ug/l	5	70	
MW-4R	1,1-Dichloroethane	06/27/2007	6.2	ug/l	0.09	70	
MW-4R	1,1-Dichloroethane	12/27/2007	7.6	ug/l	0.09	70	
MW-5	1,1-Dichloroethane	10/01/1994	11	ug/l	5	70	
MW-5	1,1-Dichloroethane	01/31/1995	12	ug/l	5	70	
MW-5	1,1-Dichloroethane	02/15/1995	8	ug/l	5	70	
MW-5	1,1-Dichloroethane	03/07/1995	7	ug/l	5	70	
MW-5	1,1-Dichloroethane	12/07/1995	14	ug/l	5	70	
MW-5	1,1-Dichloroethane	05/06/1996	16	ug/l	5	70	
MW-5	1,1-Dichloroethane	11/11/1996	16	ug/l	5	70	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-5	1,1-Dichloroethane	06/24/1997	15	ug/l	5	70	
MW-5	1,1-Dichloroethane	12/03/1997	19	ug/l	1	70	
MW-5	1,1-Dichloroethane	06/04/1998	22	ug/l	5	70	
MW-5	1,1-Dichloroethane	11/18/1998	11.2	ug/l	2	70	
MW-5	1,1-Dichloroethane	05/13/1999	15	ug/l	5	70	
MW-5	1,1-Dichloroethane	12/06/1999	13	ug/l	5	70	
MW-5	1,1-Dichloroethane	05/17/2000	10	ug/l	5	70	
MW-5	1,1-Dichloroethane	12/11/2000	11	ug/l	5	70	
MW-5	1,1-Dichloroethane	06/13/2001	12	ug/l	5	70	
MW-5	1,1-Dichloroethane	12/27/2001	6.2	ug/l	5	70	
MW-5	1,1-Dichloroethane	06/13/2002	5.9	ug/l	5	70	
MW-5	1,1-Dichloroethane	01/02/2003	6.1	ug/l	5	70	
MW-5	1,1-Dichloroethane	06/24/2003	6.4	ug/l	5	70	
MW-5	1,1-Dichloroethane	01/12/2006	7.5	ug/l	5	70	
MW-5	1,1-Dichloroethane	12/14/2006	2.9	ug/l	5	70	
MW-5	1,1-Dichloroethane	06/27/2007	3.6	ug/l	0.09	70	
MW-5	1,1-Dichloroethane	12/19/2007	5.7	ug/l	0.09	70	
MW-7	1,1-Dichloroethane	10/01/1994	16	ug/l	5	70	
MW-7	1,1-Dichloroethane	01/31/1995	26	ug/l	5	70	
MW-7	1,1-Dichloroethane	02/15/1995	29	ug/l	5	70	
MW-7	1,1-Dichloroethane	03/07/1995	25	ug/l	5	70	
MW-7	1,1-Dichloroethane	12/06/1995	25	ug/l	5	70	
MW-7	1,1-Dichloroethane	05/06/1996	26	ug/l	5	70	
MW-7	1,1-Dichloroethane	11/11/1996	16	ug/l	5	70	
MW-7	1,1-Dichloroethane	06/24/1997	19	ug/l	5	70	
MW-7	1,1-Dichloroethane	12/03/1997	17	ug/l	1	70	
MW-7	1,1-Dichloroethane	06/04/1998	14	ug/l	5	70	
MW-7	1,1-Dichloroethane	11/18/1998	8.8	ug/l	2	70	
MW-7	1,1-Dichloroethane	05/13/1999	13	ug/l	5	70	
MW-7	1,1-Dichloroethane	12/06/1999	17	ug/l	5	70	
MW-7	1,1-Dichloroethane	05/17/2000	15	ug/l	5	70	
MW-7	1,1-Dichloroethane	12/12/2000	15	ug/l	5	70	
MW-7	1,1-Dichloroethane	06/13/2001	15	ug/l	5	70	
MW-7	1,1-Dichloroethane	12/28/2001	15	ug/l	5	70	
MW-7	1,1-Dichloroethane	06/12/2002	10	ug/l	5	70	
MW-7	1,1-Dichloroethane	01/02/2003	8.7	ug/l	5	70	
MW-7	1,1-Dichloroethane	06/25/2003	14	ug/l	5	70	
MW-7	1,1-Dichloroethane	12/11/2003	8.2	ug/l	5	70	
MW-7	1,1-Dichloroethane	06/16/2004	6.2	ug/l	5	70	
MW-7	1,1-Dichloroethane	12/30/2004	6.3	ug/l	5	70	
MW-7	1,1-Dichloroethane	06/23/2005	5	ug/l	5	70	
MW-7	1,1-Dichloroethane	01/12/2006	5.9	ug/l	5	70	
MW-7	1,1-Dichloroethane	12/14/2006	3.7	ug/l	5	70	
MW-7	1,1-Dichloroethane	06/27/2007	2.7	ug/l	0.09	70	
MW-7	1,1-Dichloroethane	12/27/2007	4.9	ug/l	0.09	70	
MW-8	1,1-Dichloroethane	10/01/1994	10	ug/l	5	70	
MW-8	1,1-Dichloroethane	01/31/1995	8	ug/l	5	70	
MW-8	1,1-Dichloroethane	02/15/1995	11	ug/l	5	70	
MW-8	1,1-Dichloroethane	03/07/1995	11	ug/l	5	70	
MW-8	1,1-Dichloroethane	12/06/1995	8	ug/l	5	70	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-8	1,1-Dichloroethane	05/06/1996	12	ug/l	5	70	
MW-8	1,1-Dichloroethane	11/11/1996	9	ug/l	5	70	
MW-8	1,1-Dichloroethane	06/24/1997	11	ug/l	5	70	
MW-8	1,1-Dichloroethane	12/03/1997	14	ug/l	1	70	
MW-8	1,1-Dichloroethane	06/04/1998	12	ug/l	5	70	
MW-8	1,1-Dichloroethane	11/18/1998	7.7	ug/l	2	70	
MW-8	1,1-Dichloroethane	05/13/1999	9.3	ug/l	5	70	
MW-8	1,1-Dichloroethane	12/06/1999	8.1	ug/l	5	70	
MW-8	1,1-Dichloroethane	06/28/2007	0.09	ug/l	0.09	70	
MW-9	1,1-Dichloroethane	12/11/2000	5.2	ug/l	5	70	
MW-9	1,1-Dichloroethane	01/12/2006	6	ug/l	5	70	
MW-9	1,1-Dichloroethane	12/14/2006	1.3	ug/l	5	70	
MW-9	1,1-Dichloroethane	06/27/2007	1.2	ug/l	0.09	70	
MW-9	1,1-Dichloroethane	12/19/2007	2.4	ug/l	0.09	70	
MW-11	1,2-Dichlorobenzene	06/27/2007	0.47	ug/l	0.17	620	
MW-3	1,2-Dichlorobenzene	06/27/2007	0.17	ug/l	0.17	620	
MW-3	1,2-Dichlorobenzene	12/28/2007	0.85	ug/l	0.17	620	
MW-16	**1,2-Dichloropropane**	**01/08/2008**	**1**	**ug/l**	**0.18**	**0.51**	**0.49**
MW-3	**1,2-Dichloropropane**	**10/01/1994**	**11**	**ug/l**	**5**	**0.51**	**10.49**
MW-3	**1,2-Dichloropropane**	**01/31/1995**	**6**	**ug/l**	**5**	**0.51**	**5.49**
MW-3	**1,2-Dichloropropane**	**02/15/1995**	**9**	**ug/l**	**5**	**0.51**	**8.49**
MW-3	**1,2-Dichloropropane**	**03/07/1995**	**7**	**ug/l**	**5**	**0.51**	**6.49**
MW-3	**1,2-Dichloropropane**	**12/03/1997**	**2**	**ug/l**	**1**	**0.51**	**1.49**
MW-3	1,2,4-Trimethylbenzene	12/03/1997	5	ug/l	1		
MW-3	1,2,4-Trimethylbenzene	05/13/1999	5.8	ug/l	5		
MW-3	1,3,5-Trimethylbenzene	12/03/1997	2	ug/l	1		
MW-5	2-Butanone	06/27/2007	0.56	ug/l	0.56	4200	
MW-3	2,4,5-TP (Silvex)	06/13/2002	11	ug/l	2	50	
MW-1	Acetone	06/28/2007	0.9	ug/l	0.9	700	
MW-10	Acetone	06/27/2007	0.9	ug/l	0.9	700	
MW-12D	Acetone	06/28/2007	0.9	ug/l	0.9	700	
MW-15	Acetone	12/19/2007	5.1	ug/l	0.9	700	
MW-17	Acetone	06/28/2007	3.5	ug/l	0.9	700	
MW-18	Acetone	01/07/2008	5.3	ug/l	0.9	700	
MW-1A	Acetone	06/25/2003	270	ug/l	20	700	
MW-1A	Acetone	12/11/2003	200	ug/l	200	700	
MW-2	Acetone	06/28/2007	0.9	ug/l	0.9	700	
MW-2	Acetone	12/28/2007	47	ug/l	0.9	700	
MW-20	Acetone	01/08/2008	3.6	ug/l	0.9	700	
MW-23	Acetone	01/07/2008	5.7	ug/l	0.9	700	
MW-25	Acetone	01/08/2008	9.2	ug/l	0.9	700	
MW-27	Acetone	01/09/2008	8.5	ug/l	0.9	700	
MW-3	Acetone	06/27/2007	0.9	ug/l	0.9	700	
MW-4R	Acetone	06/27/2007	0.9	ug/l	0.9	700	
MW-5	Acetone	06/27/2007	0.9	ug/l	0.9	700	
MW-7	Acetone	06/27/2007	8.3	ug/l	0.9	700	
MW-7	Acetone	12/27/2007	6.4	ug/l	0.9	700	
MW-8	Acetone	06/28/2007	0.9	ug/l	0.9	700	
MW-1	**Benzene**	**11/18/1998**	**3**	**ug/l**	**2**	**1**	**2**
MW-1	**Benzene**	**05/13/1999**	**5.7**	**ug/l**	**5**	**1**	**4.7**

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1	**Benzene**	**12/06/1999**	**5.7**	**ug/l**	**5**	**1**	**4.7**
MW-1	**Benzene**	**06/13/2001**	**5.9**	**ug/l**	**5**	**1**	**4.9**
MW-1	**Benzene**	**06/13/2002**	**7.2**	**ug/l**	**5**	**1**	**6.2**
MW-1	**Benzene**	**12/30/2004**	**5.7**	**ug/l**	**5**	**1**	**4.7**
MW-1	**Benzene**	**06/23/2005**	**5**	**ug/l**	**5**	**1**	**4**
MW-1	**Benzene**	**01/13/2006**	**6**	**ug/l**	**5**	**1**	**5**
MW-1	**Benzene**	**12/15/2006**	**4.2**	**ug/l**	**3**	**1**	**3.2**
MW-1	**Benzene**	**06/28/2007**	**5**	**ug/l**	**0.12**	**1**	**4**
MW-1	**Benzene**	**12/27/2007**	**5.6**	**ug/l**	**0.12**	**1**	**4.6**
MW-10	**Benzene**	**06/27/2007**	**2.1**	**ug/l**	**0.12**	**1**	**1.1**
MW-11	**Benzene**	**12/11/2000**	**5.2**	**ug/l**	**5**	**1**	**4.2**
MW-11	**Benzene**	**06/12/2001**	**7.8**	**ug/l**	**5**	**1**	**6.8**
MW-11	**Benzene**	**12/27/2001**	**6.9**	**ug/l**	**5**	**1**	**5.9**
MW-11	**Benzene**	**06/13/2002**	**7.7**	**ug/l**	**5**	**1**	**6.7**
MW-11	**Benzene**	**01/03/2003**	**6.4**	**ug/l**	**5**	**1**	**5.4**
MW-11	**Benzene**	**06/24/2003**	**6.3**	**ug/l**	**5**	**1**	**5.3**
MW-11	**Benzene**	**12/11/2003**	**6.4**	**ug/l**	**5**	**1**	**5.4**
MW-11	**Benzene**	**06/15/2004**	**5.3**	**ug/l**	**5**	**1**	**4.3**
MW-11	**Benzene**	**12/29/2004**	**5.6**	**ug/l**	**5**	**1**	**4.6**
MW-11	**Benzene**	**06/22/2005**	**6**	**ug/l**	**5**	**1**	**5**
MW-11	**Benzene**	**07/07/2006**	**5.1**	**ug/l**	**5**	**1**	**4.1**
MW-11	**Benzene**	**12/14/2006**	**4.6**	**ug/l**	**3**	**1**	**3.6**
MW-11	**Benzene**	**06/27/2007**	**6**	**ug/l**	**0.12**	**1**	**5**
MW-11	**Benzene**	**12/27/2007**	**4.2**	**ug/l**	**0.12**	**1**	**3.2**
MW-12	**Benzene**	**12/11/2000**	**7**	**ug/l**	**5**	**1**	**6**
MW-12	**Benzene**	**06/13/2001**	**8.2**	**ug/l**	**5**	**1**	**7.2**
MW-12	**Benzene**	**12/27/2001**	**7.6**	**ug/l**	**5**	**1**	**6.6**
MW-12	**Benzene**	**06/12/2002**	**5.6**	**ug/l**	**5**	**1**	**4.6**
MW-12	**Benzene**	**06/24/2003**	**6.5**	**ug/l**	**5**	**1**	**5.5**
MW-12	**Benzene**	**06/15/2004**	**5**	**ug/l**	**5**	**1**	**4**
MW-12	**Benzene**	**12/30/2004**	**5.8**	**ug/l**	**5**	**1**	**4.8**
MW-12	**Benzene**	**06/23/2005**	**6**	**ug/l**	**5**	**1**	**5**
MW-12	**Benzene**	**01/12/2006**	**7.1**	**ug/l**	**5**	**1**	**6.1**
MW-12	**Benzene**	**07/07/2006**	**8.1**	**ug/l**	**5**	**1**	**7.1**
MW-12	**Benzene**	**12/14/2006**	**6.3**	**ug/l**	**3**	**1**	**5.3**
MW-12	**Benzene**	**06/28/2007**	**7.2**	**ug/l**	**0.12**	**1**	**6.2**
MW-12	**Benzene**	**12/28/2007**	**7.1**	**ug/l**	**0.12**	**1**	**6.1**
MW-12D	Benzene	06/28/2007	0.12	ug/l	0.12	1	
MW-12D	Benzene	12/28/2007	0.52	ug/l	0.12	1	
MW-13	Benzene	06/28/2007	0.12	ug/l	0.12	1	
MW-13	Benzene	12/19/2007	0.47	ug/l	0.12	1	
MW-14	**Benzene**	**12/15/2006**	**1.9**	**ug/l**	**3**	**1**	**0.9**
MW-14	**Benzene**	**06/28/2007**	**2**	**ug/l**	**0.12**	**1**	**1**
MW-14	**Benzene**	**12/28/2007**	**1.2**	**ug/l**	**0.12**	**1**	**0.2**
MW-15	**Benzene**	**06/12/2001**	**5.3**	**ug/l**	**5**	**1**	**4.3**
MW-15	**Benzene**	**12/15/2006**	**2.2**	**ug/l**	**3**	**1**	**1.2**
MW-15	**Benzene**	**06/28/2007**	**2.6**	**ug/l**	**0.12**	**1**	**1.6**
MW-16	**Benzene**	**01/08/2008**	**3.3**	**ug/l**	**0.12**	**1**	**2.3**
MW-17	**Benzene**	**12/15/2006**	**1.1**	**ug/l**	**3**	**1**	**0.1**
MW-17	**Benzene**	**06/28/2007**	**1.4**	**ug/l**	**0.12**	**1**	**0.4**

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-17	Benzene	12/27/2007	1.1	ug/l	0.12	1	0.1
MW-1B	Benzene	12/15/2006	1.3	ug/l	3	1	0.3
MW-1B	Benzene	06/28/2007	1.7	ug/l	0.12	1	0.7
MW-2	Benzene	02/15/1995	5	ug/l	5	1	4
MW-2	Benzene	03/07/1995	5	ug/l	5	1	4
MW-2	Benzene	12/06/1995	5	ug/l	5	1	4
MW-2	Benzene	12/15/2006	3	ug/l	3	1	2
MW-2	Benzene	06/28/2007	2.8	ug/l	0.12	1	1.8
MW-2	Benzene	12/28/2007	1.8	ug/l	0.12	1	0.8
MW-21	Benzene	01/09/2008	0.49	ug/l	0.12	1	
MW-24	Benzene	01/08/2008	1.6	ug/l	0.12	1	0.6
MW-26	Benzene	01/09/2008	1.9	ug/l	0.12	1	0.9
MW-3	Benzene	10/01/1994	9	ug/l	5	1	8
MW-3	Benzene	01/31/1995	8	ug/l	5	1	7
MW-3	Benzene	02/15/1995	9	ug/l	5	1	8
MW-3	Benzene	03/07/1995	6	ug/l	5	1	5
MW-3	Benzene	05/06/1996	9	ug/l	5	1	8
MW-3	Benzene	11/11/1996	11	ug/l	5	1	10
MW-3	Benzene	06/24/1997	8.3	ug/l	5	1	7.3
MW-3	Benzene	12/03/1997	10	ug/l	1	1	9
MW-3	Benzene	06/04/1998	8.8	ug/l	5	1	7.8
MW-3	Benzene	11/18/1998	5.7	ug/l	2	1	4.7
MW-3	Benzene	05/13/1999	7.9	ug/l	5	1	6.9
MW-3	Benzene	12/06/1999	11	ug/l	5	1	10
MW-3	Benzene	05/17/2000	9.5	ug/l	5	1	8.5
MW-3	Benzene	12/11/2000	10	ug/l	5	1	9
MW-3	Benzene	06/12/2001	13	ug/l	5	1	12
MW-3	Benzene	12/27/2001	11	ug/l	5	1	10
MW-3	Benzene	06/13/2002	10	ug/l	5	1	9
MW-3	Benzene	01/03/2003	7.5	ug/l	5	1	6.5
MW-3	Benzene	06/24/2003	11	ug/l	5	1	10
MW-3	Benzene	12/11/2003	7.9	ug/l	5	1	6.9
MW-3	Benzene	06/15/2004	6.9	ug/l	5	1	5.9
MW-3	Benzene	12/29/2004	8.5	ug/l	5	1	7.5
MW-3	Benzene	06/22/2005	7	ug/l	5	1	6
MW-3	Benzene	12/14/2006	4.8	ug/l	3	1	3.8
MW-3	Benzene	06/27/2007	8	ug/l	0.12	1	7
MW-3	Benzene	12/28/2007	8	ug/l	0.12	1	7
MW-4	Benzene	12/03/1997	4	ug/l	1	1	3
MW-4R	Benzene	11/18/1998	2.3	ug/l	2	1	1.3
MW-4R	Benzene	06/13/2001	5.6	ug/l	5	1	4.6
MW-4R	Benzene	06/25/2003	5.1	ug/l	5	1	4.1
MW-4R	Benzene	12/14/2006	2.4	ug/l	3	1	1.4
MW-4R	Benzene	06/27/2007	2.8	ug/l	0.12	1	1.8
MW-5	Benzene	12/03/1997	4	ug/l	1	1	3
MW-5	Benzene	06/04/1998	5.6	ug/l	5	1	4.6
MW-5	Benzene	11/18/1998	2.5	ug/l	2	1	1.5
MW-5	Benzene	06/13/2001	6.1	ug/l	5	1	5.1
MW-5	Benzene	12/14/2006	2.8	ug/l	3	1	1.8
MW-5	Benzene	06/27/2007	3.2	ug/l	0.12	1	2.2

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-5	**Benzene**	**12/19/2007**	**3.2**	**ug/l**	**0.12**	**1**	**2.2**
MW-6	**Benzene**	**12/19/2007**	**1.1**	**ug/l**	**0.12**	**1**	**0.1**
MW-7	**Benzene**	**12/03/1997**	**2**	**ug/l**	**1**	**1**	**1**
MW-7	**Benzene**	**06/13/2001**	**6**	**ug/l**	**5**	**1**	**5**
MW-7	**Benzene**	**12/28/2001**	**5.6**	**ug/l**	**5**	**1**	**4.6**
MW-7	**Benzene**	**06/25/2003**	**6.7**	**ug/l**	**5**	**1**	**5.7**
MW-7	**Benzene**	**01/12/2006**	**5.1**	**ug/l**	**5**	**1**	**4.1**
MW-7	**Benzene**	**12/14/2006**	**2.6**	**ug/l**	**3**	**1**	**1.6**
MW-7	**Benzene**	**06/27/2007**	**3.2**	**ug/l**	**0.12**	**1**	**2.2**
MW-7	**Benzene**	**12/27/2007**	**4.7**	**ug/l**	**0.12**	**1**	**3.7**
MW-8	Benzene	06/28/2007	0.12	ug/l	0.12	1	
MW-11	BHC, alpha	06/13/2002	0.0547	ug/l	0.05		
MW-11	BHC, alpha	01/03/2003	0.18	ug/l	0.05		
MW-3	BHC, alpha	12/03/1997	0.12	ug/l	0.05		
MW-4R	BHC, alpha	12/03/1997	0.1	ug/l	0.05		
MW-4R	BHC, alpha	04/30/1998	0.066	ug/l	0.05		
MW-4R	BHC, alpha	11/18/1998	0.39	ug/l	0.05		
MW-7	BHC, alpha	11/18/1998	0.63	ug/l	0.05		
MW-8	BHC, alpha	04/30/1998	0.073	ug/l	0.05		
MW-8	BHC, alpha	11/18/1998	0.068	ug/l	0.05		
MW-6	BHC, beta	12/03/1997	0.06	ug/l	0.05		
MW-1	BHC, gamma	11/18/1998	0.055	ug/l	0.05	0.2	
MW-4R	BHC, gamma	11/18/1998	0.11	ug/l	0.05	0.2	
MW-8	BHC, gamma	11/18/1998	0.063	ug/l	0.05	0.2	
MW-1	Bis(2-ethylhexyl)phthalate	12/03/1997	13	ug/l	10		
MW-1	Carbon disulfide	06/24/1997	33	ug/l	5		
MW-1	Carbon disulfide	05/13/1999	7.5	ug/l	5		
MW-1	Carbon disulfide	05/17/2000	18	ug/l	5		
MW-1	Carbon disulfide	06/13/2001	18	ug/l	5		
MW-1	Carbon disulfide	12/11/2003	170	ug/l	100		
MW-1	Carbon disulfide	06/28/2007	0.12	ug/l	0.12		
MW-1	Carbon disulfide	12/27/2007	2	ug/l	0.12		
MW-10	Carbon disulfide	06/12/2001	71	ug/l	5		
MW-10	Carbon disulfide	06/24/2003	13	ug/l	10		
MW-11	Carbon disulfide	06/12/2001	15	ug/l	5		
MW-11	Carbon disulfide	06/24/2003	47	ug/l	10		
MW-12D	Carbon disulfide	06/24/2003	70	ug/l	10		
MW-12D	Carbon disulfide	06/28/2007	0.12	ug/l	0.12		
MW-12D	Carbon disulfide	12/28/2007	1.7	ug/l	0.12		
MW-13	Carbon disulfide	06/12/2001	15	ug/l	5		
MW-13	Carbon disulfide	06/24/2003	91	ug/l	10		
MW-13	Carbon disulfide	12/11/2003	130	ug/l	100		
MW-15	Carbon disulfide	06/12/2001	21	ug/l	5		
MW-18	Carbon disulfide	01/07/2008	0.76	ug/l	0.12		
MW-1A	Carbon disulfide	06/25/2003	21	ug/l	10		
MW-1B	Carbon disulfide	06/28/2007	0.12	ug/l	0.12		
MW-1B	Carbon disulfide	12/28/2007	0.56	ug/l	0.12		
MW-3	Carbon disulfide	06/24/1997	6.6	ug/l	5		
MW-3	Carbon disulfide	11/18/1998	6.7	ug/l	2		
MW-3	Carbon disulfide	05/17/2000	22	ug/l	5		

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-3	Carbon disulfide	12/11/2000	29	ug/l	10		
MW-3	Carbon disulfide	06/12/2001	26	ug/l	5		
MW-3	Carbon disulfide	01/03/2003	11	ug/l	10		
MW-3	Carbon disulfide	06/24/2003	31	ug/l	10		
MW-3	Carbon disulfide	06/27/2007	18	ug/l	0.12		
MW-4R	Carbon disulfide	06/24/1997	5.5	ug/l	5		
MW-4R	Carbon disulfide	05/13/1999	5.9	ug/l	5		
MW-4R	Carbon disulfide	05/17/2000	30	ug/l	5		
MW-4R	Carbon disulfide	06/13/2001	11	ug/l	5		
MW-4R	Carbon disulfide	12/28/2001	5.4	ug/l	5		
MW-4R	Carbon disulfide	06/25/2003	20	ug/l	10		
MW-5	Carbon disulfide	06/24/1997	36	ug/l	5		
MW-5	Carbon disulfide	05/17/2000	17	ug/l	5		
MW-5	Carbon disulfide	06/13/2001	54	ug/l	5		
MW-5	Carbon disulfide	06/27/2007	0.12	ug/l	0.12		
MW-6	Carbon disulfide	06/24/1997	61	ug/l	5		
MW-6	Carbon disulfide	12/03/1997	6	ug/l	1		
MW-6	Carbon disulfide	05/17/2000	18	ug/l	5		
MW-6	Carbon disulfide	06/12/2001	41	ug/l	5		
MW-6	Carbon disulfide	06/24/2003	11	ug/l	10		
MW-7	Carbon disulfide	06/24/1997	66	ug/l	5		
MW-7	Carbon disulfide	12/03/1997	3	ug/l	1		
MW-7	Carbon disulfide	05/13/1999	8	ug/l	5		
MW-7	Carbon disulfide	05/17/2000	5.4	ug/l	5		
MW-7	Carbon disulfide	12/12/2000	13	ug/l	10		
MW-7	Carbon disulfide	06/13/2001	16	ug/l	5		
MW-7	Carbon disulfide	06/25/2003	50	ug/l	10		
MW-8	Carbon disulfide	06/24/1997	19	ug/l	5		
MW-8	Carbon disulfide	06/04/1998	8	ug/l	5		
MW-8	Carbon disulfide	05/13/1999	6.2	ug/l	5		
MW-8	Carbon disulfide	06/12/2001	16	ug/l	5		
MW-1	Chloride	06/28/2007	2.8	mg/l	0.05		
MW-11	Chloride	06/27/2007	7.7	mg/l	0.05		
MW-12	Chloride	06/28/2007	4.3	mg/l	0.05		
MW-12D	Chloride	06/28/2007	32	mg/l	0.05		
MW-13	Chloride	06/28/2007	2.1	mg/l	0.05		
MW-1B	Chloride	06/28/2007	2	mg/l	0.05		
MW-2	Chloride	06/28/2007	45	mg/l	0.05		
MW-3	Chloride	06/27/2007	7.7	mg/l	0.05		
MW-6	Chloride	06/28/2007	4	mg/l	0.05		
MW-7	Chloride	06/27/2007	7.7	mg/l	0.05		
MW-11	Chlorobenzene	12/14/2006	2	ug/l	3	50	
MW-11	Chlorobenzene	12/27/2007	1.6	ug/l	0.16	50	
MW-12	Chlorobenzene	12/14/2006	1.5	ug/l	3	50	
MW-12	Chlorobenzene	12/28/2007	1.7	ug/l	0.16	50	
MW-14	Chlorobenzene	12/15/2006	1.5	ug/l	3	50	
MW-14	Chlorobenzene	12/28/2007	1.7	ug/l	0.16	50	
MW-2	Chlorobenzene	12/15/2006	1.8	ug/l	3	50	
MW-2	Chlorobenzene	12/28/2007	1.5	ug/l	0.16	50	
MW-26	Chlorobenzene	01/09/2008	0.78	ug/l	0.16	50	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-3	Chlorobenzene	12/14/2006	1	ug/l	3	50	
MW-4R	Chlorobenzene	12/14/2006	1.2	ug/l	3	50	
MW-4R	Chlorobenzene	12/27/2007	0.98	ug/l	0.16	50	
MW-7	Chlorobenzene	12/14/2006	1.4	ug/l	3	50	
MW-7	Chlorobenzene	12/27/2007	0.84	ug/l	0.16	50	
MW-1	Chloroethane	12/03/1997	2	ug/l	2		
MW-1	Chloroethane	11/18/1998	5.7	ug/l	2		
MW-11	Chloroethane	12/14/2006	1.3	ug/l	10		
MW-11	Chloroethane	06/27/2007	2	ug/l	0.4		
MW-11	Chloroethane	12/27/2007	2	ug/l	0.4		
MW-12	Chloroethane	06/13/2001	11	ug/l	10		
MW-12	Chloroethane	06/24/2003	15	ug/l	10		
MW-12	Chloroethane	12/14/2006	2	ug/l	10		
MW-12	Chloroethane	06/28/2007	2.8	ug/l	0.4		
MW-14	Chloroethane	12/15/2006	1.5	ug/l	10		
MW-14	Chloroethane	06/28/2007	2.2	ug/l	0.4		
MW-14	Chloroethane	12/28/2007	2	ug/l	0.4		
MW-15	Chloroethane	06/25/2003	13	ug/l	10		
MW-15	Chloroethane	12/19/2007	0.88	ug/l	0.4		
MW-16	Chloroethane	01/08/2008	1.6	ug/l	0.4		
MW-2	Chloroethane	10/01/1994	22	ug/l	10		
MW-2	Chloroethane	01/31/1995	20	ug/l	10		
MW-2	Chloroethane	02/15/1995	20	ug/l	10		
MW-2	Chloroethane	03/07/1995	22	ug/l	10		
MW-2	Chloroethane	12/06/1995	14	ug/l	10		
MW-2	Chloroethane	12/15/2006	1.9	ug/l	10		
MW-24	Chloroethane	01/08/2008	0.88	ug/l	0.4		
MW-26	Chloroethane	01/09/2008	0.94	ug/l	0.4		
MW-3	Chloroethane	10/01/1994	12	ug/l	10		
MW-3	Chloroethane	01/31/1995	10	ug/l	10		
MW-3	Chloroethane	02/15/1995	12	ug/l	10		
MW-3	Chloroethane	11/11/1996	10	ug/l	10		
MW-3	Chloroethane	12/03/1997	12	ug/l	1		
MW-3	Chloroethane	11/18/1998	9.7	ug/l	2		
MW-3	Chloroethane	06/24/2003	10	ug/l	10		
MW-4	Chloroethane	12/03/1997	7	ug/l	1		
MW-4R	Chloroethane	05/06/1996	13	ug/l	10		
MW-4R	Chloroethane	11/18/1998	7.6	ug/l	2		
MW-4R	Chloroethane	12/14/2006	1.8	ug/l	10		
MW-4R	Chloroethane	06/27/2007	3	ug/l	0.4		
MW-4R	Chloroethane	12/27/2007	3.4	ug/l	0.4		
MW-5	Chloroethane	12/03/1997	2	ug/l	1		
MW-6	Chloroethane	12/03/1997	1	ug/l	1		
MW-7	Chloroethane	01/31/1995	11	ug/l	10		
MW-7	Chloroethane	02/15/1995	11	ug/l	10		
MW-7	Chloroethane	12/06/1995	11	ug/l	10		
MW-7	Chloroethane	12/03/1997	3	ug/l	1		
MW-8	Chloroethane	12/03/1997	7	ug/l	1		
MW-8	Chloroethane	06/25/2003	11	ug/l	10		
MW-11	**Chloroethene**	**06/27/2007**	**0.94**	**ug/l**	**0.15**	**0.015**	**0.925**

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-11	**Chloroethene**	**12/27/2007**	**0.79**	**ug/l**	**0.15**	**0.015**	**0.775**
MW-3	**Chloroethene**	**12/03/1997**	**2**	**ug/l**	**1**	**0.015**	**1.985**
MW-3	**Chloroethene**	**06/27/2007**	**0.15**	**ug/l**	**0.15**	**0.015**	**0.135**
MW-12D	Chloroform	06/24/2003	5.8	ug/l	5	70	
MW-1B	Chloroform	12/11/2003	8.4	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	11/18/1998	4.9	ug/l	2	70	
MW-1	cis-1,2-Dichloroethylene	05/13/1999	8.3	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	12/06/1999	8.7	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	05/17/2000	7.8	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	12/12/2000	9.7	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	06/13/2001	9.5	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	12/28/2001	7.4	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	06/13/2002	12	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	01/03/2003	6.7	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	06/24/2003	14	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	12/11/2003	8.8	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	06/16/2004	7.8	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	12/30/2004	11	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	06/23/2005	10	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	01/13/2006	11.4	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	07/06/2006	8.1	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	12/15/2006	6.6	ug/l	5	70	
MW-1	cis-1,2-Dichloroethylene	06/28/2007	10	ug/l	0.14	70	
MW-1	cis-1,2-Dichloroethylene	12/27/2007	13	ug/l	0.14	70	
MW-10	cis-1,2-Dichloroethylene	12/14/2006	1.2	ug/l	5	70	
MW-10	cis-1,2-Dichloroethylene	06/27/2007	3.6	ug/l	0.14	70	
MW-10	cis-1,2-Dichloroethylene	12/27/2007	3.8	ug/l	0.14	70	
MW-11	cis-1,2-Dichloroethylene	12/11/2000	28	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	06/12/2001	50	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	12/27/2001	51	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	06/13/2002	51	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	01/03/2003	42	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	06/24/2003	41	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	12/11/2003	42	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	06/15/2004	35	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	12/29/2004	38	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	06/22/2005	40	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	01/12/2006	25.4	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	07/07/2006	48.6	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	12/14/2006	26	ug/l	5	70	
MW-11	cis-1,2-Dichloroethylene	06/27/2007	30	ug/l	0.14	70	
MW-11	cis-1,2-Dichloroethylene	12/27/2007	42	ug/l	0.14	70	
MW-12	cis-1,2-Dichloroethylene	12/11/2000	10	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	06/13/2001	10	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	12/27/2001	12	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	06/12/2002	7.1	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	01/02/2003	5.5	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	06/24/2003	14	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	12/11/2003	11	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	06/15/2004	9.6	ug/l	5	70	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-12	cis-1,2-Dichloroethylene	12/30/2004	12	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	06/23/2005	9	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	01/12/2006	11.8	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	07/07/2006	10.2	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	12/14/2006	9.1	ug/l	5	70	
MW-12	cis-1,2-Dichloroethylene	06/28/2007	11	ug/l	0.14	70	
MW-12	cis-1,2-Dichloroethylene	12/28/2007	14	ug/l	0.14	70	
MW-12D	cis-1,2-Dichloroethylene	06/28/2007	0.14	ug/l	0.14	70	
MW-12D	cis-1,2-Dichloroethylene	12/28/2007	0.69	ug/l	0.14	70	
MW-13	cis-1,2-Dichloroethylene	06/28/2007	0.14	ug/l	0.14	70	
MW-13	cis-1,2-Dichloroethylene	12/19/2007	0.71	ug/l	0.14	70	
MW-14	cis-1,2-Dichloroethylene	12/12/2000	11	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	06/13/2001	12	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	12/28/2001	12	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	06/13/2002	17	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	01/03/2003	6.3	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	12/11/2003	14	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	06/16/2004	11	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	12/29/2004	7.5	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	06/23/2005	9	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	01/12/2006	7.9	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	07/07/2006	13.5	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	12/15/2006	9.3	ug/l	5	70	
MW-14	cis-1,2-Dichloroethylene	06/28/2007	14	ug/l	0.14	70	
MW-14	cis-1,2-Dichloroethylene	12/28/2007	19	ug/l	0.14	70	
MW-15	cis-1,2-Dichloroethylene	12/15/2006	3.5	ug/l	5	70	
MW-15	cis-1,2-Dichloroethylene	06/28/2007	6.6	ug/l	0.14	70	
MW-15	cis-1,2-Dichloroethylene	12/19/2007	4.6	ug/l	0.14	70	
MW-16	cis-1,2-Dichloroethylene	01/08/2008	16	ug/l	0.14	70	
MW-17	cis-1,2-Dichloroethylene	12/15/2006	2.6	ug/l	5	70	
MW-17	cis-1,2-Dichloroethylene	06/28/2007	2.4	ug/l	0.14	70	
MW-17	cis-1,2-Dichloroethylene	12/27/2007	3	ug/l	0.14	70	
MW-1B	cis-1,2-Dichloroethylene	12/30/2004	5.3	ug/l	5	70	
MW-1B	cis-1,2-Dichloroethylene	01/13/2006	5.4	ug/l	5	70	
MW-1B	cis-1,2-Dichloroethylene	12/15/2006	3.3	ug/l	5	70	
MW-1B	cis-1,2-Dichloroethylene	06/28/2007	4.1	ug/l	0.14	70	
MW-1B	cis-1,2-Dichloroethylene	12/28/2007	6.6	ug/l	0.14	70	
MW-2	cis-1,2-Dichloroethylene	01/31/1995	5	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	02/15/1995	6	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	03/07/1995	6	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	12/06/1995	6	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	05/06/1996	5	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	12/06/1999	13	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	12/15/2006	13	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	06/28/2007	17	ug/l	0.14	70	
MW-2	cis-1,2-Dichloroethylene	12/28/2007	18	ug/l	0.14	70	
MW-21	cis-1,2-Dichloroethylene	01/09/2008	1.6	ug/l	0.14	70	
MW-23	cis-1,2-Dichloroethylene	01/07/2008	7.8	ug/l	0.14	70	
MW-24	cis-1,2-Dichloroethylene	01/08/2008	8.2	ug/l	0.14	70	
MW-25	cis-1,2-Dichloroethylene	01/08/2008	1.2	ug/l	0.14	70	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-26	cis-1,2-Dichloroethylene	01/09/2008	32	ug/l	0.14	70	
MW-27	cis-1,2-Dichloroethylene	01/09/2008	21	ug/l	0.14	70	
MW-3	cis-1,2-Dichloroethylene	10/01/1994	12	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	01/31/1995	7	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	02/15/1995	13	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	03/07/1995	10	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	12/07/1995	10	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	05/06/1996	13	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	11/11/1996	12	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	06/24/1997	14	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	12/03/1997	17	ug/l	1	70	
MW-3	cis-1,2-Dichloroethylene	06/04/1998	17	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	11/18/1998	15.8	ug/l	2	70	
MW-3	cis-1,2-Dichloroethylene	05/13/1999	20	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	12/06/1999	21	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	05/17/2000	20	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	12/11/2000	26	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	06/12/2001	25	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	12/27/2001	28	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	06/13/2002	24	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	01/03/2003	22	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	06/24/2003	30	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	12/11/2003	20	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	06/15/2004	16	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	12/29/2004	18	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	06/22/2005	12	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	01/12/2006	10.6	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	12/14/2006	7.6	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	06/27/2007	8.3	ug/l	0.14	70	
MW-3	cis-1,2-Dichloroethylene	12/28/2007	13	ug/l	0.14	70	
MW-4	cis-1,2-Dichloroethylene	10/01/1994	8	ug/l	5	70	
MW-4	cis-1,2-Dichloroethylene	12/03/1997	20	ug/l	1	70	
MW-4R	cis-1,2-Dichloroethylene	10/01/1994	10	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	01/31/1995	12	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	02/15/1995	12	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	03/07/1995	10	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	12/06/1995	7	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	05/06/1996	10	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	11/11/1996	16	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	06/24/1997	18	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	06/04/1998	18	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	05/13/1999	16	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	12/06/1999	16	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	05/17/2000	14	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	12/11/2000	15	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	06/13/2001	19	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	12/28/2001	24	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	06/13/2002	14	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	01/02/2003	22	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	06/25/2003	36	ug/l	5	70	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-4R	cis-1,2-Dichloroethylene	12/12/2003	17	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	06/15/2004	15	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	12/29/2004	20	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	06/22/2005	16	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	01/12/2006	14	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	07/07/2006	12.8	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	12/14/2006	11	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	06/27/2007	15	ug/l	0.14	70	
MW-4R	cis-1,2-Dichloroethylene	12/27/2007	18	ug/l	0.14	70	
MW-5	cis-1,2-Dichloroethylene	12/03/1997	4	ug/l	1	70	
MW-5	cis-1,2-Dichloroethylene	06/04/1998	8.3	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	05/13/1999	7.4	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	12/11/2000	7.2	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	06/13/2001	13	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	12/27/2001	7.2	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	06/13/2002	11	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	01/02/2003	19	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	06/24/2003	17	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	12/12/2003	13	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	06/15/2004	11	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	12/29/2004	10	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	06/22/2005	9	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	07/07/2006	8.5	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	12/14/2006	6	ug/l	5	70	
MW-5	cis-1,2-Dichloroethylene	06/27/2007	8.2	ug/l	0.14	70	
MW-5	cis-1,2-Dichloroethylene	12/19/2007	10	ug/l	0.14	70	
MW-6	cis-1,2-Dichloroethylene	11/18/1998	6.5	ug/l	2	70	
MW-6	cis-1,2-Dichloroethylene	12/06/1999	11	ug/l	5	70	
MW-6	cis-1,2-Dichloroethylene	12/11/2000	7.6	ug/l	5	70	
MW-6	cis-1,2-Dichloroethylene	06/12/2001	13	ug/l	5	70	
MW-6	cis-1,2-Dichloroethylene	12/28/2001	8	ug/l	5	70	
MW-6	cis-1,2-Dichloroethylene	12/19/2007	2.3	ug/l	0.14	70	
MW-7	cis-1,2-Dichloroethylene	12/03/1997	3	ug/l	1	70	
MW-7	cis-1,2-Dichloroethylene	11/18/1998	2.7	ug/l	2	70	
MW-7	cis-1,2-Dichloroethylene	05/17/2000	5.7	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	12/12/2000	7	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	06/13/2001	7.5	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	12/28/2001	7.3	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	06/12/2002	5.1	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	01/02/2003	5.2	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	06/25/2003	10	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	12/11/2003	6.1	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	06/16/2004	6	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	12/30/2004	7.2	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	06/23/2005	7	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	01/12/2006	7.4	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	07/07/2006	8	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	12/14/2006	7.3	ug/l	5	70	
MW-7	cis-1,2-Dichloroethylene	06/27/2007	4.9	ug/l	0.14	70	
MW-7	cis-1,2-Dichloroethylene	12/27/2007	9.2	ug/l	0.14	70	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-8	cis-1,2-Dichloroethylene	12/03/1997	2	ug/l	1	70	
MW-8	cis-1,2-Dichloroethylene	06/25/2003	9.1	ug/l	5	70	
MW-8	cis-1,2-Dichloroethylene	06/15/2004	5.7	ug/l	5	70	
MW-8	cis-1,2-Dichloroethylene	12/30/2004	6.1	ug/l	5	70	
MW-8	cis-1,2-Dichloroethylene	12/15/2006	3.5	ug/l	5	70	
MW-8	cis-1,2-Dichloroethylene	06/28/2007	2.1	ug/l	0.14	70	
MW-9	cis-1,2-Dichloroethylene	12/11/2000	15	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	06/13/2001	11	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	12/27/2001	15	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	06/12/2002	8.2	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	01/02/2003	12	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	06/24/2003	16	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	12/12/2003	10	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	06/15/2004	12	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	12/29/2004	13	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	06/22/2005	8	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	01/12/2006	10.2	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	07/07/2006	12.3	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	12/14/2006	8.3	ug/l	5	70	
MW-9	cis-1,2-Dichloroethylene	06/27/2007	10	ug/l	0.14	70	
MW-9	cis-1,2-Dichloroethylene	12/19/2007	20	ug/l	0.14	70	
MW-1B	Ethylbenzene	06/28/2007	0.17	ug/l	0.17	550	
MW-1B	Ethylbenzene	12/28/2007	0.96	ug/l	0.17	550	
MW-3	Ethylbenzene	12/03/1997	3	ug/l	1	550	
MW-3	Ethylbenzene	11/18/1998	2	ug/l	2	550	
MW-3	Ethylbenzene	12/14/2006	1.4	ug/l	5	550	
MW-3	Ethylbenzene	06/27/2007	2.3	ug/l	0.17	550	
MW-3	Ethylbenzene	12/28/2007	3.9	ug/l	0.17	550	
MW-11	**Ethylene dichloride**	**12/14/2006**	**1.1**	**ug/l**	**3**	**0.38**	**0.72**
MW-3	**Heptachlor**	**12/03/1997**	**0.1**	**ug/l**	**0.05**	**0.008**	**0.092**
MW-3	Methyl methacrylate	12/03/1997	35	ug/l	1		
MW-3	Methyl tert-butyl ether	12/03/1997	14	ug/l	1		
MW-7	Methyl tert-butyl ether	12/03/1997	2	ug/l	1		
MW-11	Methylene chloride	12/27/2007	0.7	ug/l	0.088	4.6	
MW-12	**Methylene chloride**	**12/11/2000**	**13**	**ug/l**	**5**	**4.6**	**8.4**
MW-12	**Methylene chloride**	**06/13/2001**	**10**	**ug/l**	**5**	**4.6**	**5.4**
MW-12	**Methylene chloride**	**12/27/2001**	**12**	**ug/l**	**5**	**4.6**	**7.4**
MW-12	**Methylene chloride**	**06/12/2002**	**7.4**	**ug/l**	**5**	**4.6**	**2.8**
MW-12	Methylene chloride	06/28/2007	1.8	ug/l	0.088	4.6	
MW-12	Methylene chloride	12/28/2007	1.8	ug/l	0.088	4.6	
MW-15	**Methylene chloride**	**06/25/2003**	**16**	**ug/l**	**5**	**4.6**	**11.4**
MW-15	**Methylene chloride**	**12/30/2004**	**13**	**ug/l**	**10**	**4.6**	**8.4**
MW-15	Methylene chloride	06/28/2007	1.8	ug/l	0.088	4.6	
MW-16	Methylene chloride	01/08/2008	4.1	ug/l	0.088	4.6	
MW-17	**Methylene chloride**	**06/25/2003**	**9.7**	**ug/l**	**5**	**4.6**	**5.1**
MW-17	Methylene chloride	06/28/2007	1.2	ug/l	0.088	4.6	
MW-17	Methylene chloride	12/27/2007	0.54	ug/l	0.088	4.6	
MW-1B	Methylene chloride	06/28/2007	0.088	ug/l	0.088	4.6	
MW-1B	Methylene chloride	12/28/2007	2.8	ug/l	0.088	4.6	
MW-21	Methylene chloride	01/09/2008	0.7	ug/l	0.088	4.6	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-3	**Methylene chloride**	**10/01/1994**	**24**	**ug/l**	**10**	**4.6**	**19.4**
MW-3	**Methylene chloride**	**02/15/1995**	**14**	**ug/l**	**10**	**4.6**	**9.4**
MW-7	**Methylene chloride**	**10/01/1994**	**24**	**ug/l**	**10**	**4.6**	**19.4**
MW-7	**Methylene chloride**	**01/31/1995**	**29**	**ug/l**	**10**	**4.6**	**24.4**
MW-7	**Methylene chloride**	**02/15/1995**	**26**	**ug/l**	**10**	**4.6**	**21.4**
MW-7	**Methylene chloride**	**03/07/1995**	**11**	**ug/l**	**10**	**4.6**	**6.4**
MW-7	**Methylene chloride**	**12/06/1995**	**20**	**ug/l**	**10**	**4.6**	**15.4**
MW-14	Naphthalene	06/28/2007	3.5	ug/l	0.25	21	
MW-3	Naphthalene	12/03/1997	7	ug/l	1	21	
MW-3	Naphthalene	04/30/1998	4.6	ug/l	2	21	
MW-5	Naphthalene	03/23/1998	4.6	ug/l	2	21	
MW-1	p-Dichlorobenzene	12/15/2006	1.3	ug/l	3	1.4	
MW-1	**p-Dichlorobenzene**	**06/28/2007**	**2**	**ug/l**	**0.15**	**1.4**	**0.6**
MW-1	**p-Dichlorobenzene**	**12/27/2007**	**3.8**	**ug/l**	**0.15**	**1.4**	**2.4**
MW-11	**p-Dichlorobenzene**	**06/12/2001**	**6.9**	**ug/l**	**5**	**1.4**	**5.5**
MW-11	**p-Dichlorobenzene**	**12/27/2001**	**7.8**	**ug/l**	**5**	**1.4**	**6.4**
MW-11	**p-Dichlorobenzene**	**06/24/2003**	**7.7**	**ug/l**	**5**	**1.4**	**6.3**
MW-11	**p-Dichlorobenzene**	**12/11/2003**	**8.3**	**ug/l**	**5**	**1.4**	**6.9**
MW-11	**p-Dichlorobenzene**	**06/15/2004**	**9**	**ug/l**	**5**	**1.4**	**7.6**
MW-11	**p-Dichlorobenzene**	**12/29/2004**	**8.4**	**ug/l**	**5**	**1.4**	**7**
MW-11	**p-Dichlorobenzene**	**06/22/2005**	**11**	**ug/l**	**5**	**1.4**	**9.6**
MW-11	**p-Dichlorobenzene**	**07/07/2006**	**11.6**	**ug/l**	**5**	**1.4**	**10.2**
MW-11	**p-Dichlorobenzene**	**12/14/2006**	**7.5**	**ug/l**	**3**	**1.4**	**6.1**
MW-11	**p-Dichlorobenzene**	**12/27/2007**	**5.9**	**ug/l**	**0.15**	**1.4**	**4.5**
MW-12	**p-Dichlorobenzene**	**12/11/2000**	**6.3**	**ug/l**	**5**	**1.4**	**4.9**
MW-12	**p-Dichlorobenzene**	**06/13/2001**	**5.6**	**ug/l**	**5**	**1.4**	**4.2**
MW-12	**p-Dichlorobenzene**	**12/27/2001**	**6.4**	**ug/l**	**5**	**1.4**	**5**
MW-12	**p-Dichlorobenzene**	**06/12/2002**	**5.6**	**ug/l**	**5**	**1.4**	**4.2**
MW-12	**p-Dichlorobenzene**	**06/24/2003**	**6.8**	**ug/l**	**5**	**1.4**	**5.4**
MW-12	**p-Dichlorobenzene**	**12/11/2003**	**5.7**	**ug/l**	**5**	**1.4**	**4.3**
MW-12	**p-Dichlorobenzene**	**06/15/2004**	**6.4**	**ug/l**	**5**	**1.4**	**5**
MW-12	**p-Dichlorobenzene**	**12/30/2004**	**6.2**	**ug/l**	**5**	**1.4**	**4.8**
MW-12	**p-Dichlorobenzene**	**06/23/2005**	**8**	**ug/l**	**5**	**1.4**	**6.6**
MW-12	**p-Dichlorobenzene**	**01/12/2006**	**8.1**	**ug/l**	**5**	**1.4**	**6.7**
MW-12	**p-Dichlorobenzene**	**07/07/2006**	**10.9**	**ug/l**	**5**	**1.4**	**9.5**
MW-12	**p-Dichlorobenzene**	**12/14/2006**	**6.9**	**ug/l**	**3**	**1.4**	**5.5**
MW-12	**p-Dichlorobenzene**	**06/28/2007**	**7.5**	**ug/l**	**0.15**	**1.4**	**6.1**
MW-12	**p-Dichlorobenzene**	**12/28/2007**	**7.4**	**ug/l**	**0.15**	**1.4**	**6**
MW-13	p-Dichlorobenzene	06/28/2007	0.15	ug/l	0.15	1.4	
MW-14	**p-Dichlorobenzene**	**06/13/2002**	**7.5**	**ug/l**	**5**	**1.4**	**6.1**
MW-14	**p-Dichlorobenzene**	**12/11/2003**	**5.5**	**ug/l**	**5**	**1.4**	**4.1**
MW-14	**p-Dichlorobenzene**	**07/07/2006**	**6.4**	**ug/l**	**5**	**1.4**	**5**
MW-14	**p-Dichlorobenzene**	**12/15/2006**	**4**	**ug/l**	**3**	**1.4**	**2.6**
MW-14	**p-Dichlorobenzene**	**06/28/2007**	**3.9**	**ug/l**	**0.15**	**1.4**	**2.5**
MW-14	**p-Dichlorobenzene**	**12/28/2007**	**4.6**	**ug/l**	**0.15**	**1.4**	**3.2**
MW-15	p-Dichlorobenzene	06/28/2007	0.48	ug/l	0.15	1.4	
MW-16	**p-Dichlorobenzene**	**01/08/2008**	**1.8**	**ug/l**	**0.15**	**1.4**	**0.4**
MW-17	p-Dichlorobenzene	06/28/2007	0.32	ug/l	0.15	1.4	
MW-17	p-Dichlorobenzene	12/27/2007	0.5	ug/l	0.15	1.4	
MW-1B	**p-Dichlorobenzene**	**12/15/2006**	**1.9**	**ug/l**	**3**	**1.4**	**0.5**

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1B	**p-Dichlorobenzene**	**12/28/2007**	**2.4**	**ug/l**	**0.15**	**1.4**	**1**
MW-2	**p-Dichlorobenzene**	**12/06/1999**	**5.1**	**ug/l**	**5**	**1.4**	**3.7**
MW-2	**p-Dichlorobenzene**	**12/15/2006**	**5**	**ug/l**	**3**	**1.4**	**3.6**
MW-2	**p-Dichlorobenzene**	**06/28/2007**	**5.2**	**ug/l**	**0.15**	**1.4**	**3.8**
MW-2	**p-Dichlorobenzene**	**12/28/2007**	**4.4**	**ug/l**	**0.15**	**1.4**	**3**
MW-23	p-Dichlorobenzene	01/07/2008	1.1	ug/l	0.15	1.4	
MW-24	**p-Dichlorobenzene**	**01/08/2008**	**2.7**	**ug/l**	**0.15**	**1.4**	**1.3**
MW-26	**p-Dichlorobenzene**	**01/09/2008**	**3.1**	**ug/l**	**0.15**	**1.4**	**1.7**
MW-3	**p-Dichlorobenzene**	**12/07/1995**	**6**	**ug/l**	**5**	**1.4**	**4.6**
MW-3	**p-Dichlorobenzene**	**11/11/1996**	**5.2**	**ug/l**	**5**	**1.4**	**3.8**
MW-3	**p-Dichlorobenzene**	**12/03/1997**	**8**	**ug/l**	**1**	**1.4**	**6.6**
MW-3	**p-Dichlorobenzene**	**06/04/1998**	**7.6**	**ug/l**	**5**	**1.4**	**6.2**
MW-3	**p-Dichlorobenzene**	**11/18/1998**	**4.6**	**ug/l**	**2**	**1.4**	**3.2**
MW-3	**p-Dichlorobenzene**	**05/13/1999**	**7.4**	**ug/l**	**5**	**1.4**	**6**
MW-3	**p-Dichlorobenzene**	**12/06/1999**	**7.7**	**ug/l**	**5**	**1.4**	**6.3**
MW-3	**p-Dichlorobenzene**	**05/17/2000**	**7.6**	**ug/l**	**5**	**1.4**	**6.2**
MW-3	**p-Dichlorobenzene**	**12/11/2000**	**7.4**	**ug/l**	**5**	**1.4**	**6**
MW-3	**p-Dichlorobenzene**	**06/12/2001**	**6.6**	**ug/l**	**5**	**1.4**	**5.2**
MW-3	**p-Dichlorobenzene**	**12/27/2001**	**7.5**	**ug/l**	**5**	**1.4**	**6.1**
MW-3	**p-Dichlorobenzene**	**06/13/2002**	**8.4**	**ug/l**	**5**	**1.4**	**7**
MW-3	**p-Dichlorobenzene**	**06/24/2003**	**9.5**	**ug/l**	**5**	**1.4**	**8.1**
MW-3	**p-Dichlorobenzene**	**12/11/2003**	**7.5**	**ug/l**	**5**	**1.4**	**6.1**
MW-3	**p-Dichlorobenzene**	**06/15/2004**	**5.6**	**ug/l**	**5**	**1.4**	**4.2**
MW-3	**p-Dichlorobenzene**	**12/29/2004**	**8.9**	**ug/l**	**5**	**1.4**	**7.5**
MW-3	**p-Dichlorobenzene**	**06/22/2005**	**11**	**ug/l**	**5**	**1.4**	**9.6**
MW-3	**p-Dichlorobenzene**	**12/14/2006**	**3.8**	**ug/l**	**3**	**1.4**	**2.4**
MW-3	**p-Dichlorobenzene**	**06/27/2007**	**5.8**	**ug/l**	**0.15**	**1.4**	**4.4**
MW-3	**p-Dichlorobenzene**	**12/28/2007**	**9.8**	**ug/l**	**0.15**	**1.4**	**8.4**
MW-4	**p-Dichlorobenzene**	**12/03/1997**	**3**	**ug/l**	**1**	**1.4**	**1.6**
MW-4R	**p-Dichlorobenzene**	**12/14/2006**	**3.3**	**ug/l**	**3**	**1.4**	**1.9**
MW-4R	**p-Dichlorobenzene**	**06/27/2007**	**3.6**	**ug/l**	**0.15**	**1.4**	**2.2**
MW-4R	**p-Dichlorobenzene**	**12/27/2007**	**3.6**	**ug/l**	**0.15**	**1.4**	**2.2**
MW-5	p-Dichlorobenzene	12/14/2006	1.2	ug/l	3	1.4	
MW-5	p-Dichlorobenzene	06/27/2007	0.15	ug/l	0.15	1.4	
MW-6	p-Dichlorobenzene	12/19/2007	0.88	ug/l	0.15	1.4	
MW-7	**p-Dichlorobenzene**	**12/14/2006**	**3**	**ug/l**	**3**	**1.4**	**1.6**
MW-7	p-Dichlorobenzene	06/27/2007	1.3	ug/l	0.15	1.4	
MW-7	**p-Dichlorobenzene**	**12/27/2007**	**2.1**	**ug/l**	**0.15**	**1.4**	**0.7**
MW-8	p-Dichlorobenzene	06/28/2007	0.15	ug/l	0.15	1.4	
MW-9	p-Dichlorobenzene	06/27/2007	0.15	ug/l	0.15	1.4	
MW-9	p-Dichlorobenzene	12/19/2007	0.42	ug/l	0.15	1.4	
MW-1	Tetrachloroethene	06/28/2007	0.25	ug/l	0.25	0.7	
MW-11	**Tetrachloroethene**	**12/14/2006**	**1.1**	**ug/l**	**3**	**0.7**	**0.4**
MW-11	Tetrachloroethene	06/27/2007	0.58	ug/l	0.25	0.7	
MW-12	**Tetrachloroethene**	**12/14/2006**	**2**	**ug/l**	**3**	**0.7**	**1.3**
MW-12	**Tetrachloroethene**	**06/28/2007**	**1.3**	**ug/l**	**0.25**	**0.7**	**0.6**
MW-12	**Tetrachloroethene**	**12/28/2007**	**1**	**ug/l**	**0.25**	**0.7**	**0.3**
MW-16	**Tetrachloroethene**	**01/08/2008**	**2.5**	**ug/l**	**0.25**	**0.7**	**1.8**
MW-17	Tetrachloroethene	06/28/2007	0.47	ug/l	0.25	0.7	
MW-1B	Tetrachloroethene	06/28/2007	0.25	ug/l	0.25	0.7	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1B	Tetrachloroethene	12/28/2007	0.42	ug/l	0.25	0.7	
MW-25	Tetrachloroethene	01/08/2008	0.49	ug/l	0.25	0.7	
MW-3	**Tetrachloroethene**	**12/03/1997**	**1**	**ug/l**	**1**	**0.7**	**0.3**
MW-3	Tetrachloroethene	06/27/2007	0.25	ug/l	0.25	0.7	
MW-3	Tetrachloroethene	12/28/2007	0.45	ug/l	0.25	0.7	
MW-5	**Tetrachloroethene**	**12/03/1997**	**1**	**ug/l**	**1**	**0.7**	**0.3**
MW-5	Tetrachloroethene	06/27/2007	0.25	ug/l	0.25	0.7	
MW-7	**Tetrachloroethene**	**12/14/2006**	**1.2**	**ug/l**	**3**	**0.7**	**0.5**
MW-7	Tetrachloroethene	06/27/2007	0.25	ug/l	0.25	0.7	
MW-1	Toluene	12/15/2006	2	ug/l	5	1000	
MW-1	Toluene	06/28/2007	0.15	ug/l	0.15	1000	
MW-11	Toluene	06/27/2007	0.34	ug/l	0.15	1000	
MW-12	Toluene	06/28/2007	0.33	ug/l	0.15	1000	
MW-12D	Toluene	06/28/2007	0.15	ug/l	0.15	1000	
MW-15	Toluene	06/28/2007	0.73	ug/l	0.15	1000	
MW-17	Toluene	12/15/2006	2	ug/l	5	1000	
MW-2	Toluene	06/28/2007	0.15	ug/l	0.15	1000	
MW-3	Toluene	05/06/1996	8	ug/l	5	1000	
MW-3	Toluene	06/24/1997	7.6	ug/l	5	1000	
MW-3	Toluene	12/03/1997	2	ug/l	1	1000	
MW-3	Toluene	06/24/2003	5.1	ug/l	5	1000	
MW-3	Toluene	12/14/2006	1.5	ug/l	5	1000	
MW-3	Toluene	06/27/2007	3.2	ug/l	0.15	1000	
MW-3	Toluene	12/28/2007	2.1	ug/l	0.15	1000	
MW-5	Toluene	06/27/2007	0.15	ug/l	0.15	1000	
MW-8	Toluene	12/15/2006	6.5	ug/l	5	1000	
MW-8	Toluene	06/28/2007	0.15	ug/l	0.15	1000	
MW-1	Trichloroethene	06/28/2007	0.23	ug/l	0.23	2.8	
MW-1	Trichloroethene	12/27/2007	0.42	ug/l	0.23	2.8	
MW-11	Trichloroethene	12/14/2006	1.2	ug/l	3	2.8	
MW-11	Trichloroethene	06/27/2007	1.1	ug/l	0.23	2.8	
MW-11	Trichloroethene	12/27/2007	0.55	ug/l	0.23	2.8	
MW-12	Trichloroethene	12/14/2006	2.4	ug/l	3	2.8	
MW-12	Trichloroethene	06/28/2007	2.4	ug/l	0.23	2.8	
MW-12	Trichloroethene	12/28/2007	2.2	ug/l	0.23	2.8	
MW-14	Trichloroethene	06/28/2007	0.86	ug/l	0.23	2.8	
MW-14	Trichloroethene	12/28/2007	0.62	ug/l	0.23	2.8	
MW-15	Trichloroethene	06/28/2007	0.58	ug/l	0.23	2.8	
MW-16	**Trichloroethene**	**01/08/2008**	**3.7**	**ug/l**	**0.23**	**2.8**	**0.9**
MW-17	Trichloroethene	06/28/2007	0.72	ug/l	0.23	2.8	
MW-17	Trichloroethene	12/27/2007	0.49	ug/l	0.23	2.8	
MW-1B	Trichloroethene	06/28/2007	0.23	ug/l	0.23	2.8	
MW-2	**Trichloroethene**	**10/01/1994**	**5**	**ug/l**	**5**	**2.8**	**2.2**
MW-2	**Trichloroethene**	**01/31/1995**	**6**	**ug/l**	**5**	**2.8**	**3.2**
MW-2	**Trichloroethene**	**02/15/1995**	**6**	**ug/l**	**5**	**2.8**	**3.2**
MW-2	**Trichloroethene**	**03/07/1995**	**6**	**ug/l**	**5**	**2.8**	**3.2**
MW-2	**Trichloroethene**	**12/06/1995**	**6**	**ug/l**	**5**	**2.8**	**3.2**
MW-2	Trichloroethene	12/15/2006	1.9	ug/l	3	2.8	
MW-2	Trichloroethene	06/28/2007	1.4	ug/l	0.23	2.8	
MW-2	Trichloroethene	12/28/2007	0.47	ug/l	0.23	2.8	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-3	**Trichloroethene**	**02/15/1995**	**5**	**ug/l**	**5**	**2.8**	**2.2**
MW-3	**Trichloroethene**	**12/03/1997**	**4**	**ug/l**	**1**	**2.8**	**1.2**
MW-3	Trichloroethene	12/14/2006	1	ug/l	3	2.8	
MW-3	Trichloroethene	06/27/2007	1.1	ug/l	0.23	2.8	
MW-3	Trichloroethene	12/28/2007	2	ug/l	0.23	2.8	
MW-4	**Trichloroethene**	**12/03/1997**	**3**	**ug/l**	**1**	**2.8**	**0.2**
MW-4R	Trichloroethene	06/27/2007	0.23	ug/l	0.23	2.8	
MW-5	**Trichloroethene**	**12/03/1997**	**4**	**ug/l**	**1**	**2.8**	**1.2**
MW-5	Trichloroethene	06/27/2007	0.23	ug/l	0.23	2.8	
MW-5	Trichloroethene	12/19/2007	0.55	ug/l	0.23	2.8	
MW-7	Trichloroethene	12/14/2006	1.2	ug/l	3	2.8	
MW-7	Trichloroethene	06/27/2007	0.23	ug/l	0.23	2.8	
MW-7	Trichloroethene	12/27/2007	0.84	ug/l	0.23	2.8	
MW-8	Trichloroethene	12/03/1997	1	ug/l	1	2.8	
MW-1	Xylene	12/11/2003	5.1	ug/l	5	530	
MW-1	Xylene	06/28/2007	1.1	ug/l	0.21	530	
MW-11	Xylene	12/11/2003	5.1	ug/l	5	530	
MW-11	Xylene	06/27/2007	0.43	ug/l	0.21	530	
MW-12	Xylene	12/11/2003	5.2	ug/l	5	530	
MW-14	Xylene	12/11/2003	5.1	ug/l	5	530	
MW-16	Xylene	01/08/2008	2.2	ug/l	0.21	530	
MW-1A	Xylene	12/03/1997	3	ug/l	1	530	
MW-1A	Xylene	11/18/1998	7.4	ug/l	2	530	
MW-1A	Xylene	12/11/2003	5.6	ug/l	5	530	
MW-1A	Xylene	06/16/2004	5.9	ug/l	5	530	
MW-1B	Xylene	12/11/2003	5.5	ug/l	5	530	
MW-1B	Xylene	06/16/2004	5.2	ug/l	5	530	
MW-1B	Xylene	12/30/2004	5	ug/l	5	530	
MW-1B	Xylene	07/06/2006	7.3	ug/l	5	530	
MW-1B	Xylene	12/15/2006	5.5	ug/l	4	530	
MW-1B	Xylene	06/28/2007	3.1	ug/l	0.21	530	
MW-1B	Xylene	12/28/2007	8.8	ug/l	0.21	530	
MW-27	Xylene	01/09/2008	0.97	ug/l	0.21	530	
MW-3	Xylene	10/01/1994	34	ug/l	5	530	
MW-3	Xylene	01/31/1995	20	ug/l	5	530	
MW-3	Xylene	02/15/1995	24	ug/l	5	530	
MW-3	Xylene	03/07/1995	22	ug/l	5	530	
MW-3	Xylene	12/07/1995	19	ug/l	5	530	
MW-3	Xylene	05/06/1996	34	ug/l	5	530	
MW-3	Xylene	06/24/1997	23	ug/l	5	530	
MW-3	Xylene	12/03/1997	11	ug/l	1	530	
MW-3	Xylene	06/04/1998	23	ug/l	5	530	
MW-3	Xylene	11/18/1998	12.8	ug/l	2	530	
MW-3	Xylene	05/13/1999	11	ug/l	5	530	
MW-3	Xylene	06/24/2003	17	ug/l	10	530	
MW-3	Xylene	12/11/2003	10	ug/l	5	530	
MW-3	Xylene	06/15/2004	9.3	ug/l	5	530	
MW-3	Xylene	12/29/2004	13	ug/l	5	530	
MW-3	Xylene	06/22/2005	16	ug/l	5	530	
MW-3	Xylene	12/14/2006	8.8	ug/l	4	530	

Table 8: Historical Organic Groundwater Results

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-3	Xylene	06/27/2007	12	ug/l	0.21	530	
MW-3	Xylene	12/28/2007	15	ug/l	0.21	530	
MW-6	Xylene	12/11/2003	5.2	ug/l	5	530	
MW-8	Xylene	12/12/2003	5	ug/l	5	530	

[1] Table only contains detected constituents.
[2] PQL = Practical Quantitation Limit
[3] NCGW2L = North Carolina Ground Water 2L Standard

Table 9: Historical Organic Surface Water Results

Well ID	Parameter Name[1]	Sample Date	Result	Unit	PQL[2]	SWSTD[3]	Exceedance
SW-3	1,1-Dichloroethane	10/01/1994	9	ug/l	5	70	
SW-2	1,1-Dichloroethane	12/07/1995	12	ug/l	5	70	
SW-5	1,1-Dichloroethane	12/03/1997	7	ug/l	1	70	
SW-5	1,1,2-Trichloroethene	12/03/1997	1	ug/l	1	2.8	
SW-5	Chloroethane	12/03/1997	2	ug/l	1		
SW-5	cis-1,2-Dichloroethylene	12/03/1997	2	ug/l	1	70	
SW-3	Bromomethane	05/13/1999	11	ug/l	10		
SW-5	Carbon disulfide	12/12/2000	150	ug/l	10		
SW-5	Carbon disulfide	06/13/2001	6.6	ug/l	5		
SW-4R	Bromodichloromethane	06/15/2004	13	ug/l	5		
SW-4R	Chlorodibromomethane	06/15/2004	6.8	ug/l	5		
SW-4R	Chloroform	06/15/2004	29	ug/l	5	70	
SW-5	Bromodichloromethane	06/16/2004	12	ug/l	5		
SW-5	Chlorodibromomethane	06/16/2004	6.8	ug/l	5		
SW-5	Chloroform	06/16/2004	28	ug/l	5	70	
SW-3	cis-1,2-Dichloroethylene	07/07/2006	5.2	ug/l	5	70	
SW-5	1,1-Dichloroethane	12/14/2006	1.3	ug/l	5	70	
SW-5	cis-1,2-Dichloroethylene	12/14/2006	4.8	ug/l	5	70	
SW-5	p-Dichlorobenzene	12/14/2006	1.4	ug/l	3	1.4	
SW-5	Acetone	06/27/2007	0.9	ug/l	0.9	700	
SW-4R	Acetone	06/28/2007	0.9	ug/l	0.9	700	

[1] Table only contains detected constituents.

[2] PQL = Practical Quantitation Limit

[3] SWSTD = North Carolina Surface Water Class C or Class IV as applicable

Table 10: Current Organic Groundwater

Well ID	Parameter Name [1]	Sample Date	Result	Unit	Qual Code	PQL [2]	NCGW2L [3]	Exceedance
EB	Chloroform	12/28/2007	28	ug/l		0.16	70	
FB	Chloroform	12/28/2007	31	ug/l		0.16	70	
MW-1	**Benzene**	**12/27/2007**	**5.6**	**ug/l**		**0.12**	**1**	**4.6**
MW-1	cis-1,2-Dichloroethylene	12/27/2007	13	ug/l		0.14	70	
MW-1	**p-Dichlorobenzene**	**12/27/2007**	**3.8**	**ug/l**		**0.15**	**1.4**	**2.4**
MW-11	**Benzene**	**12/27/2007**	**4.2**	**ug/l**		**0.12**	**1**	**3.2**
MW-11	cis-1,2-Dichloroethylene	12/27/2007	42	ug/l		0.14	70	
MW-11	**p-Dichlorobenzene**	**12/27/2007**	**5.9**	**ug/l**		**0.15**	**1.4**	**4.5**
MW-12	1,1-Dichloroethane	12/28/2007	5	ug/l		0.09	70	
MW-12	1,1,2-Trichloroethene	12/28/2007	2.2	ug/l		0.23	2.8	
MW-12	**Benzene**	**12/28/2007**	**7.1**	**ug/l**		**0.12**	**1**	**6.1**
MW-12	cis-1,2-Dichloroethylene	12/28/2007	14	ug/l		0.14	70	
MW-12	**p-Dichlorobenzene**	**12/28/2007**	**7.4**	**ug/l**		**0.15**	**1.4**	**6**
MW-12	**Perchloroethylene**	**12/28/2007**	**1**	**ug/l**		**0.25**	**0.7**	**0.3**
MW-14	**Benzene**	**12/28/2007**	**1.2**	**ug/l**		**0.12**	**1**	**0.2**
MW-14	cis-1,2-Dichloroethylene	12/28/2007	19	ug/l		0.14	70	
MW-14	**p-Dichlorobenzene**	**12/28/2007**	**4.6**	**ug/l**		**0.15**	**1.4**	**3.2**
MW-16	1,1-Dichloroethane	01/08/2008	21	ug/l		0.09	70	
MW-16	**1,1,2-Trichloroethene**	**01/08/2008**	**3.7**	**ug/l**		**0.23**	**2.8**	**0.9**
MW-16	**1,2-Dichloropropane**	**01/08/2008**	**1**	**ug/l**		**0.18**	**0.51**	**0.49**
MW-16	**Benzene**	**01/08/2008**	**3.3**	**ug/l**		**0.12**	**1**	**2.3**
MW-16	cis-1,2-Dichloroethylene	01/08/2008	16	ug/l		0.14	70	
MW-16	Methylene chloride	01/08/2008	4.1	ug/l		0.088	4.6	
MW-16	**p-Dichlorobenzene**	**01/08/2008**	**1.8**	**ug/l**		**0.15**	**1.4**	**0.4**
MW-16	**Perchloroethylene**	**01/08/2008**	**2.5**	**ug/l**		**0.25**	**0.7**	**1.8**
MW-17	**Benzene**	**12/27/2007**	**1.1**	**ug/l**		**0.12**	**1**	**0.1**
MW-1B	cis-1,2-Dichloroethylene	12/28/2007	6.6	ug/l		0.14	70	
MW-1B	Methylene chloride	12/28/2007	2.8	ug/l		0.088	4.6	
MW-1B	**p-Dichlorobenzene**	**12/28/2007**	**2.4**	**ug/l**		**0.15**	**1.4**	**1**
MW-1B	Xylene	12/28/2007	8.8	ug/l		0.21	530	
MW-2	**Benzene**	**12/28/2007**	**1.8**	**ug/l**		**0.12**	**1**	**0.8**
MW-2	cis-1,2-Dichloroethylene	12/28/2007	18	ug/l		0.14	70	
MW-2	**p-Dichlorobenzene**	**12/28/2007**	**4.4**	**ug/l**		**0.15**	**1.4**	**3**
MW-23	cis-1,2-Dichloroethylene	01/07/2008	7.8	ug/l		0.14	70	
MW-23	p-Dichlorobenzene	01/07/2008	1.1	ug/l		0.15	1.4	
MW-24	**Benzene**	**01/08/2008**	**1.6**	**ug/l**		**0.12**	**1**	**0.6**
MW-24	cis-1,2-Dichloroethylene	01/08/2008	8.2	ug/l		0.14	70	
MW-24	**p-Dichlorobenzene**	**01/08/2008**	**2.7**	**ug/l**		**0.15**	**1.4**	**1.3**
MW-26	**Benzene**	**01/09/2008**	**1.9**	**ug/l**		**0.12**	**1**	**0.9**
MW-26	cis-1,2-Dichloroethylene	01/09/2008	32	ug/l		0.14	70	
MW-26	**p-Dichlorobenzene**	**01/09/2008**	**3.1**	**ug/l**		**0.15**	**1.4**	**1.7**
MW-27	cis-1,2-Dichloroethylene	01/09/2008	21	ug/l		0.14	70	
MW-3	1,1,2-Trichloroethene	12/28/2007	2	ug/l		0.23	2.8	
MW-3	**Benzene**	**12/28/2007**	**8**	**ug/l**		**0.12**	**1**	**7**
MW-3	cis-1,2-Dichloroethylene	12/28/2007	13	ug/l		0.14	70	
MW-3	Ethylbenzene	12/28/2007	3.9	ug/l		0.17	550	
MW-3	**p-Dichlorobenzene**	**12/28/2007**	**9.8**	**ug/l**		**0.15**	**1.4**	**8.4**
MW-3	Toluene	12/28/2007	2.1	ug/l		0.15	1000	
MW-3	Xylene	12/28/2007	15	ug/l		0.21	530	
MW-4R	1,1-Dichloroethane	12/27/2007	7.6	ug/l		0.09	70	

Table 10: Current Organic Groundwater

Well ID	Parameter Name [1]	Sample Date	Result	Unit	Qual Code	PQL [2]	NCGW2L [3]	Exceedance
MW-4R	cis-1,2-Dichloroethylene	12/27/2007	18	ug/l		0.14	70	
MW-4R	**p-Dichlorobenzene**	**12/27/2007**	**3.6**	**ug/l**		**0.15**	**1.4**	**2.2**
MW-5	1,1-Dichloroethane	12/19/2007	5.7	ug/l		0.09	70	
MW-5	**Benzene**	**12/19/2007**	**3.2**	**ug/l**		**0.12**	**1**	**2.2**
MW-5	cis-1,2-Dichloroethylene	12/19/2007	10	ug/l		0.14	70	
MW-6	**Benzene**	**12/19/2007**	**1.1**	**ug/l**		**0.12**	**1**	**0.1**
MW-7	**Benzene**	**12/27/2007**	**4.7**	**ug/l**		**0.12**	**1**	**3.7**
MW-7	cis-1,2-Dichloroethylene	12/27/2007	9.2	ug/l		0.14	70	
MW-7	**p-Dichlorobenzene**	**12/27/2007**	**2.1**	**ug/l**		**0.15**	**1.4**	**0.7**
MW-9	cis-1,2-Dichloroethylene	12/19/2007	20	ug/l		0.14	70	
EB	Acetone	12/28/2007	12	ug/l	J	0.9	700	
FB	Acetone	12/28/2007	11	ug/l	J	0.9	700	
MW-1	1,1-Dichloroethane	12/27/2007	2.5	ug/l	J	0.09	70	
MW-1	1,1,2-Trichloroethene	12/27/2007	0.42	ug/l	J	0.23	2.8	
MW-1	Carbon disulfide	12/27/2007	2	ug/l	J	0.12		
MW-10	1,1-Dichloroethane	12/27/2007	0.91	ug/l	J	0.09	70	
MW-10	cis-1,2-Dichloroethylene	12/27/2007	3.8	ug/l	J	0.14	70	
MW-11	1,1-Dichloroethane	12/27/2007	2.9	ug/l	J	0.09	70	
MW-11	1,1,2-Trichloroethene	12/27/2007	0.55	ug/l	J	0.23	2.8	
MW-11	Chlorobenzene	12/27/2007	1.6	ug/l	J	0.16	50	
MW-11	Chloroethane	12/27/2007	2	ug/l	J	0.4		
MW-11	**Chloroethene**	**12/27/2007**	**0.79**	**ug/l**	**J**	**0.15**	**0.015**	**0.775**
MW-11	Methylene chloride	12/27/2007	0.7	ug/l	J	0.088	4.6	
MW-12	Chlorobenzene	12/28/2007	1.7	ug/l	J	0.16	50	
MW-12	Methylene chloride	12/28/2007	1.8	ug/l	J	0.088	4.6	
MW-12D	1,1-Dichloroethane	12/28/2007	0.89	ug/l	J	0.09	70	
MW-12D	Benzene	12/28/2007	0.52	ug/l	J	0.12	1	
MW-12D	Carbon disulfide	12/28/2007	1.7	ug/l	J	0.12		
MW-12D	cis-1,2-Dichloroethylene	12/28/2007	0.69	ug/l	J	0.14	70	
MW-13	1,1-Dichloroethane	12/19/2007	0.56	ug/l	J	0.09	70	
MW-13	Benzene	12/19/2007	0.47	ug/l	J	0.12	1	
MW-13	cis-1,2-Dichloroethylene	12/19/2007	0.71	ug/l	J	0.14	70	
MW-14	1,1-Dichloroethane	12/28/2007	2.2	ug/l	J	0.09	70	
MW-14	1,1,2-Trichloroethene	12/28/2007	0.62	ug/l	J	0.23	2.8	
MW-14	Chlorobenzene	12/28/2007	1.7	ug/l	J	0.16	50	
MW-14	Chloroethane	12/28/2007	2	ug/l	J	0.4		
MW-15	1,1-Dichloroethane	12/19/2007	3.7	ug/l	J	0.09	70	
MW-15	Acetone	12/19/2007	5.1	ug/l	J	0.9	700	
MW-15	Chloroethane	12/19/2007	0.88	ug/l	J	0.4		
MW-15	cis-1,2-Dichloroethylene	12/19/2007	4.6	ug/l	J	0.14	70	
MW-16	Chloroethane	01/08/2008	1.6	ug/l	J	0.4		
MW-16	Xylene	01/08/2008	2.2	ug/l	J	0.21	530	
MW-17	1,1-Dichloroethane	12/27/2007	3.3	ug/l	J	0.09	70	
MW-17	1,1,2-Trichloroethene	12/27/2007	0.49	ug/l	J	0.23	2.8	
MW-17	cis-1,2-Dichloroethylene	12/27/2007	3	ug/l	J	0.14	70	
MW-17	Methylene chloride	12/27/2007	0.54	ug/l	J	0.088	4.6	
MW-17	p-Dichlorobenzene	12/27/2007	0.5	ug/l	J	0.15	1.4	
MW-18	Acetone	01/07/2008	5.3	ug/l	J	0.9	700	
MW-18	Carbon disulfide	01/07/2008	0.76	ug/l	J	0.12		
MW-1B	1,1-Dichloroethane	12/28/2007	2.8	ug/l	J	0.09	70	

Table 10: Current Organic Groundwater

Well ID	Parameter Name [1]	Sample Date	Result	Unit	Qual Code	PQL [2]	NCGW2L [3]	Exceedance
MW-1B	Carbon disulfide	12/28/2007	0.56	ug/l	J	0.12		
MW-1B	Ethylbenzene	12/28/2007	0.96	ug/l	J	0.17	550	
MW-1B	Perchloroethylene	12/28/2007	0.42	ug/l	J	0.25	0.7	
MW-2	1,1-Dichloroethane	12/28/2007	1.5	ug/l	J	0.09	70	
MW-2	1,1,2-Trichloroethene	12/28/2007	0.47	ug/l	J	0.23	2.8	
MW-2	Acetone	12/28/2007	47	ug/l	J	0.9	700	
MW-2	Chlorobenzene	12/28/2007	1.5	ug/l	J	0.16	50	
MW-20	1,1-Dichloroethane	01/08/2008	0.94	ug/l	J	0.09	70	
MW-20	Acetone	01/08/2008	3.6	ug/l	J	0.9	700	
MW-21	1,1-Dichloroethane	01/09/2008	2.4	ug/l	J	0.09	70	
MW-21	Benzene	01/09/2008	0.49	ug/l	J	0.12	1	
MW-21	cis-1,2-Dichloroethylene	01/09/2008	1.6	ug/l	J	0.14	70	
MW-21	Methylene chloride	01/09/2008	0.7	ug/l	J	0.088	4.6	
MW-23	1,1-Dichloroethane	01/07/2008	1.2	ug/l	J	0.09	70	
MW-23	Acetone	01/07/2008	5.7	ug/l	J	0.9	700	
MW-24	1,1-Dichloroethane	01/08/2008	1.1	ug/l	J	0.09	70	
MW-24	Chloroethane	01/08/2008	0.88	ug/l	J	0.4		
MW-25	1,1-Dichloroethane	01/08/2008	3.4	ug/l	J	0.09	70	
MW-25	Acetone	01/08/2008	9.2	ug/l	J	0.9	700	
MW-25	cis-1,2-Dichloroethylene	01/08/2008	1.2	ug/l	J	0.14	70	
MW-25	Perchloroethylene	01/08/2008	0.49	ug/l	J	0.25	0.7	
MW-26	1,1-Dichloroethane	01/09/2008	1.7	ug/l	J	0.09	70	
MW-26	Chlorobenzene	01/09/2008	0.78	ug/l	J	0.16	50	
MW-26	Chloroethane	01/09/2008	0.94	ug/l	J	0.4		
MW-27	1,1-Dichloroethane	01/09/2008	0.99	ug/l	J	0.09	70	
MW-27	Acetone	01/09/2008	8.5	ug/l	J	0.9	700	
MW-27	Xylene	01/09/2008	0.97	ug/l	J	0.21	530	
MW-3	1,1-Dichloroethane	12/28/2007	1.1	ug/l	J	0.09	70	
MW-3	1,2-Dichlorobenzene	12/28/2007	0.85	ug/l	J	0.17	620	
MW-3	Perchloroethylene	12/28/2007	0.45	ug/l	J	0.25	0.7	
MW-4R	Chlorobenzene	12/27/2007	0.98	ug/l	J	0.16	50	
MW-4R	Chloroethane	12/27/2007	3.4	ug/l	J	0.4		
MW-5	1,1,2-Trichloroethene	12/19/2007	0.55	ug/l	J	0.23	2.8	
MW-6	cis-1,2-Dichloroethylene	12/19/2007	2.3	ug/l	J	0.14	70	
MW-6	p-Dichlorobenzene	12/19/2007	0.88	ug/l	J	0.15	1.4	
MW-7	1,1-Dichloroethane	12/27/2007	4.9	ug/l	J	0.09	70	
MW-7	1,1,2-Trichloroethene	12/27/2007	0.84	ug/l	J	0.23	2.8	
MW-7	Acetone	12/27/2007	6.4	ug/l	J	0.9	700	
MW-7	Chlorobenzene	12/27/2007	0.84	ug/l	J	0.16	50	
MW-9	1,1-Dichloroethane	12/19/2007	2.4	ug/l	J	0.09	70	
MW-9	p-Dichlorobenzene	12/19/2007	0.42	ug/l	J	0.15	1.4	

[1] Table only contains detected constituents.

[2] PQL = Practical Quantitation Limit

[3] NCGW2L = North Carolina Ground Water 2L Standard

Table 11: Current Inorganic Groundwater

Well ID	Parameter Name [1]	Sample Date	Result	Unit	Qual Code	PQL [2]	NCGW2L [3]	Exceedance
MW-1	Cobalt	12/27/2007	23.7	ug/l		2		
MW-1	Zinc, total	12/27/2007	83.5	ug/l		1	1050	
MW-11	Barium	12/27/2007	304	ug/l		0.2	2000	
MW-11	**Chromium, total**	**12/27/2007**	**67.1**	**ug/l**		**2**	**50**	**17.1**
MW-11	Cobalt	12/27/2007	107	ug/l		2		
MW-11	Nickel	12/27/2007	55.6	ug/l		2	100	
MW-11	Zinc, total	12/27/2007	246	ug/l		1	1050	
MW-12	Barium	12/28/2007	124	ug/l		0.2	2000	
MW-12	Zinc, total	12/28/2007	19.4	ug/l		1	1050	
MW-14	Cobalt	12/28/2007	94.9	ug/l		2		
MW-14	Zinc, total	12/28/2007	18.1	ug/l		1	1050	
MW-15	Zinc, total	12/19/2007	12.7	ug/l		1	1050	
MW-16	Cobalt	01/08/2008	14.1	ug/l		2		
MW-16	Zinc, total	01/08/2008	11.7	ug/l		1	1050	
MW-17	Copper	12/27/2007	9.9	ug/l		0.6	1000	
MW-17	Zinc, total	12/27/2007	25.3	ug/l		1	1050	
MW-18	Cobalt	01/07/2008	92.3	ug/l		2		
MW-18	Copper	01/07/2008	12.6	ug/l		0.6	1000	
MW-18	Zinc, total	01/07/2008	12.2	ug/l		1	1050	
MW-1B	Cobalt	12/28/2007	59.7	ug/l		2		
MW-1B	Zinc, total	12/28/2007	22.5	ug/l		1	1050	
MW-2	Cobalt	12/28/2007	75	ug/l		2		
MW-2	Zinc, total	12/28/2007	13.2	ug/l		1	1050	
MW-20	Zinc, total	01/08/2008	10.4	ug/l		1	1050	
MW-22	Chromium, total	01/07/2008	27.8	ug/l		2	50	
MW-23	**Chromium, total**	**01/07/2008**	**95.2**	**ug/l**		**2**	**50**	**45.2**
MW-23	Cobalt	01/07/2008	22.4	ug/l		2		
MW-23	Copper	01/07/2008	13.2	ug/l		0.6	1000	
MW-23	Nickel	01/07/2008	91.7	ug/l		2	100	
MW-24	Barium	01/08/2008	113	ug/l		0.2	2000	
MW-24	Chromium, total	01/08/2008	12.2	ug/l		2	50	
MW-24	Cobalt	01/08/2008	29.7	ug/l		2		
MW-24	Zinc, total	01/08/2008	19.3	ug/l		1	1050	
MW-25	Chromium, total	01/08/2008	16.6	ug/l		2	50	
MW-25	Zinc, total	01/08/2008	15.3	ug/l		1	1050	
MW-26	Barium	01/09/2008	163	ug/l		0.2	2000	
MW-26	Chromium, total	01/09/2008	26.7	ug/l		2	50	
MW-26	Cobalt	01/09/2008	78.4	ug/l		2		
MW-26	Zinc, total	01/09/2008	40.7	ug/l		1	1050	
MW-27	Barium	01/09/2008	123	ug/l		0.2	2000	
MW-27	Chromium, total	01/09/2008	19.2	ug/l		2	50	
MW-27	Zinc, total	01/09/2008	16.5	ug/l		1	1050	
MW-3	Cobalt	12/28/2007	12.3	ug/l		2		
MW-3	Zinc, total	12/28/2007	49.5	ug/l		1	1050	
MW-4R	Barium	12/27/2007	119	ug/l		0.2	2000	
MW-4R	Cobalt	12/27/2007	145	ug/l		2		
MW-5	Barium	12/19/2007	102	ug/l		0.2	2000	
MW-5	Chromium, total	12/19/2007	38.9	ug/l		2	50	
MW-5	Vanadium	12/19/2007	29.6	ug/l		1		
MW-5	Zinc, total	12/19/2007	81.9	ug/l		1	1050	

Table 11: Current Inorganic Groundwater

Well ID	Parameter Name [1]	Sample Date	Result	Unit	Qual Code	PQL [2]	NCGW2L [3] Exceedance
MW-6	Cobalt	12/19/2007	64.9	ug/l		2	
MW-6	Zinc, total	12/19/2007	19.7	ug/l		1	1050
MW-9	Barium	12/19/2007	120	ug/l		0.2	2000
MW-9	Cobalt	12/19/2007	47.8	ug/l		2	
MW-9	Zinc, total	12/19/2007	10.6	ug/l		1	1050
SW-4R	Zinc, total	12/28/2007	3.5	ug/l		1	1050
MW-1	Barium	12/27/2007	46.9	ug/l	J	0.2	2000
MW-1	Lead, total	12/27/2007	6.4	ug/l	J	2	15
MW-1	Nickel	12/27/2007	9.9	ug/l	J	2	100
MW-1	Thallium	12/27/2007	0.064	ug/l	J	0.036	
MW-10	Arsenic	12/27/2007	4.1	ug/l	J	2	50
MW-10	Barium	12/27/2007	32.2	ug/l	J	0.2	2000
MW-10	Copper	12/27/2007	1.8	ug/l	J	0.6	1000
MW-10	Nickel	12/27/2007	2.9	ug/l	J	2	100
MW-10	Zinc, total	12/27/2007	9	ug/l	J	1	1050
MW-11	Arsenic	12/27/2007	4.1	ug/l	J	2	50
MW-11	Copper	12/27/2007	6.4	ug/l	J	0.6	1000
MW-11	Lead, total	12/27/2007	8.1	ug/l	J	2	15
MW-11	Thallium	12/27/2007	0.998	ug/l	J	0.036	
MW-12	Arsenic	12/28/2007	5.8	ug/l	J	2	50
MW-12	Cadmium, total	12/28/2007	0.6	ug/l	J	0.5	1.75
MW-12	Chromium, total	12/28/2007	6.8	ug/l	J	2	50
MW-12	Cobalt	12/28/2007	4.5	ug/l	J	2	
MW-12	Copper	12/28/2007	2.2	ug/l	J	0.6	1000
MW-12	Nickel	12/28/2007	5.2	ug/l	J	2	100
MW-12	Silver	12/28/2007	2.3	ug/l	J	2	18
MW-12	Thallium	12/28/2007	0.09	ug/l	J	0.036	
MW-12	Vanadium	12/28/2007	3.8	ug/l	J	1	
MW-12D	Arsenic	12/28/2007	2.9	ug/l	J	2	50
MW-12D	Barium	12/28/2007	6.8	ug/l	J	0.2	2000
MW-12D	Silver	12/28/2007	2.2	ug/l	J	2	18
MW-12D	Zinc, total	12/28/2007	7.9	ug/l	J	1	1050
MW-13	Barium	12/19/2007	22.6	ug/l	J	0.2	2000
MW-13	Cobalt	12/19/2007	3.2	ug/l	J	2	
MW-13	Nickel	12/19/2007	7.9	ug/l	J	2	100
MW-13	Zinc, total	12/19/2007	8.1	ug/l	J	1	1050
MW-14	Arsenic	12/28/2007	2.6	ug/l	J	2	50
MW-14	Barium	12/28/2007	51.8	ug/l	J	0.2	2000
MW-14	Copper	12/28/2007	3.1	ug/l	J	0.6	1000
MW-14	Nickel	12/28/2007	5.2	ug/l	J	2	100
MW-14	Thallium	12/28/2007	0.102	ug/l	J	0.036	
MW-15	Barium	12/19/2007	36.6	ug/l	J	0.2	2000
MW-15	Nickel	12/19/2007	2.5	ug/l	J	2	100
MW-16	Barium	01/08/2008	64.6	ug/l	J	0.2	2000
MW-16	Copper	01/08/2008	4	ug/l	J	0.6	1000
MW-16	Nickel	01/08/2008	6.2	ug/l	J	2	100
MW-16	Thallium	01/08/2008	0.108	ug/l	J	0.036	
MW-17	Arsenic	12/27/2007	3.3	ug/l	J	2	50
MW-17	Barium	12/27/2007	86.7	ug/l	J	0.2	2000
MW-17	Cadmium, total	12/27/2007	0.6	ug/l	J	0.5	1.75
MW-17	Chromium, total	12/27/2007	8.3	ug/l	J	2	50

Table 11: Current Inorganic Groundwater

Well ID	Parameter Name [1]	Sample Date	Result	Unit	Qual Code	PQL [2]	NCGW2L [3] Exceedance
MW-17	Cobalt	12/27/2007	27.2	ug/l	J	2	
MW-17	Nickel	12/27/2007	13.5	ug/l	J	2	100
MW-17	Thallium	12/27/2007	0.119	ug/l	J	0.036	
MW-17	Vanadium	12/27/2007	4.2	ug/l	J	1	
MW-18	Barium	01/07/2008	40.2	ug/l	J	0.2	2000
MW-18	Nickel	01/07/2008	39.1	ug/l	J	2	100
MW-18	Thallium	01/07/2008	0.413	ug/l	J	0.036	
MW-19	Barium	01/08/2008	44.2	ug/l	J	0.2	2000
MW-19	Copper	01/08/2008	4.2	ug/l	J	0.6	1000
MW-19	Nickel	01/08/2008	5.8	ug/l	J	2	100
MW-19	Thallium	01/08/2008	0.043	ug/l	J	0.036	
MW-19	Vanadium	01/08/2008	3.2	ug/l	J	1	
MW-19	Zinc, total	01/08/2008	3.8	ug/l	J	1	1050
MW-1B	Arsenic	12/28/2007	3.9	ug/l	J	2	50
MW-1B	Barium	12/28/2007	92	ug/l	J	0.2	2000
MW-1B	Copper	12/28/2007	4.5	ug/l	J	0.6	1000
MW-1B	Nickel	12/28/2007	8.8	ug/l	J	2	100
MW-1B	Thallium	12/28/2007	0.117	ug/l	J	0.036	
MW-2	Arsenic	12/28/2007	3.5	ug/l	J	2	50
MW-2	Barium	12/28/2007	40.5	ug/l	J	0.2	2000
MW-2	Copper	12/28/2007	1.1	ug/l	J	0.6	1000
MW-2	Nickel	12/28/2007	4	ug/l	J	2	100
MW-2	Silver	12/28/2007	2.1	ug/l	J	2	18
MW-2	Thallium	12/28/2007	0.074	ug/l	J	0.036	
MW-20	Barium	01/08/2008	61	ug/l	J	0.2	2000
MW-20	Chromium, total	01/08/2008	7.9	ug/l	J	2	50
MW-20	Cobalt	01/08/2008	3.5	ug/l	J	2	
MW-20	Copper	01/08/2008	4.4	ug/l	J	0.6	1000
MW-20	Nickel	01/08/2008	9.6	ug/l	J	2	100
MW-20	Thallium	01/08/2008	0.056	ug/l	J	0.036	
MW-20	Vanadium	01/08/2008	6.7	ug/l	J	1	
MW-21	Barium	01/09/2008	43.1	ug/l	J	0.2	2000
MW-21	Cobalt	01/09/2008	6	ug/l	J	2	
MW-21	Nickel	01/09/2008	4.2	ug/l	J	2	100
MW-21	Thallium	01/09/2008	0.06	ug/l	J	0.036	
MW-21	Zinc, total	01/09/2008	7.3	ug/l	J	1	1050
MW-22	Barium	01/07/2008	55.3	ug/l	J	0.2	2000
MW-22	Copper	01/07/2008	3	ug/l	J	0.6	1000
MW-22	Nickel	01/07/2008	14.9	ug/l	J	2	100
MW-22	Zinc, total	01/07/2008	3.9	ug/l	J	1	1050
MW-23	Barium	01/07/2008	92.4	ug/l	J	0.2	2000
MW-23	Thallium	01/07/2008	0.101	ug/l	J	0.036	
MW-23	Zinc, total	01/07/2008	9.6	ug/l	J	1	1050
MW-24	Arsenic	01/08/2008	2.1	ug/l	J	2	50
MW-24	Copper	01/08/2008	3.6	ug/l	J	0.6	1000
MW-24	Nickel	01/08/2008	12.6	ug/l	J	2	100
MW-24	Thallium	01/08/2008	0.107	ug/l	J	0.036	
MW-25	Barium	01/08/2008	54.7	ug/l	J	0.2	2000
MW-25	Cobalt	01/08/2008	3.9	ug/l	J	2	
MW-25	Copper	01/08/2008	2.3	ug/l	J	0.6	1000
MW-25	Lead, total	01/08/2008	2.7	ug/l	J	2	15

Table 11: Current Inorganic Groundwater

Well ID	Parameter Name [1]	Sample Date	Result	Unit	Qual Code	PQL [2]	NCGW2L [3] Exceedance
MW-25	Nickel	01/08/2008	22	ug/l	J	2	100
MW-25	Thallium	01/08/2008	0.058	ug/l	J	0.036	
MW-25	Vanadium	01/08/2008	8.5	ug/l	J	1	
MW-26	Copper	01/09/2008	5.6	ug/l	J	0.6	1000
MW-26	Lead, total	01/09/2008	4.7	ug/l	J	2	15
MW-26	Nickel	01/09/2008	49	ug/l	J	2	100
MW-26	Thallium	01/09/2008	0.12	ug/l	J	0.036	
MW-27	Cobalt	01/09/2008	4.8	ug/l	J	2	
MW-27	Copper	01/09/2008	8.8	ug/l	J	0.6	1000
MW-27	Lead, total	01/09/2008	3.4	ug/l	J	2	15
MW-27	Nickel	01/09/2008	20.3	ug/l	J	2	100
MW-27	Thallium	01/09/2008	0.093	ug/l	J	0.036	
MW-27	Vanadium	01/09/2008	7.7	ug/l	J	1	
MW-3	Arsenic	12/28/2007	3.5	ug/l	J	2	50
MW-3	Barium	12/28/2007	46.2	ug/l	J	0.2	2000
MW-3	Nickel	12/28/2007	8.1	ug/l	J	2	100
MW-5	Cobalt	12/19/2007	5.5	ug/l	J	2	
MW-5	Copper	12/19/2007	5.8	ug/l	J	0.6	1000
MW-5	Lead, total	12/19/2007	8.3	ug/l	J	2	15
MW-5	Nickel	12/19/2007	16.6	ug/l	J	2	100
MW-5	Thallium	12/19/2007	0.073	ug/l	J	0.036	
MW-6	Barium	12/19/2007	67.3	ug/l	J	0.2	2000
MW-6	Nickel	12/19/2007	12.9	ug/l	J	2	100
MW-7	Barium	12/27/2007	16.8	ug/l	J	0.2	2000
MW-7	Chromium, total	12/27/2007	5.1	ug/l	J	2	50
MW-7	Lead, total	12/27/2007	2	ug/l	J	2	15
MW-7	Zinc, total	12/27/2007	8	ug/l	J	1	1050
MW-9	Cadmium, total	12/19/2007	0.7	ug/l	J	0.5	1.75
MW-9	Copper	12/19/2007	2.2	ug/l	J	0.6	1000
MW-9	Nickel	12/19/2007	38.3	ug/l	J	2	100
MW-9	Thallium	12/19/2007	0.054	ug/l	J	0.036	
SW-4R	Arsenic	12/28/2007	6.1	ug/l	J	2	50
SW-4R	Barium	12/28/2007	16.1	ug/l	J	0.2	2000
SW-4R	Cadmium, total	12/28/2007	0.8	ug/l	J	0.5	1.75
SW-4R	Chromium, total	12/28/2007	2.9	ug/l	J	2	50
SW-4R	Cobalt	12/28/2007	3.6	ug/l	J	2	
SW-4R	Copper	12/28/2007	0.7	ug/l	J	0.6	1000
SW-4R	Nickel	12/28/2007	2.3	ug/l	J	2	100
SW-4R	Silver	12/28/2007	3.9	ug/l	J	2	18
SW-4R	Vanadium	12/28/2007	3.3	ug/l	J	1	
SW-5	Arsenic	12/27/2007	4.1	ug/l	J	2	50
SW-5	Barium	12/27/2007	15.3	ug/l	J	0.2	2000
SW-5	Cadmium, total	12/27/2007	0.5	ug/l	J	0.5	1.75
SW-5	Chromium, total	12/27/2007	2	ug/l	J	2	50
SW-5	Cobalt	12/27/2007	4.6	ug/l	J	2	
SW-5	Silver	12/27/2007	2.5	ug/l	J	2	18
SW-5	Vanadium	12/27/2007	1.6	ug/l	J	1	
SW-5	Zinc, total	12/27/2007	3	ug/l	J	1	1050

[1] Table only contains detected constituents.
[2] PQL = Practical Quantitation Limit
[3] NCGW2L = North Carolina Ground Water 2L Standard

Table 12: Carcinogenic Toxicity Values for Oral Ingestion

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration July 2007 (ug/L)	LADD July 2007		HI Risk Maximum		Hi Risk July 2007	
		Oral Sfo (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
Methylene Chloride	MW-1B	7.5	2.80	0.03	0.01	2.80	0.03	0.01	4.57E-03	1.51E-03	4.57E-03	1.51E-03
	MW-3	7.5	24.00	0.29	0.10	-	-	-	3.92E-02	1.30E-02	-	-
	MW-7	7.5	29.00	0.36	0.12	-	-	-	4.73E-02	1.57E-02	-	-
	MW-11	7.5	0.70	0.01	0.00	0.70	0.01	0.00	1.14E-03	3.78E-04	1.14E-03	3.78E-04
	MW-12	7.5	13.00	0.16	0.05	1.80	0.02	0.01	2.12E-02	7.02E-03	2.94E-03	9.73E-04
	MW-15	7.5	16.00	0.20	0.06	-	-	-	2.61E-02	8.65E-03	-	-
	MW-16	7.5	4.10	0.05	0.02	4.10	0.05	0.02	6.69E-03	2.22E-03	6.69E-03	2.22E-03
	MW-17	7.5	9.70	0.12	0.04	0.54	0.01	0.00	1.58E-02	5.24E-03	8.82E-04	2.92E-04
	MW-21	7.5	0.70	0.01	0.00	0.70	0.01	0.00	1.14E-03	3.78E-04	1.14E-03	3.78E-04
Benzene	MW-1	55	7.20	0.09	0.03	5.60	0.07	0.02	1.60E-03	5.31E-04	1.25E-03	4.13E-04
	MW-1B	55	1.70	0.02	0.01	-	-	-	3.78E-04	1.25E-04	-	-
	MW-2	55	2.80	0.03	0.01	1.80	0.02	0.01	6.23E-04	2.06E-04	4.01E-04	1.33E-04
	MW-3	55	13.00	0.16	0.05	8.00	0.10	0.03	2.89E-03	9.58E-04	1.78E-03	5.89E-04
	MW-4	55	4.00	0.05	0.02	-	-	-	8.91E-04	2.95E-04	-	-
	MW-4R	55	5.60	0.07	0.02	-	-	-	1.25E-03	4.13E-04	-	-
	MW-5	55	6.10	0.07	0.02	3.20	0.04	0.01	1.36E-03	4.49E-04	7.12E-04	2.36E-04
	MW-6	55	1.10	0.01	0.00	1.10	0.01	0.00	2.45E-04	8.11E-05	2.45E-04	8.11E-05
	MW-7	55	6.70	0.08	0.03	4.70	0.06	0.02	1.49E-03	4.94E-04	1.05E-03	3.46E-04
	MW-8	55	0.12	0.00	0.00	-	-	-	2.67E-05	8.84E-06	-	-
	MW-10	55	2.10	0.03	0.01	-	-	-	4.68E-04	1.55E-04	-	-
	MW-11	55	7.70	0.09	0.03	4.20	0.05	0.02	1.71E-03	5.67E-04	9.35E-04	3.09E-04
	MW-12	55	8.20	0.10	0.03	7.10	0.09	0.03	1.83E-03	6.04E-04	1.58E-03	5.23E-04
	MW-12D	55	0.52	0.01	0.00	0.52	0.01	0.00	1.16E-04	3.83E-05	1.16E-04	3.83E-05
	MW-13	55	0.47	0.01	0.00	0.47	0.01	0.00	1.05E-04	3.46E-05	1.05E-04	3.46E-05
	MW-14	55	2.00	0.02	0.01	1.20	0.01	0.00	4.45E-04	1.47E-04	2.67E-04	8.84E-05
	MW-15	55	5.30	0.06	0.02	-	-	-	1.18E-03	3.91E-04	-	-
	MW-16	55	3.30	0.04	0.01	3.30	0.04	0.01	7.35E-04	2.43E-04	7.35E-04	2.43E-04
	MW-17	55	1.40	0.02	0.01	1.10	0.01	0.00	3.12E-04	1.03E-04	2.45E-04	8.11E-05
	MW-21	55	0.49	0.01	0.00	0.49	0.01	0.00	1.09E-04	3.61E-05	1.09E-04	3.61E-05
	MW-24	55	1.60	0.02	0.01	1.60	0.02	0.01	3.56E-04	1.18E-04	3.56E-04	1.18E-04
	MW-26	55	1.90	0.02	0.01	1.90	0.02	0.01	4.23E-04	1.40E-04	4.23E-04	1.40E-04

Table 12: Carcinogenic Toxicity Values for Oral Ingestion

NOTE:
1. LADD is lifetime average daily dose from ingested groundwater at the specified concentration.
2. Sfo values taken from the Region 9 Risk Based Concentration Table. These values represent a cancer slope factor.
3. During July 2007 sampling "-" designates none of this constituent was detected.
4. Formula used for calculations:

LADD = (C*IR*ED)/(BW*AT)

C = constituent concentration (ug/L)	
IR = Ingestion Rate (L/day)	An ingestion rate of 2L/day was used for adults 1L/day for children
ED = Exposure Duration (days)	An exposure duration of 30 years was used for adults, 8 for children
BW = Body weight (kg)	An average weight of 70 kg was used for adults, 28.2 kg for children
AT = Average Time (days)	A time of 70 years for adults and children was used

Table 13: Carcinogenic Toxicity Values for Inhalation Exposure

Contaminant	Well	Reference Dose	Maximum Concentration	LADD Maximum		Concentration July 2007	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Inhalation Sfi (ug/kg-day)	(ug/m^3)	Adult (ug/kg-day)	Child (ug/kg-day)	(ug/m^3)	Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
Methylene Chloride	MW-1B	1.6	2.80	0.17	0.07	2.80	0.17	0.07	1.07E-01	4.26E-02	1.07E-01	4.26E-02
	MW-3	1.6	24.00	1.47	0.58	-	-	-	9.18E-01	3.65E-01	-	-
	MW-7	1.6	29.00	1.78	0.71	-	-	-	1.11E+00	4.41E-01	-	-
	MW-11	1.6	0.70	0.04	0.02	0.70	0.04	0.02	2.68E-02	1.06E-02	2.68E-02	1.06E-02
	MW-12	1.6	13.00	0.80	0.32	1.80	0.11	0.04	4.97E-01	1.98E-01	6.89E-02	2.74E-02
	MW-15	1.6	16.00	0.98	0.39	-	-	-	6.12E-01	2.43E-01	-	-
	MW-16	1.6	4.10	0.25	0.10	4.10	0.25	0.10	1.57E-01	6.23E-02	1.57E-01	6.23E-02
	MW-17	1.6	9.70	0.59	0.24	0.54	0.03	0.01	3.71E-01	1.47E-01	2.07E-02	8.21E-03
	MW-21	1.6	0.70	0.04	0.02	0.70	0.04	0.02	2.68E-02	1.06E-02	2.68E-02	1.06E-02
Benzene	MW-1	27	7.20	0.44	0.18	5.60	0.34	0.14	1.63E-02	6.48E-03	1.27E-02	5.04E-03
	MW-1B	27	1.70	0.10	0.04	-	-	-	3.85E-03	1.53E-03	-	-
	MW-2	27	2.80	0.17	0.07	1.80	0.11	0.04	6.35E-03	2.52E-03	4.08E-03	1.62E-03
	MW-3	27	13.00	0.80	0.32	8.00	0.49	0.19	2.95E-02	1.17E-02	1.81E-02	7.20E-03
	MW-4	27	4.00	0.24	0.10	-	-	-	9.07E-03	3.60E-03	-	-
	MW-4R	27	5.60	0.34	0.14	-	-	-	1.27E-02	5.04E-03	-	-
	MW-5	27	6.10	0.37	0.15	3.20	0.20	0.08	1.38E-02	5.49E-03	7.26E-03	2.88E-03
	MW-6	27	1.10	0.07	0.03	1.10	0.07	0.03	2.49E-03	9.91E-04	2.49E-03	9.91E-04
	MW-7	27	6.70	0.41	0.16	4.70	0.29	0.11	1.52E-02	6.03E-03	1.07E-02	4.23E-03
	MW-8	27	0.12	0.01	0.00	-	-	-	2.72E-04	1.08E-04	-	-
	MW-10	27	2.10	0.13	0.05	-	-	-	4.76E-03	1.89E-03	-	-
	MW-11	27	7.70	0.47	0.19	4.20	0.26	0.10	1.75E-02	6.93E-03	9.52E-03	3.78E-03
	MW-12	27	8.20	0.50	0.20	7.10	0.43	0.17	1.86E-02	7.38E-03	1.61E-02	6.39E-03
	MW-12D	27	0.52	0.03	0.01	0.52	0.03	0.01	1.18E-03	4.68E-04	1.18E-03	4.68E-04
	MW-13	27	0.47	0.03	0.01	0.47	0.03	0.01	1.07E-03	4.23E-04	1.07E-03	4.23E-04
	MW-14	27	2.00	0.12	0.05	1.20	0.07	0.03	4.54E-03	1.80E-03	2.72E-03	1.08E-03
	MW-15	27	5.30	0.32	0.13	-	-	-	1.20E-02	4.77E-03	-	-
	MW-16	27	3.30	0.20	0.08	3.30	0.20	0.08	7.48E-03	2.97E-03	7.48E-03	2.97E-03
	MW-17	27	1.40	0.09	0.03	1.10	0.07	0.03	3.17E-03	1.26E-03	2.49E-03	9.91E-04
	MW-21	27	0.49	0.03	0.01	0.49	0.03	0.01	1.11E-03	4.41E-04	1.11E-03	4.41E-04
	MW-24	27	1.60	0.10	0.04	1.60	0.10	0.04	3.63E-03	1.44E-03	3.63E-03	1.44E-03
	MW-26	27	1.90	0.12	0.05	1.90	0.12	0.05	4.31E-03	1.71E-03	4.31E-03	1.71E-03

Table 13: Carcinogenic Toxicity Values for Inhalation Exposure

NOTE:
1. LADD is lifetime average daily dose inhaled at the specified concentration.
2. Sfi values taken from the Region 9 Risk Based Concentration Table. These values represent a cancer slope factor.
3. During July 2007 sampling "-" designates none of this constituent was detected.
4. HI is the Hazzard Index Risk = LADD/RfD
5. Formula used for calculations:

LADD = (C*IR*ED*K)/(BW*AT)

C = constituent concentration (ug/m^3)	
K = Volatilization factor (L/m^3)	A Volatilization factor of 0.5 L/m^3 was used based on EPA published values
IR = Inhalation Rate (m^3/day)	An inhalation rate of 20 m^3/day was used for adults and 12m^3/day for children
ED = Exposure Duration (days)	An exposure duration of 30 years was used for adults, 8 for children
BW = Body weight (kg)	An average weight of 70 kg was used for adults, 28.2 kg for children
AT = Average Time (days)	A times of 70 years for adults and children was used

Table 14: Carcinogenic Toxicity Values from Dermal Exposure

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 2007 (ug/L)	LADD 2007		HI Risk Maximum		HI Risk 1/25/2007	
		Oral Sfo (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
Methylene Chloride	MW-1B	7.5	2.80	3.85E-05	1.19E-05	2.80	3.85E-05	1.19E-05	5.13E-06	1.59E-06	5.13E-06	1.59E-06
	MW-3	7.5	24.00	3.30E-04	1.02E-04	-	-	-	4.40E-05	1.36E-05	-	-
	MW-7	7.5	29.00	3.99E-04	1.24E-04	-	-	-	5.32E-05	1.65E-05	-	-
	MW-11	7.5	0.70	9.63E-06	2.98E-06	0.70	9.63E-06	2.98E-06	1.28E-06	3.98E-07	1.28E-06	3.98E-07
	MW-12	7.5	13.00	1.79E-04	5.54E-05	1.80	2.48E-05	7.67E-06	2.38E-05	7.39E-06	3.30E-06	1.02E-06
	MW-15	7.5	16.00	2.20E-04	6.82E-05	-	-	-	2.93E-05	9.09E-06	-	-
	MW-16	7.5	4.10	5.64E-05	1.75E-05	4.10	5.64E-05	1.75E-05	7.52E-06	2.33E-06	7.52E-06	2.33E-06
	MW-17	7.5	9.70	1.33E-04	4.13E-05	0.54	7.43E-06	2.30E-06	1.78E-05	5.51E-06	9.90E-07	3.07E-07
	MW-21	7.5	0.70	9.63E-06	2.98E-06	0.70	9.63E-06	2.98E-06	1.28E-06	3.98E-07	1.28E-06	3.98E-07
Benzene	MW-1	55	7.20	4.62E-04	1.43E-04	5.60	3.59E-04	1.11E-04	8.40E-06	2.60E-06	6.53E-06	2.02E-06
	MW-1B	55	1.70	1.09E-04	3.38E-05	-	-	-	1.98E-06	6.15E-07	-	-
	MW-2	55	2.80	1.80E-04	5.57E-05	1.80	1.16E-04	3.58E-05	3.27E-06	1.01E-06	2.10E-06	6.51E-07
	MW-3	55	13.00	8.34E-04	2.58E-04	8.00	5.13E-04	1.59E-04	1.52E-05	4.70E-06	9.34E-06	2.89E-06
	MW-4	55	4.00	2.57E-04	7.95E-05	-	-	-	4.67E-06	1.45E-06	-	-
	MW-4R	55	5.60	3.59E-04	1.11E-04	-	-	-	6.53E-06	2.02E-06	-	-
	MW-5	55	6.10	3.92E-04	1.21E-04	3.20	2.05E-04	6.36E-05	7.12E-06	2.21E-06	3.73E-06	1.16E-06
	MW-6	55	1.10	7.06E-05	2.19E-05	1.10	7.06E-05	2.19E-05	1.28E-06	3.98E-07	1.28E-06	3.98E-07
	MW-7	55	6.70	4.30E-04	1.33E-04	4.70	3.02E-04	9.35E-05	7.82E-06	2.42E-06	5.48E-06	1.70E-06
	MW-8	55	0.12	7.70E-06	2.39E-06	-	-	-	1.40E-07	4.34E-08	-	-
	MW-10	55	2.10	1.35E-04	4.18E-05	-	-	-	2.45E-06	7.59E-07	-	-
	MW-11	55	7.70	4.94E-04	1.53E-04	4.20	2.70E-04	8.35E-05	8.99E-06	2.78E-06	4.90E-06	1.52E-06
	MW-12	55	8.20	5.26E-04	1.63E-04	7.10	4.56E-04	1.41E-04	9.57E-06	2.96E-06	8.29E-06	2.57E-06
	MW-12D	55	0.52	3.34E-05	1.03E-05	0.52	3.34E-05	1.03E-05	6.07E-07	1.88E-07	6.07E-07	1.88E-07
	MW-13	55	0.47	3.02E-05	9.35E-06	0.47	3.02E-05	9.35E-06	5.48E-07	1.70E-07	5.48E-07	1.70E-07
	MW-14	55	2.00	1.28E-04	3.98E-05	1.20	7.70E-05	2.39E-05	2.33E-06	7.23E-07	1.40E-06	4.34E-07
	MW-15	55	5.30	3.40E-04	1.05E-04	-	-	-	6.18E-06	1.92E-06	-	-
	MW-16	55	3.30	2.12E-04	6.56E-05	3.30	2.12E-04	6.56E-05	3.85E-06	1.19E-06	3.85E-06	1.19E-06
	MW-17	55	1.40	8.99E-05	2.78E-05	1.10	7.06E-05	2.19E-05	1.63E-06	5.06E-07	1.28E-06	3.98E-07
	MW-21	55	0.49	3.14E-05	9.74E-06	0.49	3.14E-05	9.74E-06	5.72E-07	1.77E-07	5.72E-07	1.77E-07
	MW-24	55	1.60	1.03E-04	3.18E-05	1.60	1.03E-04	3.18E-05	1.87E-06	5.78E-07	1.87E-06	5.78E-07
	MW-26	55	1.90	1.22E-04	3.78E-05	1.90	1.22E-04	3.78E-05	2.22E-06	6.87E-07	2.22E-06	6.87E-07

Table 14: Carcinogenic Toxicity Values from Dermal Exposure

NOTE:
1. LADD is lifetime average daily dose from dermal contact with contaminated groundwater at the specified concentration.
2. Sfo values taken from the Region 9 Risk Based Concentration Table. These values represent a cancer slope factor.
3. During July2007 sampling "-" designates none of this constituent was detected.
4. Dermal Values used the same RfD values as those used for Oral.
5. HI is the Hazard Index Risk = LADD/RfD
6. Formula used for calculations:

LADD = (C*K*EV*ED*EF*SA)/(BW*AT)

C = constituent concentration (ug/L)	
K = permeability coefficient (cm/day)	contaminant dependent
EV = event frequency	15 min/day
ED = Exposure Duration (years)	30 years for an adult, 8 years for a child
EF = Exposure Frequency (days/year)	365 days per year
SA = skin surface area (cm^2)	20,000cm^2 for adults and 9360 cm^2 for children
BW = Body weight (kg)	70 kg was used for adults, 28.2 kg for children
AT = Average Time (days)	70 years for adults and children

Table 15: Non-Carcinogenic Toxicity Values for Oral Ingestion

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07-1/08 (ug/L)	LADD July 2007		HI Risk Maximum		Hi Risk July 2007	
		Oral RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
1,1 Dichloroethane	MW-1	100	22.00	0.63	0.78	2.50	0.07	0.09	6.29E-03	7.80E-03	7.14E-04	8.87E-04
	MW-1A	100	6.50	0.19	0.23	-	-	-	1.86E-03	2.30E-03	-	-
	MW-1B	100	2.80	0.08	0.10	2.80	0.08	0.10	8.00E-04	9.93E-04	8.00E-04	9.93E-04
	MW-2	100	33.00	0.94	1.17	1.50	0.04	0.05	9.43E-03	1.17E-02	4.29E-04	5.32E-04
	MW-3	100	22.00	0.63	0.78	1.10	0.03	0.04	6.29E-03	7.80E-03	3.14E-04	3.90E-04
	MW-4	100	16.00	0.46	0.57	-	-	-	4.57E-03	5.67E-03	-	-
	MW-4R	100	18.00	0.51	0.64	7.60	0.22	0.27	5.14E-03	6.38E-03	2.17E-03	2.70E-03
	MW-5	100	22.00	0.63	0.78	5.70	0.16	0.20	6.29E-03	7.80E-03	1.63E-03	2.02E-03
	MW-7	100	29.00	0.83	1.03	4.90	0.14	0.17	8.29E-03	1.03E-02	1.40E-03	1.74E-03
	MW-8	100	14.00	0.40	0.50	-	-	-	4.00E-03	4.96E-03	-	-
	MW-9	100	6.00	0.17	0.21	2.40	0.07	0.09	1.71E-03	2.13E-03	6.86E-04	8.51E-04
	MW-10	100	0.91	0.03	0.03	0.91	0.03	0.03	2.60E-04	3.23E-04	2.60E-04	3.23E-04
	MW-11	100	11.00	0.31	0.39	2.90	0.08	0.10	3.14E-03	3.90E-03	8.29E-04	1.03E-03
	MW-12	100	17.00	0.49	0.60	5.00	0.14	0.18	4.86E-03	6.03E-03	1.43E-03	1.77E-03
	MW-12D	100	0.89	0.03	0.03	0.89	0.03	0.03	2.54E-04	3.16E-04	2.54E-04	3.16E-04
	MW-13	100	0.56	0.02	0.02	0.56	0.02	0.02	1.60E-04	1.99E-04	1.60E-04	1.99E-04
	MW-14	100	11.00	0.31	0.39	2.20	0.06	0.08	3.14E-03	3.90E-03	6.29E-04	7.80E-04
	MW-15	100	53.00	1.51	1.88	3.70	0.11	0.13	1.51E-02	1.88E-02	1.06E-03	1.31E-03
	MW-16	100	21.00	0.60	0.74	21.00	0.60	0.74	6.00E-03	7.45E-03	6.00E-03	7.45E-03
	MW-17	100	17.00	0.49	0.60	3.30	0.09	0.12	4.86E-03	6.03E-03	9.43E-04	1.17E-03
	MW-20	100	0.94	0.03	0.03	0.94	0.03	0.03	2.69E-04	3.33E-04	2.69E-04	3.33E-04
	MW-21	100	2.40	0.07	0.09	2.40	0.07	0.09	6.86E-04	8.51E-04	6.86E-04	8.51E-04
	MW-23	100	1.20	0.03	0.04	1.20	0.03	0.04	3.43E-04	4.26E-04	3.43E-04	4.26E-04
	MW-24	100	1.10	0.03	0.04	1.10	0.03	0.04	3.14E-04	3.90E-04	3.14E-04	3.90E-04
	MW-25	100	3.40	0.10	0.12	3.40	0.10	0.12	9.71E-04	1.21E-03	9.71E-04	1.21E-03
	MW-26	100	1.70	0.05	0.06	1.70	0.05	0.06	4.86E-04	6.03E-04	4.86E-04	6.03E-04
	MW-27	100	0.99	0.03	0.04	0.99	0.03	0.04	2.83E-04	3.51E-04	2.83E-04	3.51E-04
1,2-Dichloropropane	MW-3	1.1	11.00	0.31	0.39	-	-	-	2.86E-01	3.55E-01	-	-
	MW-16	1.1	1.00	0.03	0.04	1.00	0.03	0.04	2.60E-02	3.22E-02	2.60E-02	3.22E-02
Xylenes	MW-1	200	5.10	0.15	0.18	-	-	-	7.29E-04	9.04E-04	-	-
	MW-1A	200	7.40	0.21	0.26	-	-	-	1.06E-03	1.31E-03	-	-
	MW-1B	200	8.80	0.25	0.31	8.80	0.25	0.31	1.26E-03	1.56E-03	1.26E-03	1.56E-03
	MW-3	200	34.00	0.97	1.21	15.00	0.43	0.53	4.86E-03	6.03E-03	2.14E-03	2.66E-03
	MW-6	200	5.20	0.15	0.18	-	-	-	7.43E-04	9.22E-04	-	-
	MW-8	200	5.00	0.14	0.18	-	-	-	7.14E-04	8.87E-04	-	-
	MW-11	200	5.10	0.15	0.18	-	-	-	7.29E-04	9.04E-04	-	-
	MW-12	200	5.20	0.15	0.18	-	-	-	7.43E-04	9.22E-04	-	-
	MW-14	200	5.10	0.15	0.18	-	-	-	7.29E-04	9.04E-04	-	-
	MW-16	200	2.20	0.06	0.08	2.20	0.06	0.08	3.14E-04	3.90E-04	3.14E-04	3.90E-04
	MW-27	200	0.97	0.03	0.03	0.97	0.03	0.03	1.39E-04	1.72E-04	1.39E-04	1.72E-04

Table 15: Non-Carcinogenic Toxicity Values for Oral Ingestion

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07-1/08 (ug/L)	LADD July 2007		HI Risk Maximum		Hi Risk July 2007	
		Oral RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
Tetrachloroethene	MW-1	10	0.25	0.01	0.01	-	-	-	7.14E-04	8.87E-04	-	-
	MW-1B	10	0.42	0.01	0.01	0.42	0.01	0.01	1.20E-03	1.49E-03	1.20E-03	1.49E-03
	MW-3	10	1.00	0.03	0.04	0.45	0.01	0.02	2.86E-03	3.55E-03	1.29E-03	1.60E-03
	MW-5	10	1.00	0.03	0.04	-	-	-	2.86E-03	3.55E-03	-	-
	MW-7	10	1.20	0.03	0.04	-	-	-	3.43E-03	4.26E-03	-	-
	MW-11	10	1.10	0.03	0.04	-	-	-	3.14E-03	3.90E-03	-	-
	MW-12	10	2.00	0.06	0.07	1.00	0.03	0.04	5.71E-03	7.09E-03	2.86E-03	3.55E-03
	MW-16	10	2.50	0.07	0.09	2.50	0.07	0.09	7.14E-03	8.87E-03	7.14E-03	8.87E-03
	MW-17	10	0.47	0.01	0.02	-	-	-	1.34E-03	1.67E-03	-	-
	MW-25	10	0.49	0.01	0.02	0.49	0.01	0.02	1.40E-03	1.74E-03	1.40E-03	1.74E-03
Benzene	MW-1	4	7.20	0.21	0.26	5.60	0.16	0.20	5.14E-02	6.38E-02	4.00E-02	4.96E-02
	MW-1B	4	1.70	0.05	0.06	-	-	-	1.21E-02	1.51E-02	-	-
	MW-2	4	2.80	0.08	0.10	1.80	0.05	0.06	2.00E-02	2.48E-02	1.29E-02	1.60E-02
	MW-3	4	13.00	0.37	0.46	8.00	0.23	0.28	9.29E-02	1.15E-01	5.71E-02	7.09E-02
	MW-4	4	4.00	0.11	0.14	-	-	-	2.86E-02	3.55E-02	-	-
	MW-4R	4	5.60	0.16	0.20	-	-	-	4.00E-02	4.96E-02	-	-
	MW-5	4	6.10	0.17	0.22	3.20	0.09	0.11	4.36E-02	5.41E-02	2.29E-02	2.84E-02
	MW-6	4	1.10	0.03	0.04	1.10	0.03	0.04	7.86E-03	9.75E-03	7.86E-03	9.75E-03
	MW-7	4	6.70	0.19	0.24	4.70	0.13	0.17	4.79E-02	5.94E-02	3.36E-02	4.17E-02
	MW-8	4	0.12	0.00	0.00	-	-	-	8.57E-04	1.06E-03	-	-
	MW-10	4	2.10	0.06	0.07	-	-	-	1.50E-02	1.86E-02	-	-
	MW-11	4	7.70	0.22	0.27	4.20	0.12	0.15	5.50E-02	6.83E-02	3.00E-02	3.72E-02
	MW-12	4	8.20	0.23	0.29	7.10	0.20	0.25	5.86E-02	7.27E-02	5.07E-02	6.29E-02
	MW-12D	4	0.52	0.01	0.02	0.52	0.01	0.02	3.71E-03	4.61E-03	3.71E-03	4.61E-03
	MW-13	4	0.47	0.01	0.02	0.47	0.01	0.02	3.36E-03	4.17E-03	3.36E-03	4.17E-03
	MW-14	4	2.00	0.06	0.07	1.20	0.03	0.04	1.43E-02	1.77E-02	8.57E-03	1.06E-02
	MW-15	4	5.30	0.15	0.19	-	-	-	3.79E-02	4.70E-02	-	-
	MW-16	4	3.30	0.09	0.12	3.30	0.09	0.12	2.36E-02	2.93E-02	2.36E-02	2.93E-02
	MW-17	4	1.40	0.04	0.05	1.10	0.03	0.04	1.00E-02	1.24E-02	7.86E-03	9.75E-03
	MW-21	4	0.49	0.01	0.02	0.49	0.01	0.02	3.50E-03	4.34E-03	3.50E-03	4.34E-03
	MW-24	4	1.60	0.05	0.06	1.60	0.05	0.06	1.14E-02	1.42E-02	1.14E-02	1.42E-02
	MW-26	4	1.90	0.05	0.07	1.90	0.05	0.07	1.36E-02	1.68E-02	1.36E-02	1.68E-02
Methylene Chloride	MW-1B	60	2.80	0.08	0.10	2.80	0.08	0.10	1.33E-03	1.65E-03	1.33E-03	1.65E-03
	MW-3	60	24.00	0.69	0.85	-	-	-	1.14E-02	1.42E-02	-	-
	MW-7	60	29.00	0.83	1.03	-	-	-	1.38E-02	1.71E-02	-	-
	MW-11	60	0.70	0.02	0.02	0.70	0.02	0.02	3.33E-04	4.14E-04	3.33E-04	4.14E-04
	MW-12	60	13.00	0.37	0.46	1.80	0.05	0.06	6.19E-03	7.68E-03	8.57E-04	1.06E-03
	MW-15	60	16.00	0.46	0.57	-	-	-	7.62E-03	9.46E-03	-	-
	MW-16	60	4.10	0.12	0.15	4.10	0.12	0.15	1.95E-03	2.42E-03	1.95E-03	2.42E-03
	MW-17	60	9.70	0.28	0.34	0.54	0.02	0.02	4.62E-03	5.73E-03	2.57E-04	3.19E-04
	MW-21	60	0.70	0.02	0.02	0.70	0.02	0.02	3.33E-04	4.14E-04	3.33E-04	4.14E-04

Table 15: Non-Carcinogenic Toxicity Values for Oral Ingestion

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07-1/08 (ug/L)	LADD July 2007		HI Risk Maximum		Hi Risk July 2007	
		Oral RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
p-dichlorobenzene	MW-1	30	3.80	0.11	0.13	3.80	0.11	0.13	3.62E-03	4.49E-03	3.62E-03	4.49E-03
	MW-1B	30	2.40	0.07	0.09	2.40	0.07	0.09	2.29E-03	2.84E-03	2.29E-03	2.84E-03
	MW-2	30	5.20	0.15	0.18	4.40	0.13	0.16	4.95E-03	6.15E-03	4.19E-03	5.20E-03
	MW-3	30	11.00	0.31	0.39	9.80	0.28	0.35	1.05E-02	1.30E-02	9.33E-03	1.16E-02
	MW-4	30	3.00	0.09	0.11	-	-	-	2.86E-03	3.55E-03	-	-
	MW-4R	30	3.60	0.10	0.13	3.60	0.10	0.13	3.43E-03	4.26E-03	3.43E-03	4.26E-03
	MW-5	30	1.20	0.03	0.04	-	-	-	1.14E-03	1.42E-03	-	-
	MW-6	30	0.88	0.03	0.03	0.88	0.03	0.03	8.38E-04	1.04E-03	8.38E-04	1.04E-03
	MW-7	30	3.00	0.09	0.11	2.10	0.06	0.07	2.86E-03	3.55E-03	2.00E-03	2.48E-03
	MW-8	30	0.15	0.00	0.01	-	-	-	1.43E-04	1.77E-04	-	-
	MW-9	30	0.42	0.01	0.01	0.42	0.01	0.01	4.00E-04	4.96E-04	4.00E-04	4.96E-04
	MW-11	30	11.60	0.33	0.41	5.90	0.17	0.21	1.10E-02	1.37E-02	5.62E-03	6.97E-03
	MW-12	30	10.90	0.31	0.39	7.40	0.21	0.26	1.04E-02	1.29E-02	7.05E-03	8.75E-03
	MW-13	30	0.15	0.00	0.01	-	-	-	1.43E-04	1.77E-04	-	-
	MW-14	30	7.50	0.21	0.27	4.60	0.13	0.16	7.14E-03	8.87E-03	4.38E-03	5.44E-03
	MW-15	30	0.48	0.01	0.02	-	-	-	4.57E-04	5.67E-04	-	-
	MW-16	30	1.80	0.05	0.06	1.80	0.05	0.06	1.71E-03	2.13E-03	1.71E-03	2.13E-03
	MW-17	30	0.50	0.01	0.02	0.50	0.01	0.02	4.76E-04	5.91E-04	4.76E-04	5.91E-04
	MW-23	30	1.10	0.03	0.04	1.10	0.03	0.04	1.05E-03	1.30E-03	1.05E-03	1.30E-03
	MW-24	30	2.70	0.08	0.10	2.70	0.08	0.10	2.57E-03	3.19E-03	2.57E-03	3.19E-03
	MW-26	30	3.10	0.09	0.11	3.10	0.09	0.11	2.95E-03	3.66E-03	2.95E-03	3.66E-03
Trichloroethene	MW-1	0.3	0.42	0.01	0.01	0.42	0.01	0.01	4.00E-02	4.96E-02	4.00E-02	4.96E-02
	MW-1B	0.3	0.23	0.01	0.01	-	-	-	2.19E-02	2.72E-02	-	-
	MW-2	0.3	6.00	0.17	0.21	0.47	0.01	0.02	5.71E-01	7.09E-01	4.48E-02	5.56E-02
	MW-3	0.3	5.00	0.14	0.18	2.00	0.06	0.07	4.76E-01	5.91E-01	1.90E-01	2.36E-01
	MW-4	0.3	3.00	0.09	0.11	-	-	-	2.86E-01	3.55E-01	-	-
	MW-4R	0.3	0.23	0.01	0.01	-	-	-	2.19E-02	2.72E-02	-	-
	MW-5	0.3	4.00	0.11	0.14	0.55	0.02	0.02	3.81E-01	4.73E-01	5.24E-02	6.50E-02
	MW-7	0.3	1.20	0.03	0.04	0.84	0.02	0.03	1.14E-01	1.42E-01	8.00E-02	9.93E-02
	MW-8	0.3	1.00	0.03	0.04	-	-	-	9.52E-02	1.18E-01	-	-
	MW-11	0.3	1.20	0.03	0.04	0.55	0.02	0.02	1.14E-01	1.42E-01	5.24E-02	6.50E-02
	MW-12	0.3	2.40	0.07	0.09	2.20	0.06	0.08	2.29E-01	2.84E-01	2.10E-01	2.60E-01
	MW-14	0.3	0.86	0.02	0.03	0.62	0.02	0.02	8.19E-02	1.02E-01	5.90E-02	7.33E-02
	MW-15	0.3	0.58	0.02	0.02	-	-	-	5.52E-02	6.86E-02	-	-
	MW-16	0.3	3.70	0.11	0.13	3.70	0.11	0.13	3.52E-01	4.37E-01	3.52E-01	4.37E-01
	MW-17	0.3	0.72	0.02	0.03	0.49	0.01	0.02	6.86E-02	8.51E-02	4.67E-02	5.79E-02

Table 15: Non-Carcinogenic Toxicity Values for Oral Ingestion

Contaminant	Well	Reference Dose	Maximum	LADD Maximum		Concentration	LADD July 2007		HI Risk Maximum		Hi Risk July 2007	
		Oral RfD (ug/kg-day)	Concentration (ug/L)	Adult (ug/kg-day)	Child (ug/kg-day)	12/07-1/08 (ug/L)	Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
cis-1,2 Dichloroethylene	MW-1	10	13.00	0.37	0.46	13.00	0.37	0.46	3.71E-02	4.61E-02	3.71E-02	4.61E-02
	MW-1B	10	6.60	0.19	0.23	6.60	0.19	0.23	1.89E-02	2.34E-02	1.89E-02	2.34E-02
	MW-2	10	18.00	0.51	0.64	18.00	0.51	0.64	5.14E-02	6.38E-02	5.14E-02	6.38E-02
	MW-3	10	30.00	0.86	1.06	13.00	0.37	0.46	8.57E-02	1.06E-01	3.71E-02	4.61E-02
	MW-4	10	20.00	0.57	0.71	-	-	-	5.71E-02	7.09E-02	-	-
	MW-4R	10	36.00	1.03	1.28	18.00	0.51	0.64	1.03E-01	1.28E-01	5.14E-02	6.38E-02
	MW-5	10	19.00	0.54	0.67	10.00	0.29	0.35	5.43E-02	6.74E-02	2.86E-02	3.55E-02
	MW-6	10	13.00	0.37	0.46	2.30	0.07	0.08	3.71E-02	4.61E-02	6.57E-03	8.16E-03
	MW-7	10	10.00	0.29	0.35	9.20	0.26	0.33	2.86E-02	3.55E-02	2.63E-02	3.26E-02
	MW-8	10	9.10	0.26	0.32	-	-	-	2.60E-02	3.23E-02	-	-
	MW-9	10	20.00	0.57	0.71	20.00	0.57	0.71	5.71E-02	7.09E-02	5.71E-02	7.09E-02
	MW-10	10	3.80	0.11	0.13	3.80	0.11	0.13	1.09E-02	1.35E-02	1.09E-02	1.35E-02
	MW-11	10	51.00	1.46	1.81	42.00	1.20	1.49	1.46E-01	1.81E-01	1.20E-01	1.49E-01
	MW-12	10	14.00	0.40	0.50	14.00	0.40	0.50	4.00E-02	4.96E-02	4.00E-02	4.96E-02
	MW-12D	10	0.69	0.02	0.02	0.69	0.02	0.02	1.97E-03	2.45E-03	1.97E-03	2.45E-03
	MW-13	10	0.71	0.02	0.03	0.71	0.02	0.03	2.03E-03	2.52E-03	2.03E-03	2.52E-03
	MW-14	10	19.00	0.54	0.67	19.00	0.54	0.67	5.43E-02	6.74E-02	5.43E-02	6.74E-02
	MW-15	10	6.60	0.19	0.23	4.60	0.13	0.16	1.89E-02	2.34E-02	1.31E-02	1.63E-02
	MW-16	10	16.00	0.46	0.57	16.00	0.46	0.57	4.57E-02	5.67E-02	4.57E-02	5.67E-02
	MW-17	10	3.00	0.09	0.11	3.00	0.09	0.11	8.57E-03	1.06E-02	8.57E-03	1.06E-02
	MW-21	10	1.60	0.05	0.06	1.60	0.05	0.06	4.57E-03	5.67E-03	4.57E-03	5.67E-03
	MW-23	10	7.80	0.22	0.28	7.80	0.22	0.28	2.23E-02	2.77E-02	2.23E-02	2.77E-02
	MW-24	10	8.20	0.23	0.29	8.20	0.23	0.29	2.34E-02	2.91E-02	2.34E-02	2.91E-02
	MW-25	10	1.20	0.03	0.04	1.20	0.03	0.04	3.43E-03	4.26E-03	3.43E-03	4.26E-03
	MW-26	10	32.00	0.91	1.13	32.00	0.91	1.13	9.14E-02	1.13E-01	9.14E-02	1.13E-01
	MW-27	10	21.00	0.60	0.74	21.00	0.60	0.74	6.00E-02	7.45E-02	6.00E-02	7.45E-02

NOTE:
1. LADD is lifetime average daily dose from ingested groundwater at the specified concentration.
2. RfD values taken from the Region 9 Risk Based Concentration Table. These values represent a daily exposure level that is not harmful to human health, over a lifetime.
3. During July 2007 sampling "-" designates none of this constituent was detected.
4. Formula used for calculations:

LADD = (C*IR*ED)/(BW*AT)

C = constituent concentration (ug/L)

IR = Ingestion Rate (L/day)	An ingestion rate of 2L/day was used for adults 1L/day for children
ED = Exposure Duration (days)	An exposure duration of 30 years was used for adults, 8 for children
BW = Body weight (kg)	An average weight of 70 kg was used for adults, 28.2 kg for children
AT = Average Time (days)	Times of 30 years for adults and 8 for children were used

Table 16: Non-Carcinogenic Toxicity Values for Inhalation Exposure

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07& 1/08 (ug/L)	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Inhalation RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
1,1 Dichloroethane	MW-1	140	22.00	3.14	4.68	2.50	0.36	0.53	2.24E-02	3.34E-02	2.55E-03	3.80E-03
	MW-1A	140	6.50	0.93	1.38	-	-	-	6.63E-03	9.88E-03	-	-
	MW-1B	140	2.80	0.40	0.60	2.80	0.40	0.60	2.86E-03	4.26E-03	2.86E-03	4.26E-03
	MW-2	140	33.00	4.71	7.02	1.50	0.21	0.32	3.37E-02	5.02E-02	1.53E-03	2.28E-03
	MW-3	140	22.00	3.14	4.68	1.10	0.16	0.23	2.24E-02	3.34E-02	1.12E-03	1.67E-03
	MW-4	140	16.00	2.29	3.40	-	-	-	1.63E-02	2.43E-02	-	-
	MW-4R	140	18.00	2.57	3.83	7.60	1.09	1.62	1.84E-02	2.74E-02	7.76E-03	1.16E-02
	MW-5	140	22.00	3.14	4.68	5.70	0.81	1.21	2.24E-02	3.34E-02	5.82E-03	8.66E-03
	MW-7	140	29.00	4.14	6.17	4.90	0.70	1.04	2.96E-02	4.41E-02	5.00E-03	7.45E-03
	MW-8	140	14.00	2.00	2.98	-	-	-	1.43E-02	2.13E-02	-	-
	MW-9	140	6.00	0.86	1.28	2.40	0.34	0.51	6.12E-03	9.12E-03	2.45E-03	3.65E-03
	MW-10	140	0.91	0.13	0.19	0.91	0.13	0.19	9.29E-04	1.38E-03	9.29E-04	1.38E-03
	MW-11	140	11.00	1.57	2.34	2.90	0.41	0.62	1.12E-02	1.67E-02	2.96E-03	4.41E-03
	MW-12	140	17.00	2.43	3.62	5.00	0.71	1.06	1.73E-02	2.58E-02	5.10E-03	7.60E-03
	MW-12D	140	0.89	0.13	0.19	0.89	0.13	0.19	9.08E-04	1.35E-03	9.08E-04	1.35E-03
	MW-13	140	0.56	0.08	0.12	0.56	0.08	0.12	5.71E-04	8.51E-04	5.71E-04	8.51E-04
	MW-14	140	11.00	1.57	2.34	2.20	0.31	0.47	1.12E-02	1.67E-02	2.24E-03	3.34E-03
	MW-15	140	53.00	7.57	11.28	3.70	0.53	0.79	5.41E-02	8.05E-02	3.78E-03	5.62E-03
	MW-16	140	21.00	3.00	4.47	21.00	3.00	4.47	2.14E-02	3.19E-02	2.14E-02	3.19E-02
	MW-17	140	17.00	2.43	3.62	3.30	0.47	0.70	1.73E-02	2.58E-02	3.37E-03	5.02E-03
	MW-20	140	0.94	0.13	0.20	0.94	0.13	0.20	9.59E-04	1.43E-03	9.59E-04	1.43E-03
	MW-21	140	2.40	0.34	0.51	2.40	0.34	0.51	2.45E-03	3.65E-03	2.45E-03	3.65E-03
	MW-23	140	1.20	0.17	0.26	1.20	0.17	0.26	1.22E-03	1.82E-03	1.22E-03	1.82E-03
	MW-24	140	1.10	0.16	0.23	1.10	0.16	0.23	1.12E-03	1.67E-03	1.12E-03	1.67E-03
	MW-25	140	3.40	0.49	0.72	3.40	0.49	0.72	3.47E-03	5.17E-03	3.47E-03	5.17E-03
	MW-26	140	1.70	0.24	0.36	1.70	0.24	0.36	1.73E-03	2.58E-03	1.73E-03	2.58E-03
	MW-27	140	0.99	0.14	0.21	0.99	0.14	0.21	1.01E-03	1.50E-03	1.01E-03	1.50E-03
1,2-Dichloropropane	MW-3	1.1	11.00	1.57	2.34	-	-	-	1.43E+00	2.13E+00	-	-
	MW-16	1.1	1.00	0.14	0.21	1.00	0.14	0.21	1.30E-01	1.93E-01	1.30E-01	1.93E-01
Xylenes	MW-1	29	5.10	0.73	1.09	-	-	-	2.51E-02	3.74E-02	-	-
	MW-1A	29	7.40	1.06	1.57	-	-	-	3.65E-02	5.43E-02	-	-
	MW-1B	29	8.80	1.26	1.87	8.80	1.26	1.87	4.33E-02	6.46E-02	4.33E-02	6.46E-02
	MW-3	29	34.00	4.86	7.23	15.00	2.14	3.19	1.67E-01	2.49E-01	7.39E-02	1.10E-01
	MW-6	29	5.20	0.74	1.11	-	-	-	2.56E-02	3.82E-02	-	-
	MW-8	29	5.00	0.71	1.06	-	-	-	2.46E-02	3.67E-02	-	-
	MW-11	29	5.10	0.73	1.09	-	-	-	2.51E-02	3.74E-02	-	-
	MW-12	29	5.20	0.74	1.11	-	-	-	2.56E-02	3.82E-02	-	-
	MW-14	29	5.10	0.73	1.09	-	-	-	2.51E-02	3.74E-02	-	-
	MW-16	29	2.20	0.31	0.47	2.20	0.31	0.47	1.08E-02	1.61E-02	1.08E-02	1.61E-02
	MW-27	29	0.97	0.14	0.21	0.97	0.14	0.21	4.78E-03	7.12E-03	4.78E-03	7.12E-03

Table 16: Non-Carcinogenic Toxicity Values for Inhalation Exposure

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07& 1/08 (ug/L)	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Inhalation RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
Tetrachloroethene	MW-1	10	0.25	0.04	0.05	-	-	-	3.57E-03	5.32E-03	-	-
	MW-1B	10	0.42	0.06	0.09	0.42	0.06	0.09	6.00E-03	8.94E-03	6.00E-03	8.94E-03
	MW-3	10	1.00	0.14	0.21	0.45	0.06	0.10	1.43E-02	2.13E-02	6.43E-03	9.57E-03
	MW-5	10	1.00	0.14	0.21	-	-	-	1.43E-02	2.13E-02	-	-
	MW-7	10	1.20	0.17	0.26	-	-	-	1.71E-02	2.55E-02	-	-
	MW-11	10	1.10	0.16	0.23	-	-	-	1.57E-02	2.34E-02	-	-
	MW-12	10	2.00	0.29	0.43	1.00	0.14	0.21	2.86E-02	4.26E-02	1.43E-02	2.13E-02
	MW-16	10	2.50	0.36	0.53	2.50	0.36	0.53	3.57E-02	5.32E-02	3.57E-02	5.32E-02
	MW-17	10	0.47	0.07	0.10	-	-	-	6.71E-03	1.00E-02	-	-
	MW-25	10	0.49	0.07	0.10	0.49	0.07	0.10	7.00E-03	1.04E-02	7.00E-03	1.04E-02
Benzene	MW-1	8.6	7.20	1.03	1.53	5.60	0.80	1.19	1.20E-01	1.78E-01	9.30E-02	1.39E-01
	MW-1B	8.6	1.70	0.24	0.36	-	-	-	2.82E-02	4.21E-02	-	-
	MW-2	8.6	2.80	0.40	0.60	1.80	0.26	0.38	4.65E-02	6.93E-02	2.99E-02	4.45E-02
	MW-3	8.6	13.00	1.86	2.77	8.00	1.14	1.70	2.16E-01	3.22E-01	1.33E-01	1.98E-01
	MW-4	8.6	4.00	0.57	0.85	-	-	-	6.64E-02	9.90E-02	-	-
	MW-4R	8.6	5.60	0.80	1.19	-	-	-	9.30E-02	1.39E-01	-	-
	MW-5	8.6	6.10	0.87	1.30	3.20	0.46	0.68	1.01E-01	1.51E-01	5.32E-02	7.92E-02
	MW-6	8.6	1.10	0.16	0.23	1.10	0.16	0.23	1.83E-02	2.72E-02	1.83E-02	2.72E-02
	MW-7	8.6	6.70	0.96	1.43	4.70	0.67	1.00	1.11E-01	1.66E-01	7.81E-02	1.16E-01
	MW-8	8.6	0.12	0.02	0.03	-	-	-	1.99E-03	2.97E-03	-	-
	MW-10	8.6	2.10	0.30	0.45	-	-	-	3.49E-02	5.20E-02	-	-
	MW-11	8.6	7.70	1.10	1.64	4.20	0.60	0.89	1.28E-01	1.90E-01	6.98E-02	1.04E-01
	MW-12	8.6	8.20	1.17	1.74	7.10	1.01	1.51	1.36E-01	2.03E-01	1.18E-01	1.76E-01
	MW-12D	8.6	0.52	0.07	0.11	0.52	0.07	0.11	8.64E-03	1.29E-02	8.64E-03	1.29E-02
	MW-13	8.6	0.47	0.07	0.10	0.47	0.07	0.10	7.81E-03	1.16E-02	7.81E-03	1.16E-02
	MW-14	8.6	2.00	0.29	0.43	1.20	0.17	0.26	3.32E-02	4.95E-02	1.99E-02	2.97E-02
	MW-15	8.6	5.30	0.76	1.13	-	-	-	8.80E-02	1.31E-01	-	-
	MW-16	8.6	3.30	0.47	0.70	3.30	0.47	0.70	5.48E-02	8.16E-02	5.48E-02	8.16E-02
	MW-17	8.6	1.40	0.20	0.30	1.10	0.16	0.23	2.33E-02	3.46E-02	1.83E-02	2.72E-02
	MW-21	8.6	0.49	0.07	0.10	0.49	0.07	0.10	8.14E-03	1.21E-02	8.14E-03	1.21E-02
	MW-24	8.6	1.60	0.23	0.34	1.60	0.23	0.34	2.66E-02	3.96E-02	2.66E-02	3.96E-02
	MW-26	8.6	1.90	0.27	0.40	1.90	0.27	0.40	3.16E-02	4.70E-02	3.16E-02	4.70E-02
Methylene Chloride	MW-1B	860	2.80	0.40	0.60	2.80	0.40	0.60	4.65E-04	6.93E-04	4.65E-04	6.93E-04
	MW-3	860	24.00	3.43	5.11	-	-	-	3.99E-03	5.94E-03	-	-
	MW-7	860	29.00	4.14	6.17	-	-	-	4.82E-03	7.17E-03	-	-
	MW-11	860	0.70	0.10	0.15	0.70	0.10	0.15	1.16E-04	1.73E-04	1.16E-04	1.73E-04
	MW-12	860	13.00	1.86	2.77	1.80	0.26	0.38	2.16E-03	3.22E-03	2.99E-04	4.45E-04
	MW-15	860	16.00	2.29	3.40	-	-	-	2.66E-03	3.96E-03	-	-
	MW-16	860	4.10	0.59	0.87	4.10	0.59	0.87	6.81E-04	1.01E-03	6.81E-04	1.01E-03
	MW-17	860	9.70	1.39	2.06	0.54	0.08	0.11	1.61E-03	2.40E-03	8.97E-05	1.34E-04
	MW-21	860	0.70	0.10	0.15	0.70	0.10	0.15	1.16E-04	1.73E-04	1.16E-04	1.73E-04

Table 16: Non-Carcinogenic Toxicity Values for Inhalation Exposure

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07& 1/08 (ug/L)	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Inhalation RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
p-dichlorobenzene	MW-1	230	3.80	0.54	0.81	3.80	0.54	0.81	2.36E-03	3.52E-03	2.36E-03	3.52E-03
	MW-1B	230	2.40	0.34	0.51	2.40	0.34	0.51	1.49E-03	2.22E-03	1.49E-03	2.22E-03
	MW-2	230	5.20	0.74	1.11	4.40	0.63	0.94	3.23E-03	4.81E-03	2.73E-03	4.07E-03
	MW-3	230	11.00	1.57	2.34	9.80	1.40	2.09	6.83E-03	1.02E-02	6.09E-03	9.07E-03
	MW-4	230	3.00	0.43	0.64	-	-	-	1.86E-03	2.78E-03	-	-
	MW-4R	230	3.60	0.51	0.77	3.60	0.51	0.77	2.24E-03	3.33E-03	2.24E-03	3.33E-03
	MW-5	230	1.20	0.17	0.26	-	-	-	7.45E-04	1.11E-03	-	-
	MW-6	230	0.88	0.13	0.19	0.88	0.13	0.19	5.47E-04	8.14E-04	5.47E-04	8.14E-04
	MW-7	230	3.00	0.43	0.64	2.10	0.30	0.45	1.86E-03	2.78E-03	1.30E-03	1.94E-03
	MW-8	230	0.15	0.02	0.03	-	-	-	9.32E-05	1.39E-04	-	-
	MW-9	230	0.42	0.06	0.09	0.42	0.06	0.09	2.61E-04	3.89E-04	2.61E-04	3.89E-04
	MW-11	230	11.60	1.66	2.47	5.90	0.84	1.26	7.20E-03	1.07E-02	3.66E-03	5.46E-03
	MW-12	230	10.90	1.56	2.32	7.40	1.06	1.57	6.77E-03	1.01E-02	4.60E-03	6.85E-03
	MW-13	230	0.15	0.02	0.03	-	-	-	9.32E-05	1.39E-04	-	-
	MW-14	230	7.50	1.07	1.60	4.60	0.66	0.98	4.66E-03	6.94E-03	2.86E-03	4.26E-03
	MW-15	230	0.48	0.07	0.10	-	-	-	2.98E-04	4.44E-04	-	-
	MW-16	230	1.80	0.26	0.38	1.80	0.26	0.38	1.12E-03	1.67E-03	1.12E-03	1.67E-03
	MW-17	230	0.50	0.07	0.11	0.50	0.07	0.11	3.11E-04	4.63E-04	3.11E-04	4.63E-04
	MW-23	230	1.10	0.16	0.23	1.10	0.16	0.23	6.83E-04	1.02E-03	6.83E-04	1.02E-03
	MW-24	230	2.70	0.39	0.57	2.70	0.39	0.57	1.68E-03	2.50E-03	1.68E-03	2.50E-03
	MW-26	230	3.10	0.44	0.66	3.10	0.44	0.66	1.93E-03	2.87E-03	1.93E-03	2.87E-03
Trichloroethene	MW-1	10	0.42	0.06	0.09	0.42	0.06	0.09	6.00E-03	8.94E-03	6.00E-03	8.94E-03
	MW-1B	10	0.23	0.03	0.05	-	-	-	3.29E-03	4.89E-03	-	-
	MW-2	10	6.00	0.86	1.28	0.47	0.07	0.10	8.57E-02	1.28E-01	6.71E-03	1.00E-02
	MW-3	10	5.00	0.71	1.06	2.00	0.29	0.43	7.14E-02	1.06E-01	2.86E-02	4.26E-02
	MW-4	10	3.00	0.43	0.64	-	-	-	4.29E-02	6.38E-02	-	-
	MW-4R	10	0.23	0.03	0.05	-	-	-	3.29E-03	4.89E-03	-	-
	MW-5	10	4.00	0.57	0.85	0.55	0.08	0.12	5.71E-02	8.51E-02	7.86E-03	1.17E-02
	MW-7	10	1.20	0.17	0.26	0.84	0.12	0.18	1.71E-02	2.55E-02	1.20E-02	1.79E-02
	MW-8	10	1.00	0.14	0.21	-	-	-	1.43E-02	2.13E-02	-	-
	MW-11	10	1.20	0.17	0.26	0.55	0.08	0.12	1.71E-02	2.55E-02	7.86E-03	1.17E-02
	MW-12	10	2.40	0.34	0.51	2.20	0.31	0.47	3.43E-02	5.11E-02	3.14E-02	4.68E-02
	MW-14	10	0.86	0.12	0.18	0.62	0.09	0.13	1.23E-02	1.83E-02	8.86E-03	1.32E-02
	MW-15	10	0.58	0.08	0.12	-	-	-	8.29E-03	1.23E-02	-	-
	MW-16	10	3.70	0.53	0.79	3.70	0.53	0.79	5.29E-02	7.87E-02	5.29E-02	7.87E-02
	MW-17	10	0.72	0.10	0.15	0.49	0.07	0.10	1.03E-02	1.53E-02	7.00E-03	1.04E-02

Table 16: Non-Carcinogenic Toxicity Values for Inhalation Exposure

Contaminant	Well	Reference Dose	Maximum	LADD Maximum		Concentration	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Inhalation RfD (ug/kg-day)	Concentration (ug/L)	Adult (ug/kg-day)	Child (ug/kg-day)	12/07& 1/08 (ug/L)	Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
cis-1,2 Dichloroethylene	MW-1	10	13.00	1.86	2.77	13.00	1.86	2.77	1.86E-01	2.77E-01	1.86E-01	2.77E-01
	MW-1B	10	6.60	0.94	1.40	6.60	0.94	1.40	9.43E-02	1.40E-01	9.43E-02	1.40E-01
	MW-2	10	18.00	2.57	3.83	18.00	2.57	3.83	2.57E-01	3.83E-01	2.57E-01	3.83E-01
	MW-3	10	30.00	4.29	6.38	13.00	1.86	2.77	4.29E-01	6.38E-01	1.86E-01	2.77E-01
	MW-4	10	20.00	2.86	4.26	-	-	-	2.86E-01	4.26E-01	-	-
	MW-4R	10	36.00	5.14	7.66	18.00	2.57	3.83	5.14E-01	7.66E-01	2.57E-01	3.83E-01
	MW-5	10	19.00	2.71	4.04	10.00	1.43	2.13	2.71E-01	4.04E-01	1.43E-01	2.13E-01
	MW-6	10	13.00	1.86	2.77	2.30	0.33	0.49	1.86E-01	2.77E-01	3.29E-02	4.89E-02
	MW-7	10	10.00	1.43	2.13	9.20	1.31	1.96	1.43E-01	2.13E-01	1.31E-01	1.96E-01
	MW-8	10	9.10	1.30	1.94	-	-	-	1.30E-01	1.94E-01	-	-
	MW-9	10	20.00	2.86	4.26	20.00	2.86	4.26	2.86E-01	4.26E-01	2.86E-01	4.26E-01
	MW-10	10	3.80	0.54	0.81	3.80	0.54	0.81	5.43E-02	8.09E-02	5.43E-02	8.09E-02
	MW-11	10	51.00	7.29	10.85	42.00	6.00	8.94	7.29E-01	1.09E+00	6.00E-01	8.94E-01
	MW-12	10	14.00	2.00	2.98	14.00	2.00	2.98	2.00E-01	2.98E-01	2.00E-01	2.98E-01
	MW-12D	10	0.69	0.10	0.15	0.69	0.10	0.15	9.86E-03	1.47E-02	9.86E-03	1.47E-02
	MW-13	10	0.71	0.10	0.15	0.71	0.10	0.15	1.01E-02	1.51E-02	1.01E-02	1.51E-02
	MW-14	10	19.00	2.71	4.04	19.00	2.71	4.04	2.71E-01	4.04E-01	2.71E-01	4.04E-01
	MW-15	10	6.60	0.94	1.40	4.60	0.66	0.98	9.43E-02	1.40E-01	6.57E-02	9.79E-02
	MW-16	10	16.00	2.29	3.40	16.00	2.29	3.40	2.29E-01	3.40E-01	2.29E-01	3.40E-01
	MW-17	10	3.00	0.43	0.64	3.00	0.43	0.64	4.29E-02	6.38E-02	4.29E-02	6.38E-02
	MW-21	10	1.60	0.23	0.34	1.60	0.23	0.34	2.29E-02	3.40E-02	2.29E-02	3.40E-02
	MW-23	10	7.80	1.11	1.66	7.80	1.11	1.66	1.11E-01	1.66E-01	1.11E-01	1.66E-01
	MW-24	10	8.20	1.17	1.74	8.20	1.17	1.74	1.17E-01	1.74E-01	1.17E-01	1.74E-01
	MW-25	10	1.20	0.17	0.26	1.20	0.17	0.26	1.71E-02	2.55E-02	1.71E-02	2.55E-02
	MW-26	10	32.00	4.57	6.81	32.00	4.57	6.81	4.57E-01	6.81E-01	4.57E-01	6.81E-01
	MW-27	10	21.00	3.00	4.47	21.00	3.00	4.47	3.00E-01	4.47E-01	3.00E-01	4.47E-01

NOTE:
1. LADD is lifetime average daily dose inhaled at the specified concentration.
2. RfD values taken from the Region 9 Risk Based Concentration Table. These values represent a daily exposure level that is not harmful to human health, over a lifetime.
3. During July 2007 sampling "-" designates none of this constituent was detected.
4. HI is the Hazzard Index Risk = LADD/RfD
5. Formula used for calculations:

LADD = (C*IR*ED*K)/(BW*AT)

C = constituent concentration (ug/L)	
K = Volatilization factor (L/m^3)	A Volatilization factor of 0.5 L/m^3 was used based on EPA published values
IR = Inhalation Rate (m^3/day)	An inhalation rate of 20 m^3/day was used for adults and 12m^3/day for children
ED = Exposure Duration (days)	An exposure duration of 30 years was used for adults, 8 for children
BW = Body weight (kg)	An average weight of 70 kg was used for adults, 28.2 kg for children
AT = Average Time (days)	Times of 30 years for adults and 8 for children were used

Table 17: Non-Carcinogenic Toxicity Values from Dermal Exposure

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07-1/08 (ug/L)	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Oral RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
1,1 Dichloroethane	MW-1	100	22.00	1.40E-03	1.62E-03	2.50	1.59E-04	1.84E-04	1.40E-05	1.62E-05	1.59E-06	1.84E-06
	MW-1A	100	6.50	4.13E-04	4.79E-04	-	-	-	4.13E-06	4.79E-06	-	-
	MW-1B	100	2.80	1.78E-04	2.06E-04	2.80	1.78E-04	2.06E-04	1.78E-06	2.06E-06	1.78E-06	2.06E-06
	MW-2	100	33.00	2.09E-03	2.43E-03	1.50	9.52E-05	1.11E-04	2.09E-05	2.43E-05	9.52E-07	1.11E-06
	MW-3	100	22.00	1.40E-03	1.62E-03	1.10	6.98E-05	8.11E-05	1.40E-05	1.62E-05	6.98E-07	8.11E-07
	MW-4	100	16.00	1.02E-03	1.18E-03	-	-	-	1.02E-05	1.18E-05	-	-
	MW-4R	100	18.00	1.14E-03	1.33E-03	7.60	4.82E-04	5.60E-04	1.14E-05	1.33E-05	4.82E-06	5.60E-06
	MW-5	100	22.00	1.40E-03	1.62E-03	5.70	3.62E-04	4.20E-04	1.40E-05	1.62E-05	3.62E-06	4.20E-06
	MW-7	100	29.00	1.84E-03	2.14E-03	4.90	3.11E-04	3.61E-04	1.84E-05	2.14E-05	3.11E-06	3.61E-06
	MW-8	100	14.00	8.89E-04	1.03E-03	-	-	-	8.89E-06	1.03E-05	-	-
	MW-9	100	6.00	3.81E-04	4.42E-04	2.40	1.52E-04	1.77E-04	3.81E-06	4.42E-06	1.52E-06	1.77E-06
	MW-10	100	0.91	5.78E-05	6.71E-05	0.91	5.78E-05	6.71E-05	5.78E-07	6.71E-07	5.78E-07	6.71E-07
	MW-11	100	11.00	6.98E-04	8.11E-04	2.90	1.84E-04	2.14E-04	6.98E-06	8.11E-06	1.84E-06	2.14E-06
	MW-12	100	17.00	1.08E-03	1.25E-03	5.00	3.17E-04	3.69E-04	1.08E-05	1.25E-05	3.17E-06	3.69E-06
	MW-12D	100	0.89	5.65E-05	6.56E-05	0.89	5.65E-05	6.56E-05	5.65E-07	6.56E-07	5.65E-07	6.56E-07
	MW-13	100	0.56	3.55E-05	4.13E-05	0.56	3.55E-05	4.13E-05	3.55E-07	4.13E-07	3.55E-07	4.13E-07
	MW-14	100	11.00	6.98E-04	8.11E-04	2.20	1.40E-04	1.62E-04	6.98E-06	8.11E-06	1.40E-06	1.62E-06
	MW-15	100	53.00	3.36E-03	3.91E-03	3.70	2.35E-04	2.73E-04	3.36E-05	3.91E-05	2.35E-06	2.73E-06
	MW-16	100	21.00	1.33E-03	1.55E-03	21.00	1.33E-03	1.55E-03	1.33E-05	1.55E-05	1.33E-05	1.55E-05
	MW-17	100	17.00	1.08E-03	1.25E-03	3.30	2.09E-04	2.43E-04	1.08E-05	1.25E-05	2.09E-06	2.43E-06
	MW-20	100	0.94	5.97E-05	6.93E-05	0.94	5.97E-05	6.93E-05	5.97E-07	6.93E-07	5.97E-07	6.93E-07
	MW-21	100	2.40	1.52E-04	1.77E-04	2.40	1.52E-04	1.77E-04	1.52E-06	1.77E-06	1.52E-06	1.77E-06
	MW-23	100	1.20	7.62E-05	8.85E-05	1.20	7.62E-05	8.85E-05	7.62E-07	8.85E-07	7.62E-07	8.85E-07
	MW-24	100	1.10	6.98E-05	8.11E-05	1.10	6.98E-05	8.11E-05	6.98E-07	8.11E-07	6.98E-07	8.11E-07
	MW-25	100	3.40	2.16E-04	2.51E-04	3.40	2.16E-04	2.51E-04	2.16E-06	2.51E-06	2.16E-06	2.51E-06
	MW-26	100	1.70	1.08E-04	1.25E-04	1.70	1.08E-04	1.25E-04	1.08E-06	1.25E-06	1.08E-06	1.25E-06
	MW-27	100	0.99	6.28E-05	7.30E-05	0.99	6.28E-05	7.30E-05	6.28E-07	7.30E-07	6.28E-07	7.30E-07
1,2-Dichloropropane	MW-3	1.1	11.00	7.84E-04	9.11E-04	-	-	-	7.13E-04	8.28E-04	-	-
	MW-16	1.1	1.00	7.13E-05	8.28E-05	1.00	7.13E-05	8.28E-05	6.48E-05	7.53E-05	6.48E-05	7.53E-05
Xylenes	MW-1	200	5.10	2.91E-03	3.38E-03	-	-	-	1.45E-05	1.69E-05	-	-
	MW-1A	200	7.40	4.22E-03	4.90E-03	-	-	-	2.11E-05	2.45E-05	-	-
	MW-1B	200	8.80	5.02E-03	5.83E-03	8.80	5.02E-03	5.83E-03	2.51E-05	2.92E-05	2.51E-05	2.92E-05
	MW-3	200	34.00	1.94E-02	2.25E-02	15.00	8.56E-03	9.94E-03	9.70E-05	1.13E-04	4.28E-05	4.97E-05
	MW-6	200	5.20	2.97E-03	3.45E-03	-	-	-	1.48E-05	1.72E-05	-	-
	MW-8	200	5.00	2.85E-03	3.31E-03	-	-	-	1.43E-05	1.66E-05	-	-
	MW-11	200	5.10	2.91E-03	3.38E-03	-	-	-	1.45E-05	1.69E-05	-	-
	MW-12	200	5.20	2.97E-03	3.45E-03	-	-	-	1.48E-05	1.72E-05	-	-
	MW-14	200	5.10	2.91E-03	3.38E-03	-	-	-	1.45E-05	1.69E-05	-	-
	MW-16	200	2.20	1.26E-03	1.46E-03	2.20	1.26E-03	1.46E-03	6.28E-06	7.29E-06	6.28E-06	7.29E-06
	MW-27	200	0.97	5.53E-04	6.43E-04	0.97	5.53E-04	6.43E-04	2.77E-06	3.21E-06	2.77E-06	3.21E-06

Table 17: Non-Carcinogenic Toxicity Values from Dermal Exposure

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07-1/08 (ug/L)	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Oral RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
Tetrachloroethene	MW-1	10	0.25	8.56E-05	9.94E-05	-	-	-	8.56E-06	9.94E-06	-	-
	MW-1B	10	0.42	1.44E-04	1.67E-04	0.42	1.44E-04	1.67E-04	1.44E-05	1.67E-05	1.44E-05	1.67E-05
	MW-3	10	1.00	3.42E-04	3.98E-04	0.45	1.54E-04	1.79E-04	3.42E-05	3.98E-05	1.54E-05	1.79E-05
	MW-5	10	1.00	3.42E-04	3.98E-04	-	-	-	3.42E-05	3.98E-05	-	-
	MW-7	10	1.20	4.11E-04	4.77E-04	-	-	-	4.11E-05	4.77E-05	-	-
	MW-11	10	1.10	3.77E-04	4.37E-04	-	-	-	3.77E-05	4.37E-05	-	-
	MW-12	10	2.00	6.85E-04	7.95E-04	1.00	3.42E-04	3.98E-04	6.85E-05	7.95E-05	3.42E-05	3.98E-05
	MW-16	10	2.50	8.56E-04	9.94E-04	2.50	8.56E-04	9.94E-04	8.56E-05	9.94E-05	8.56E-05	9.94E-05
	MW-17	10	0.47	1.61E-04	1.87E-04	-	-	-	1.61E-05	1.87E-05	-	-
	MW-25	10	0.49	1.68E-04	1.95E-04	0.49	1.68E-04	1.95E-04	1.68E-05	1.95E-05	1.68E-05	1.95E-05
Benzene	MW-1	4	7.20	1.08E-03	1.25E-03	5.60	8.39E-04	9.74E-04	2.70E-04	3.13E-04	2.10E-04	2.44E-04
	MW-1B	4	1.70	2.55E-04	2.96E-04	-	-	-	6.36E-05	7.39E-05	-	-
	MW-2	4	2.80	4.19E-04	4.87E-04	1.80	2.70E-04	3.13E-04	1.05E-04	1.22E-04	6.74E-05	7.83E-05
	MW-3	4	13.00	1.95E-03	2.26E-03	8.00	1.20E-03	1.39E-03	4.87E-04	5.65E-04	3.00E-04	3.48E-04
	MW-4	4	4.00	5.99E-04	6.96E-04	-	-	-	1.50E-04	1.74E-04	-	-
	MW-4R	4	5.60	8.39E-04	9.74E-04	-	-	-	2.10E-04	2.44E-04	-	-
	MW-5	4	6.10	9.14E-04	1.06E-03	3.20	4.79E-04	5.57E-04	2.28E-04	2.65E-04	1.20E-04	1.39E-04
	MW-6	4	1.10	1.65E-04	1.91E-04	1.10	1.65E-04	1.91E-04	4.12E-05	4.78E-05	4.12E-05	4.78E-05
	MW-7	4	6.70	1.00E-03	1.17E-03	4.70	7.04E-04	8.18E-04	2.51E-04	2.91E-04	1.76E-04	2.04E-04
	MW-8	4	0.12	1.80E-05	2.09E-05	-	-	-	4.49E-06	5.22E-06	-	-
	MW-10	4	2.10	3.14E-04	3.65E-04	-	-	-	7.86E-05	9.13E-05	-	-
	MW-11	4	7.70	1.15E-03	1.34E-03	4.20	6.29E-04	7.31E-04	2.88E-04	3.35E-04	1.57E-04	1.83E-04
	MW-12	4	8.20	1.23E-03	1.43E-03	7.10	1.06E-03	1.24E-03	3.07E-04	3.57E-04	2.66E-04	3.09E-04
	MW-12D	4	0.52	7.79E-05	9.05E-05	0.52	7.79E-05	9.05E-05	1.95E-05	2.26E-05	1.95E-05	2.26E-05
	MW-13	4	0.47	7.04E-05	8.18E-05	0.47	7.04E-05	8.18E-05	1.76E-05	2.04E-05	1.76E-05	2.04E-05
	MW-14	4	2.00	3.00E-04	3.48E-04	1.20	1.80E-04	2.09E-04	7.49E-05	8.70E-05	4.49E-05	5.22E-05
	MW-15	4	5.30	7.94E-04	9.22E-04	-	-	-	1.98E-04	2.31E-04	-	-
	MW-16	4	3.30	4.94E-04	5.74E-04	3.30	4.94E-04	5.74E-04	1.24E-04	1.44E-04	1.24E-04	1.44E-04
	MW-17	4	1.40	2.10E-04	2.44E-04	1.10	1.65E-04	1.91E-04	5.24E-05	6.09E-05	4.12E-05	4.78E-05
	MW-21	4	0.49	7.34E-05	8.52E-05	0.49	7.34E-05	8.52E-05	1.83E-05	2.13E-05	1.83E-05	2.13E-05
	MW-24	4	1.60	2.40E-04	2.78E-04	1.60	2.40E-04	2.78E-04	5.99E-05	6.96E-05	5.99E-05	6.96E-05
	MW-26	4	1.90	2.85E-04	3.31E-04	1.90	2.85E-04	3.31E-04	7.11E-05	8.26E-05	7.11E-05	8.26E-05
Methylene Chloride	MW-1B	60	2.80	8.99E-05	1.04E-04	2.80	8.99E-05	1.04E-04	1.50E-06	1.74E-06	1.50E-06	1.74E-06
	MW-3	60	24.00	7.70E-04	8.95E-04	-	-	-	1.28E-05	1.49E-05	-	-
	MW-7	60	29.00	9.31E-04	1.08E-03	-	-	-	1.55E-05	1.80E-05	-	-
	MW-11	60	0.70	2.25E-05	2.61E-05	0.70	2.25E-05	2.61E-05	3.74E-07	4.35E-07	3.74E-07	4.35E-07
	MW-12	60	13.00	4.17E-04	4.85E-04	1.80	5.78E-05	6.71E-05	6.95E-06	8.08E-06	9.63E-07	1.12E-06
	MW-15	60	16.00	5.13E-04	5.96E-04	-	-	-	8.56E-06	9.94E-06	-	-
	MW-16	60	4.10	1.32E-04	1.53E-04	4.10	1.32E-04	1.53E-04	2.19E-06	2.55E-06	2.19E-06	2.55E-06
	MW-17	60	9.70	3.11E-04	3.62E-04	0.54	1.73E-05	2.01E-05	5.19E-06	6.03E-06	2.89E-07	3.36E-07
	MW-21	60	0.70	2.25E-05	2.61E-05	0.70	2.25E-05	2.61E-05	3.74E-07	4.35E-07	3.74E-07	4.35E-07

Table 17: Non-Carcinogenic Toxicity Values from Dermal Exposure

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07-1/08 (ug/L)	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Oral RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
p-dichlorobenzene	MW-1	30	3.80	1.68E-03	1.95E-03	3.80	1.68E-03	1.95E-03	5.60E-05	6.51E-05	5.60E-05	6.51E-05
	MW-1B	30	2.40	1.06E-03	1.23E-03	2.40	1.06E-03	1.23E-03	3.54E-05	4.11E-05	3.54E-05	4.11E-05
	MW-2	30	5.20	2.30E-03	2.67E-03	4.40	1.95E-03	2.26E-03	7.66E-05	8.90E-05	6.48E-05	7.53E-05
	MW-3	30	11.00	4.86E-03	5.65E-03	9.80	4.33E-03	5.03E-03	1.62E-04	1.88E-04	1.44E-04	1.68E-04
	MW-4	30	3.00	1.33E-03	1.54E-03	-	-	-	4.42E-05	5.14E-05	-	-
	MW-4R	30	3.60	1.59E-03	1.85E-03	3.60	1.59E-03	1.85E-03	5.31E-05	6.16E-05	5.31E-05	6.16E-05
	MW-5	30	1.20	5.31E-04	6.16E-04	-	-	-	1.77E-05	2.05E-05	-	-
	MW-6	30	0.88	3.89E-04	4.52E-04	0.88	3.89E-04	4.52E-04	1.30E-05	1.51E-05	1.30E-05	1.51E-05
	MW-7	30	3.00	1.33E-03	1.54E-03	2.10	9.29E-04	1.08E-03	4.42E-05	5.14E-05	3.10E-05	3.60E-05
	MW-8	30	0.15	6.63E-05	7.70E-05	-	-	-	2.21E-06	2.57E-06	-	-
	MW-9	30	0.42	1.86E-04	2.16E-04	0.42	1.86E-04	2.16E-04	6.19E-06	7.19E-06	6.19E-06	7.19E-06
	MW-11	30	11.60	5.13E-03	5.96E-03	5.90	2.61E-03	3.03E-03	1.71E-04	1.99E-04	8.70E-05	1.01E-04
	MW-12	30	10.90	4.82E-03	5.60E-03	7.40	3.27E-03	3.80E-03	1.61E-04	1.87E-04	1.09E-04	1.27E-04
	MW-13	30	0.15	6.63E-05	7.70E-05	-	-	-	2.21E-06	2.57E-06	-	-
	MW-14	30	7.50	3.32E-03	3.85E-03	4.60	2.03E-03	2.36E-03	1.11E-04	1.28E-04	6.78E-05	7.88E-05
	MW-15	30	0.48	2.12E-04	2.47E-04	-	-	-	7.07E-06	8.22E-06	-	-
	MW-16	30	1.80	7.96E-04	9.25E-04	1.80	7.96E-04	9.25E-04	2.65E-05	3.08E-05	2.65E-05	3.08E-05
	MW-17	30	0.50	2.21E-04	2.57E-04	0.50	2.21E-04	2.57E-04	7.37E-06	8.56E-06	7.37E-06	8.56E-06
	MW-23	30	1.10	4.86E-04	5.65E-04	1.10	4.86E-04	5.65E-04	1.62E-05	1.88E-05	1.62E-05	1.88E-05
	MW-24	30	2.70	1.19E-03	1.39E-03	2.70	1.19E-03	1.39E-03	3.98E-05	4.62E-05	3.98E-05	4.62E-05
	MW-26	30	3.10	1.37E-03	1.59E-03	3.10	1.37E-03	1.59E-03	4.57E-05	5.31E-05	4.57E-05	5.31E-05
Trichloroethene	MW-1	0.3	0.42	4.79E-05	5.57E-05	0.42	4.79E-05	5.57E-05	1.60E-04	1.86E-04	1.60E-04	1.86E-04
	MW-1B	0.3	0.23	2.62E-05	3.05E-05	-	-	-	8.75E-05	1.02E-04	-	-
	MW-2	0.3	6.00	6.85E-04	7.95E-04	0.47	5.36E-05	6.23E-05	2.28E-03	2.65E-03	1.79E-04	2.08E-04
	MW-3	0.3	5.00	5.71E-04	6.63E-04	2.00	2.28E-04	2.65E-04	1.90E-03	2.21E-03	7.61E-04	8.84E-04
	MW-4	0.3	3.00	3.42E-04	3.98E-04	-	-	-	1.14E-03	1.33E-03	-	-
	MW-4R	0.3	0.23	2.62E-05	3.05E-05	-	-	-	8.75E-05	1.02E-04	-	-
	MW-5	0.3	4.00	4.56E-04	5.30E-04	0.55	6.28E-05	7.29E-05	1.52E-03	1.77E-03	2.09E-04	2.43E-04
	MW-7	0.3	1.20	1.37E-04	1.59E-04	0.84	9.58E-05	1.11E-04	4.56E-04	5.30E-04	3.19E-04	3.71E-04
	MW-8	0.3	1.00	1.14E-04	1.33E-04	-	-	-	3.80E-04	4.42E-04	-	-
	MW-11	0.3	1.20	1.37E-04	1.59E-04	0.55	6.28E-05	7.29E-05	4.56E-04	5.30E-04	2.09E-04	2.43E-04
	MW-12	0.3	2.40	2.74E-04	3.18E-04	2.20	2.51E-04	2.92E-04	9.13E-04	1.06E-03	8.37E-04	9.72E-04
	MW-14	0.3	0.86	9.81E-05	1.14E-04	0.62	7.07E-05	8.22E-05	3.27E-04	3.80E-04	2.36E-04	2.74E-04
	MW-15	0.3	0.58	6.62E-05	7.69E-05	-	-	-	2.21E-04	2.56E-04	-	-
	MW-16	0.3	3.70	4.22E-04	4.90E-04	3.70	4.22E-04	4.90E-04	1.41E-03	1.63E-03	1.41E-03	1.63E-03
	MW-17	0.3	0.72	8.22E-05	9.54E-05	0.49	5.59E-05	6.50E-05	2.74E-04	3.18E-04	1.86E-04	2.17E-04

Table 17: Non-Carcinogenic Toxicity Values from Dermal Exposure

Contaminant	Well	Reference Dose	Maximum Concentration (ug/L)	LADD Maximum		Concentration 12/07-1/08 (ug/L)	LADD July 2007		HI Risk Maximum		HI Risk July 2007	
		Oral RfD (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)		Adult (ug/kg-day)	Child (ug/kg-day)	Adult	Child	Adult	Child
cis-1,2 Dichloroethylene	MW-1	10	13.00	9.27E-04	1.08E-03	13.00	9.27E-04	1.08E-03	9.27E-05	1.08E-04	9.27E-05	1.08E-04
	MW-1B	10	6.60	4.71E-04	5.47E-04	6.60	4.71E-04	5.47E-04	4.71E-05	5.47E-05	4.71E-05	5.47E-05
	MW-2	10	18.00	1.28E-03	1.49E-03	18.00	1.28E-03	1.49E-03	1.28E-04	1.49E-04	1.28E-04	1.49E-04
	MW-3	10	30.00	2.14E-03	2.49E-03	13.00	9.27E-04	1.08E-03	2.14E-04	2.49E-04	9.27E-05	1.08E-04
	MW-4	10	20.00	1.43E-03	1.66E-03	-	-	-	1.43E-04	1.66E-04	-	-
	MW-4R	10	36.00	2.57E-03	2.98E-03	18.00	1.28E-03	1.49E-03	2.57E-04	2.98E-04	1.28E-04	1.49E-04
	MW-5	10	19.00	1.35E-03	1.57E-03	10.00	7.13E-04	8.28E-04	1.35E-04	1.57E-04	7.13E-05	8.28E-05
	MW-6	10	13.00	9.27E-04	1.08E-03	2.30	1.64E-04	1.91E-04	9.27E-05	1.08E-04	1.64E-05	1.91E-05
	MW-7	10	10.00	7.13E-04	8.28E-04	9.20	6.56E-04	7.62E-04	7.13E-05	8.28E-05	6.56E-05	7.62E-05
	MW-8	10	9.10	6.49E-04	7.54E-04	-	-	-	6.49E-05	7.54E-05	-	-
	MW-9	10	20.00	1.43E-03	1.66E-03	20.00	1.43E-03	1.66E-03	1.43E-04	1.66E-04	1.43E-04	1.66E-04
	MW-10	10	3.80	2.71E-04	3.15E-04	3.80	2.71E-04	3.15E-04	2.71E-05	3.15E-05	2.71E-05	3.15E-05
	MW-11	10	51.00	3.64E-03	4.23E-03	42.00	3.00E-03	3.48E-03	3.64E-04	4.23E-04	3.00E-04	3.48E-04
	MW-12	10	14.00	9.98E-04	1.16E-03	14.00	9.98E-04	1.16E-03	9.98E-05	1.16E-04	9.98E-05	1.16E-04
	MW-12D	10	0.69	4.92E-05	5.72E-05	0.69	4.92E-05	5.72E-05	4.92E-06	5.72E-06	4.92E-06	5.72E-06
	MW-13	10	0.71	5.06E-05	5.88E-05	0.71	5.06E-05	5.88E-05	5.06E-06	5.88E-06	5.06E-06	5.88E-06
	MW-14	10	19.00	1.35E-03	1.57E-03	19.00	1.35E-03	1.57E-03	1.35E-04	1.57E-04	1.35E-04	1.57E-04
	MW-15	10	6.60	4.71E-04	5.47E-04	4.60	3.28E-04	3.81E-04	4.71E-05	5.47E-05	3.28E-05	3.81E-05
	MW-16	10	16.00	1.14E-03	1.33E-03	16.00	1.14E-03	1.33E-03	1.14E-04	1.33E-04	1.14E-04	1.33E-04
	MW-17	10	3.00	2.14E-04	2.49E-04	3.00	2.14E-04	2.49E-04	2.14E-05	2.49E-05	2.14E-05	2.49E-05
	MW-21	10	1.60	1.14E-04	1.33E-04	1.60	1.14E-04	1.33E-04	1.14E-05	1.33E-05	1.14E-05	1.33E-05
	MW-23	10	7.80	5.56E-04	6.46E-04	7.80	5.56E-04	6.46E-04	5.56E-05	6.46E-05	5.56E-05	6.46E-05
	MW-24	10	8.20	5.85E-04	6.79E-04	8.20	5.85E-04	6.79E-04	5.85E-05	6.79E-05	5.85E-05	6.79E-05
	MW-25	10	1.20	8.56E-05	9.94E-05	1.20	8.56E-05	9.94E-05	8.56E-06	9.94E-06	8.56E-06	9.94E-06
	MW-26	10	32.00	2.28E-03	2.65E-03	32.00	2.28E-03	2.65E-03	2.28E-04	2.65E-04	2.28E-04	2.65E-04
	MW-27	10	21.00	1.50E-03	1.74E-03	21.00	1.50E-03	1.74E-03	1.50E-04	1.74E-04	1.50E-04	1.74E-04

NOTE:
1. LADD is lifetime average daily dose from dermal contact with contaminated groundwater at the specified concentration.
2. RfD values taken from the Region 9 Risk Based Concentration Table. These values represent a daily exposure level that is not harmful to human health, over a lifetime.
3. During July 2007 sampling "-" designates none of this constituent was detected.
4. Dermal Values used the same RfD values as those used for Oral.
5. HI is the Hazard Index Risk = LADD/RfD
6. Formula used for calculations:

LADD = (C*K*EV*ED*EF*SA)/(BW*AT)

C = constituent concentration (ug/L)	
K = permeability coefficient (cm/day)	contaminant dependent
EV = event frequency	15 min/day
ED = Exposure Duration (years)	30 years for an adult, 8 years for a child
EF = Exposure Frequency (days/year)	365 days per year
SA = skin surface area (cm^2)	20,000cm^2 for adults and 9360 cm^2 for children
BW = Body weight (kg)	70 kg was used for adults, 28.2 kg for children
AT = Average Time (days)	30 years for adults and 8 for children

Table 18: Remediation Alternatives

Remediation Technology	Contamination Treatment	Advantages	Disadvantages	Site Specific Information	Costs
Monitored Natural Attenuation	Passively treats contaminated medium	▪ Inexpensive and easy to implement ▪ Often applicable when low levels of contamination are present and low migration potential exists ▪ Often applicable on sites with low significant threats to public health and the environment exist	▪ Other than natural biodegradation, minimal reduction in contamination levels. ▪ Provides no containment of groundwater ▪ Requires long-term monitoring ▪ Not appropriate for high risk sites	▪ Low health risks ▪ Contamination both anaerobic and aerobic degradation ▪ Contamination in rock limits ability of natural attenuation.	Already incorporated into facility operation
Vapor Extraction/Bioventing	Actively treats contaminated medium	▪ Controls contamination migration	▪ Contamination must be susceptible to air stripping ▪ Need favorable soil conditions ▪ Pilot test required for adequate engineering design	▪ Landfill appears to be effecting migration. ▪ Impact of cis-1,2-Dichloroethylene in vadose zone	$75,000 Pilot test and engineering $200,000 Installation and start up large system $75,000 Small scale focused systems $15,000 Annual operation and maintenance
Air Sparging	Actively treats contaminated medium	▪ Controls contamination migration ▪ Immediate reduction in contamination during initial weeks/months	▪ Contamination must be susceptible to volatilization ▪ Often used in conjunction with vapor extraction ▪ Need favorable soil conditions ▪ Long-term system operation ▪ Expensive start up cost and operation ▪ Extensive operation and maintenance ▪ Pilot test required for adequate engineering design	▪ Contamination of concern degrades under both anaerobic and aerobic conditions ▪ Not applicable on low level sites	$100,000 Pilot test and engineering $500,000 Installation and start up $20,000 Annual operation and maintenance
Enhanced Bioremediation	Actively treats contaminated medium	▪ Can be tailored to fit the contamination of concern ▪ Minimally invasive ▪ Chemicals can be applied directly to the contamination ▪ Can be applied into fracture zones	▪ Degradation of chemicals may require repeat applications ▪ Permitting requirements can be extensive ▪ Not effective on low levels of contamination	▪ Nature of contamination being both aerobic and anaerobic limits application options ▪ Limited biological activity due to contamination occurring in fractured rock	$40,000 Design and permitting costs $45,000 Installation of injection points and additional monitoring points $100,000 Initial injection of compound $100,000 Sub sequential injection of compound $15,000 Additional Annual Monitoirng
Phytoremediation	Passively treats contaminated medium	▪ Environmentally friendly ▪ Inexpensive and easy to implement ▪ Potential source of revenue ▪ Can maintain hydraulic control	▪ Does not work with deep groundwater contamination	▪ COC's have Kow susceptible to phytoremediation. ▪ Can be focused in drainages.	$20,000 Hybrid Willow trees.
Constructed Wetlands	Passively treats contaminated medium	▪ Environmentally friendly ▪ Inexpensive and easy to implement	▪ Does not work with deep groundwater contamination ▪ Constructed wetlands make the area unsuitable for future use	▪ Groundwater would have to be channeled into wetland	
Stream Dilution	Passively treats contaminated medium	▪ Inexpensive	▪ Surface water can not be used for consumption ▪ Must maintain surface water standards.	▪ Currently existing under natural conditions ▪ Much of Downstream is controlled by Alexander County ▪ Surface water is further diluted with other creeks prior to leaving facility ▪ Contamination lower the than estimated levels to exceed surface water standards	Already in operation under existing conditions.
Passive Landfill Gas Ventilation System	Removes source area recharge contamination	▪ Inactively controls contamination recharge ▪ Inexpensive implementation and operation	▪ Generally not efficient for remediation of dissolved phase contamination		Currently in operation on the second unit of the sanitary landfill
Active Landfill Gas Ventilation System	Actively removes source area recharge contamination	▪ Actively controls contamination recharge ▪ Possible use as alternative energy source ▪ Can be focused on target areas ▪ Permit not required if flow rate below 200 scfm.	▪ Expensive start up cost and operation ▪ Can contribute to global warming	▪ Landfill appears to be effecting migration. ▪ Impact of cis-1,2-Dichloroethylene in vadose zone	$750,000 Total turn key expense flare system $50,000 annual operating expense
Pump and Treat	Actively removes source area contamination	▪ Controls contamination migration	▪ Total removal of contamination is limited ▪ Requires operation and maintenance of equipment ▪ Ineffective at treating sites with high soil – water partition coefficent		

Table 19: Stream Dilution Calculations

MW-24 drainage area Area = 2000 ft^2

Constituent of Concern	Well	K (ft/sec)	dh/dl	Q_{gw} (ft^3/sec)	Max GW Concentration (ug/L)	Max C_{sw} (ug/l)	2007 Concentration (ug/L)	2007 C_{sw} (ug/l)	SWSTD[1] (ug/L)	Maximum Concentration needed in GW to exceed SWSTD (ug/l)
1,1 Dichloroethane	MW-7	5.25E-08	6.34E-02	6.65E-06	29.00	2.35E-03	4.90	3.98E-04	-	-
	MW-12	2.63E-06	1.02E-02	5.39E-05	17.00	1.12E-02	5.00	3.28E-03	-	-
	MW-12D	2.63E-06	1.02E-02	5.39E-05	0.89	5.84E-04	0.89	5.84E-04	-	-
	MW-24	4.36E-04	8.01E-02	6.99E-02	1.10	5.06E-01	1.10	5.06E-01	-	-
Xylenes	MW-12	2.63E-06	1.02E-02	5.39E-05	5.20	3.41E-03	-	-	-	-
Tetrachloroethene	MW-7	5.25E-08	6.34E-02	6.65E-06	1.20	9.74E-05	-	-	0.8	9860.52
	MW-12	2.63E-06	1.02E-02	5.39E-05	2.00	1.31E-03	1.00	6.57E-04	0.8	1218.30
Benzene	MW-7	5.25E-08	6.34E-02	6.65E-06	6.70	5.44E-04	4.70	3.81E-04	1.19	14667.53
	MW-12	2.63E-06	1.02E-02	5.39E-05	8.20	5.38E-03	7.10	4.66E-03	1.19	1812.22
	MW-12D	2.63E-06	1.02E-02	5.39E-05	0.52	3.41E-04	0.52	3.41E-04	1.19	1812.22
	MW-24	4.36E-04	8.01E-02	6.99E-02	1.60	7.36E-01	1.60	7.36E-01	1.19	2.59
Methylene Chloride	MW-7	5.25E-08	6.34E-02	6.65E-06	29.00	2.35E-03	-	-	-	-
	MW-12	2.63E-06	1.02E-02	5.39E-05	13.00	8.54E-03	1.80	1.18E-03	-	-
p-dichlorobenzene	MW-7	5.25E-08	6.34E-02	6.65E-06	3.00	2.43E-04	2.10	1.70E-04	-	-
	MW-12	2.63E-06	1.02E-02	5.39E-05	10.90	7.16E-03	7.40	4.86E-03	-	-
	MW-24	4.36E-04	8.01E-02	6.99E-02	2.70	1.24E+00	2.70	1.24E+00	-	-
Trichloroethene	MW-7	5.25E-08	6.34E-02	6.65E-06	1.20	9.74E-05	0.84	6.82E-05	3.08	37963.02
	MW-12	2.63E-06	1.02E-02	5.39E-05	2.40	1.58E-03	2.20	1.44E-03	3.08	4690.46
cis-1,2 Dichloroethylene	MW-7	5.25E-08	6.34E-02	6.65E-06	10.00	8.11E-04	9.20	7.46E-04	-	-
	MW-12	2.63E-06	1.02E-02	5.39E-05	14.00	9.19E-03	14.00	9.19E-03	-	-
	MW-12D	2.63E-06	1.02E-02	5.39E-05	0.69	4.53E-04	0.69	4.53E-04	-	-
	MW-24	4.36E-04	8.01E-02	6.99E-02	8.20	3.77E+00	8.20	3.77E+00	-	-

Table 19: Stream Dilution Calculations

MW-26 drainage area Area = 1600 ft^2

Constituent of Concern	Well	K (ft/sec)	dh/dl	Q_{gw} (ft^3/sec)	Max GW Concentration (ug/L)	Max C_{sw} (ug/l)	2007 Concentration (ug/L)	2007 C_{sw} (ug/l)	SWSTD[1] (ug/L)	Maximum Concentration needed in GW to exceed SWSTD (ug/l)
1,1 Dichloroethane	MW-3	1.28E-07	1.52E-01	3.10E-05	22.00	8.32E-03	1.10	4.16E-04	-	-
	MW-11	2.63E-06	1.65E-01	6.93E-04	11.00	9.22E-02	2.90	2.43E-02	-	-
	MW-26	3.81E-06	4.37E-02	2.66E-04	1.70	5.50E-03	1.70	5.50E-03	-	-
1,2-Dichloropropane	MW-3	1.28E-07	1.52E-01	3.10E-05	11.00	4.16E-03	-	-	-	-
Xylenes	MW-3	1.28E-07	1.52E-01	3.10E-05	34.00	1.29E-02	15.00	5.67E-03	-	-
	MW-11	2.63E-06	1.65E-01	6.93E-04	5.10	4.28E-02	-	-	-	-
Tetrachloroethene	MW-3	1.28E-07	1.52E-01	3.10E-05	1.00	3.78E-04	0.45	1.70E-04	0.8	2115.45
	MW-11	2.63E-06	1.65E-01	6.93E-04	1.10	9.22E-03	-	-	0.8	95.43
Benzene	MW-3	1.28E-07	1.52E-01	3.10E-05	13.00	4.92E-03	8.00	3.03E-03	1.19	3146.73
	MW-11	2.63E-06	1.65E-01	6.93E-04	7.70	6.46E-02	4.20	3.52E-02	1.19	141.95
	MW-26	3.81E-06	4.37E-02	2.66E-04	1.90	6.15E-03	1.90	6.15E-03	1.19	367.92
Methylene Chloride	MW-3	1.28E-07	1.52E-01	3.10E-05	24.00	9.08E-03	-	-	-	-
	MW-11	2.63E-06	1.65E-01	6.93E-04	0.70	5.87E-03	0.70	5.87E-03	-	-
p-dichlorobenzene	MW-3	1.28E-07	1.52E-01	3.10E-05	11.00	4.16E-03	9.80	3.71E-03	-	-
	MW-11	2.63E-06	1.65E-01	6.93E-04	11.60	9.72E-02	5.90	4.95E-02	-	-
	MW-26	3.81E-06	4.37E-02	2.66E-04	3.10	1.00E-02	3.10	1.00E-02	-	-
Trichloroethene	MW-3	1.28E-07	1.52E-01	3.10E-05	5.00	1.89E-03	2.00	7.56E-04	3.08	8144.47
	MW-11	2.63E-06	1.65E-01	6.93E-04	1.20	1.01E-02	0.55	4.61E-03	3.08	367.40
cis-1,2 Dichloroethylene	MW-3	1.28E-07	1.52E-01	3.10E-05	30.00	1.13E-02	13.00	4.92E-03	-	-
	MW-11	2.63E-06	1.65E-01	6.93E-04	51.00	4.28E-01	42.00	3.52E-01	-	-
	MW-26	3.81E-06	4.37E-02	2.66E-04	32.00	1.04E-01	32.00	1.04E-01	-	-

Table 19: Stream Dilution Calculations

MW-16 drainage area Area = 1000 ft^2

Constituent of Concern	Well	K (ft/sec)	dh/dl	Q_{gw} (ft^3/sec)	Max GW Concentration (ug/L)	Max C_{sw} (ug/l)	2007 Concentration (ug/L)	2007 C_{sw} (ug/l)	SWSTD[1] (ug/L)	Maximum Concentration needed in GW to exceed SWSTD (ug/l)
1,1 Dichloroethane	MW-5	2.10E-06	3.64E-02	7.65E-05	22.00	2.05E-02	5.70	5.31E-03	-	-
	MW-16	2.86E-05	9.02E-02	2.58E-03	21.00	6.41E-01	21.00	6.41E-01	-	-
1,2-Dichloropropane	MW-16	2.86E-05	9.02E-02	2.58E-03	1.00	3.05E-02	1.00	3.05E-02	-	-
Xylenes	MW-16	2.86E-05	9.02E-02	2.58E-03	2.20	6.71E-02	2.20	6.71E-02	-	-
Tetrachloroethene	MW-5	2.10E-06	3.64E-02	7.65E-05	1.00	9.32E-04	-	-	0.8	858.01
	MW-16	2.86E-05	9.02E-02	2.58E-03	2.50	7.63E-02	0.09	2.75E-03	0.8	26.23
Benzene	MW-5	2.10E-06	3.64E-02	7.65E-05	6.10	5.69E-03	3.20	2.98E-03	1.19	1276.29
	MW-16	2.86E-05	9.02E-02	2.58E-03	3.30	1.01E-01	3.30	1.01E-01	1.19	39.01
Methylene Chloride	MW-16	2.86E-05	9.02E-02	2.58E-03	4.10	1.25E-01	4.10	1.25E-01	-	-
p-dichlorobenzene	MW-5	2.10E-06	3.64E-02	7.65E-05	1.20	1.12E-03	-	-	-	-
	MW-16	2.86E-05	6.64E-02	1.90E-03	1.80	4.07E-02	1.80	4.07E-02	-	-
Trichloroethene	MW-5	2.10E-06	3.64E-02	7.65E-05	4.00	3.73E-03	0.55	5.13E-04	3.08	3303.35
	MW-16	2.86E-05	9.02E-02	2.58E-03	3.70	1.13E-01	3.70	1.13E-01	3.08	100.97
cis-1,2 Dichloroethylene	MW-5	2.10E-06	3.64E-02	7.65E-05	19.00	1.77E-02	10.00	9.32E-03	-	-
	MW-16	2.86E-05	9.02E-02	2.58E-03	16.00	4.88E-01	16.00	4.88E-01	-	-

Table 19: Stream Dilution Calculations

MW-9 drainage area Area = 850 ft^2

Constituent of Concern	Well	K (ft/sec)	dh/dl	Q_{gw} (ft^3/sec)	Max GW Concentration (ug/L)	Max C_{sw} (ug/l)	2007 Concentration (ug/L)	2007 C_{sw} (ug/l)	SWSTD[1] (ug/L)	Maximum Concentration needed in GW to exceed SWSTD (ug/l)
1,1 Dichloroethane	MW-4R	1.61E-05	5.98E-02	8.18E-04	18.00	0.18	7.60	0.08	-	-
	MW-9	2.63E-06	8.33E-02	1.86E-04	6.00	0.01	2.40	0.01	-	-
	MW-10	2.63E-06	6.64E-02	1.48E-04	0.91	0.00	0.91	0.00	-	-
Benzene	MW-4R	1.61E-05	5.98E-02	8.18E-04	5.60	0.06	-	-	1.19	120.54
	MW-10	2.63E-06	6.64E-02	1.48E-04	2.10	0.00	-	-	1.19	658.37
p-dichlorobenzene	MW-4R	1.61E-05	5.98E-02	8.18E-04	3.60	0.04	3.60	0.04	-	-
	MW-9	2.63E-06	8.33E-02	1.86E-04	0.42	0.00	0.42	0.00	-	-
Trichloroethene	MW-4R	1.61E-05	5.98E-02	8.18E-04	0.23	0.00	-	-	3.08	311.98
cis-1,2 Dichloroethylene	MW-4R	1.61E-05	5.98E-02	8.18E-04	36.00	0.36	18.00	0.18	-	-
	MW-9	2.63E-06	8.33E-02	1.86E-04	20.00	0.05	20.00	0.05	-	-
	MW-10	2.63E-06	6.64E-02	1.48E-04	3.80	0.01	3.80	0.01	-	-

[1] SWSTD = North Carolina Surface Water Standard Class C or Class IV as appropriate

Formula Used for Calculations: $C_{sw} = C_{gs}[Q_{gw}/(Q_{gw}+Q_{sw})]$

C_{sw} = potential surface water contaminant concentration
C_{gs} = groundwater contaminant
Q_{sw} = 0.082 ft^3/sec
Q_{gw} = groundwater flux (KA[dh/dl])
K = hydraulic conductivity
A = cross sectional area of groundwater discharge - Estimated per section
(dh/dl) = hydraulic gradient as calculated on Table 20

Table 20: Flow rate calculations

Well	h_1 (ft)	h_2 (ft)	dh (ft)	dl (ft)	i	K (cm/sec)	n_e (%)	v (ft/yr)	Lithology
MW-1	1045.47	1040.00	5.47	24.86	0.2199	5.60E-05	10%	127.43	Gneiss
MW-1A	1041.15	1040.00	1.15	65.05	0.0177	5.60E-05	10%	10.28	Gneiss
MW-1B	-	-	-	-	-		5%	-	Gneiss
MW-2	980.72	960.00	20.72	23.96	0.8648	3.70E-06	28.1%	11.78	Silty Sand
MW-3	998.77	990.00	8.77	57.87	0.1515	3.90E-06	10%	6.11	Gneiss
MW-4R	997.01	990.00	7.01	117.08	0.0598	4.90E-04	10%	303.34	Gneiss
MW-5	1011.42	1010.00	1.42	38.98	0.0364	6.40E-05	28.1%	8.59	Saprolite
MW-6	980.78	960.00	20.78	27.13	0.7661	2.40E-05	10%	190.23	Gneiss
MW-7	970.29	960.00	10.29	162.33	0.0634	1.60E-06	10%	1.05	Gneiss
MW-8	1010.13	1000.00	10.13	75.93	0.1334	1.30E-05	10%	17.95	Gneiss
MW-9	984.11	990.00	5.89	70.75	0.0833	8.02E-05	10%	69.13	PWR
MW-10	1002.71	1000.00	2.71	40.88	0.0664	8.02E-05	10%	55.09	Rock
MW-11	970.12	980.00	9.88	59.98	0.1647	8.02E-05	10%	136.64	Rock
MW-12	954.88	950.00	4.88	107.78	0.0453	4.90E-04	10%	229.58	PWR/Gneiss
MW-12D	951.17	950.00	1.17	114.37	0.0102	8.02E-05	10%	8.50	Gniess
MW-13	964.53	960.00	4.53	14.01	0.3233	8.02E-05	10%	268.26	Gneiss
MW-14	958.05	950.00	8.05	42.08	0.1912	8.02E-05	10%	158.65	Gneiss
MW-15	998.92	990.00	8.92	39.73	0.2246	8.02E-05	10%	186.36	Gneiss
MW-16	1005.58	1010.00	4.42	49.01	0.0902	8.72E-04	17%	478.63	Silty Sand
MW-17	977.22	970.00	7.22	26.16	0.2759	8.02E-05	10%	228.92	Gneiss
MW-18	1029.33	1040.00	10.67	362.02	0.0295	1.19E-04	10%	36.29	Gneiss
MW-19	1015.00	1020.00	5.00	54.38	0.0919	1.92E-06	10%	1.83	Gneiss
MW-20	1005.91	1010.00	4.09	181.49	0.0225	5.49E-05	10%	12.80	Gneiss
MW-21	959.49	970.00	10.51	39.20	0.2681	3.77E-03	28.1%	3721.72	Silty Sand
MW-22	943.66	950.00	6.34	27.55	0.2301	6.04E-04	28.1%	511.79	Silty Sand
MW-23	932.88	940.00	7.12	19.23	0.3703	9.83E-04	28.1%	1340.11	Silty Sand
MW-24	940.34	950.00	9.66	120.66	0.0801	1.33E-02	10%	11016.84	PWR
MW-25	948.88	950.00	1.12	49.48	0.0226	5.41E-05	10%	12.67	Gneiss
MW-26	960.78	960.00	0.78	17.85	0.0437	1.16E-04	10%	52.45	Gneiss
MW-27	971.81	970.00	1.81	26.03	0.0695	2.83E-05	10%	20.36	Gneiss

NOTES:

1. Parameters *dh* and *dl* denote the difference in the hydraulic head and the horizontal distance, respectively, between two measurement points. A line is constructed from a piezometers to a perpendicular of the potentiometric contour in Plate 7 *Average day potentiometric map with flow directions.* The hydraulic head is the absolute value of the difference in the groundwater elevation at the piezometer, h_1, and the elevation of the corresponding potentiometric contour, h_2. The horizontal distance, *dl,* is the length of the line.

2. Parameter *i* denotes the hydraulic gradient associate with the line, and is defined by the equation:

$$i = \frac{dh}{dl}$$

3. Parameter n_e denotes the effective porosity.

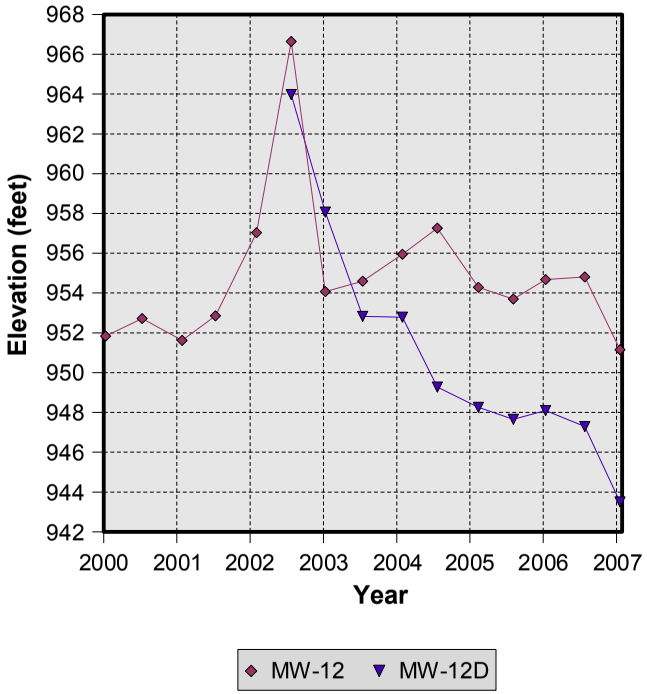
4. *K* denotes the hydraulic conductivity determined from field slug tests; or the average per lithology if slug test was not preformed.

5. Parameter *v* denotes the average linear velocity. The average linear velocity, denoted by *v*, is defined by the equation:

$$v = -\frac{K}{n_e}\frac{dh}{dl}$$

Table 21: Vertical Flow Compontents

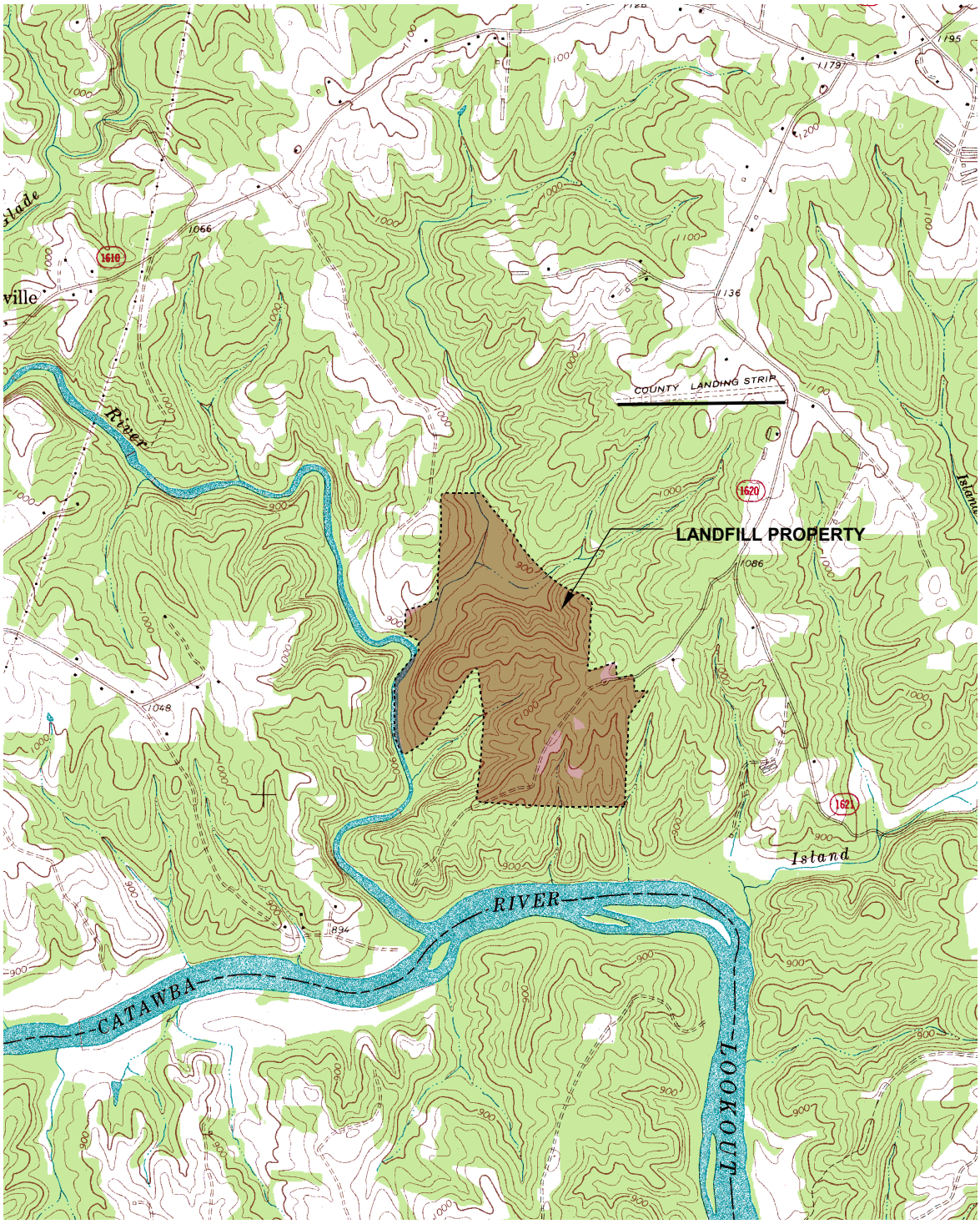
Date	MW-12	MW-12D	dh	dl (mid-point of saturated screen)	Vertical Gradient (dh/dl)
12/11/2000	951.83	-	-	33.87	-
06/11/2001	952.72	-	-	34.31	-
12/27/2001	951.62	-	-	33.76	-
06/12/2002	952.85	-	-	34.38	-
01/02/2003	957.04	-	-	34.43	-
06/24/2003	966.65	963.97	-2.68	34.43	-0.07784
12/11/2003	954.07	958.06	3.99	34.43	0.11589
06/15/2004	954.60	952.82	-1.78	34.43	-0.05170
12/29/2004	955.95	952.78	-3.17	34.43	-0.09207
06/22/2005	957.26	949.27	-7.99	34.43	-0.23207
01/12/2006	954.29	948.26	-6.03	34.43	-0.17514
07/06/2006	953.70	947.66	-6.04	34.43	-0.17543
12/14/2006	954.67	948.10	-6.57	34.43	-0.19082
06/27/2007	954.81	947.29	-7.52	34.43	-0.21841
12/19/2007	951.15	943.50	-7.65	33.53	-0.22819
		Average	**-4.54**		**-0.13258**



Topographic Map with Site Location

PLATE 1

Assessment of Corrective Measures – Alexander County



QUADRANGLE LEGEND

ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route

U. S. Route

State Route

NOTE: Topographical map assembled from corresponding USGS 7.5-min. quadrangles of the subject region.

Date Completed	11/14/2007
Created By	M. German
Project Name	Assessment of Corrective Measures
Site Name	Alexander County Landfill
Project Number	G07060.0

Municipal Engineering Services Company, PA

0 1/2 1 MILE

PLATE 2

Municipal Services Engineering Company, P.A.

P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767

P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393

CONSTRUCTION AND DEMOLITION LANDFILL FACILITY
ALEXANDER COUNTY NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

FACILITY MAP

SCALE:	1" = 100'
DATE:	04/09/08
DRWN. BY:	L. HAMPTON
CHKD. BY:	E. CALDWELL
PROJECT NUMBER	G07060.0
DRAWING NO.	PLATE 2
SHEET NO.	1 OF 1

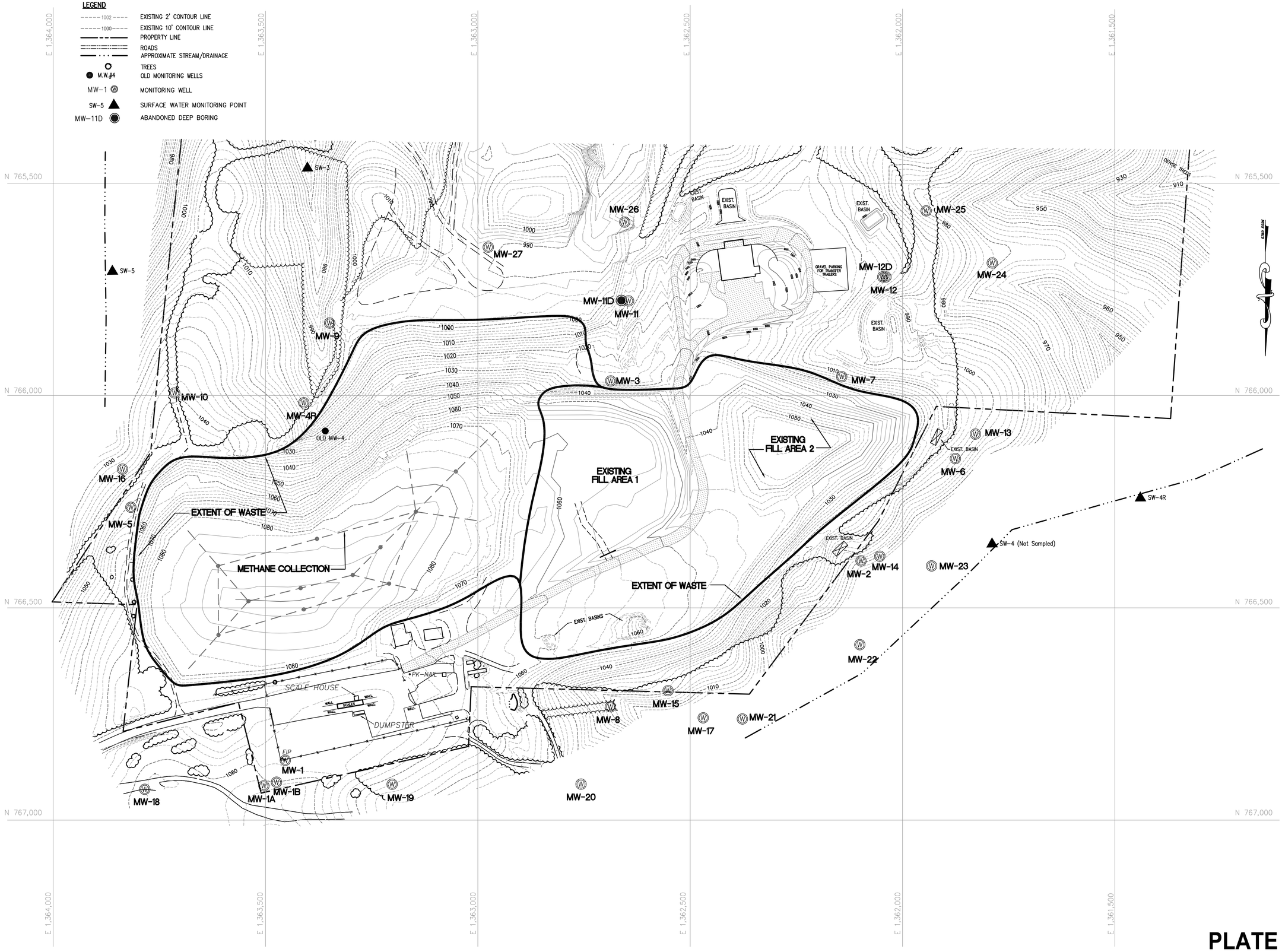


PLATE 3

Municipal Engineering Services Company, P.A.
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393

CONSTRUCTION AND DEMOLITION LANDFILL FACILITY
ALEXANDER COUNTY NORTH CAROLINA

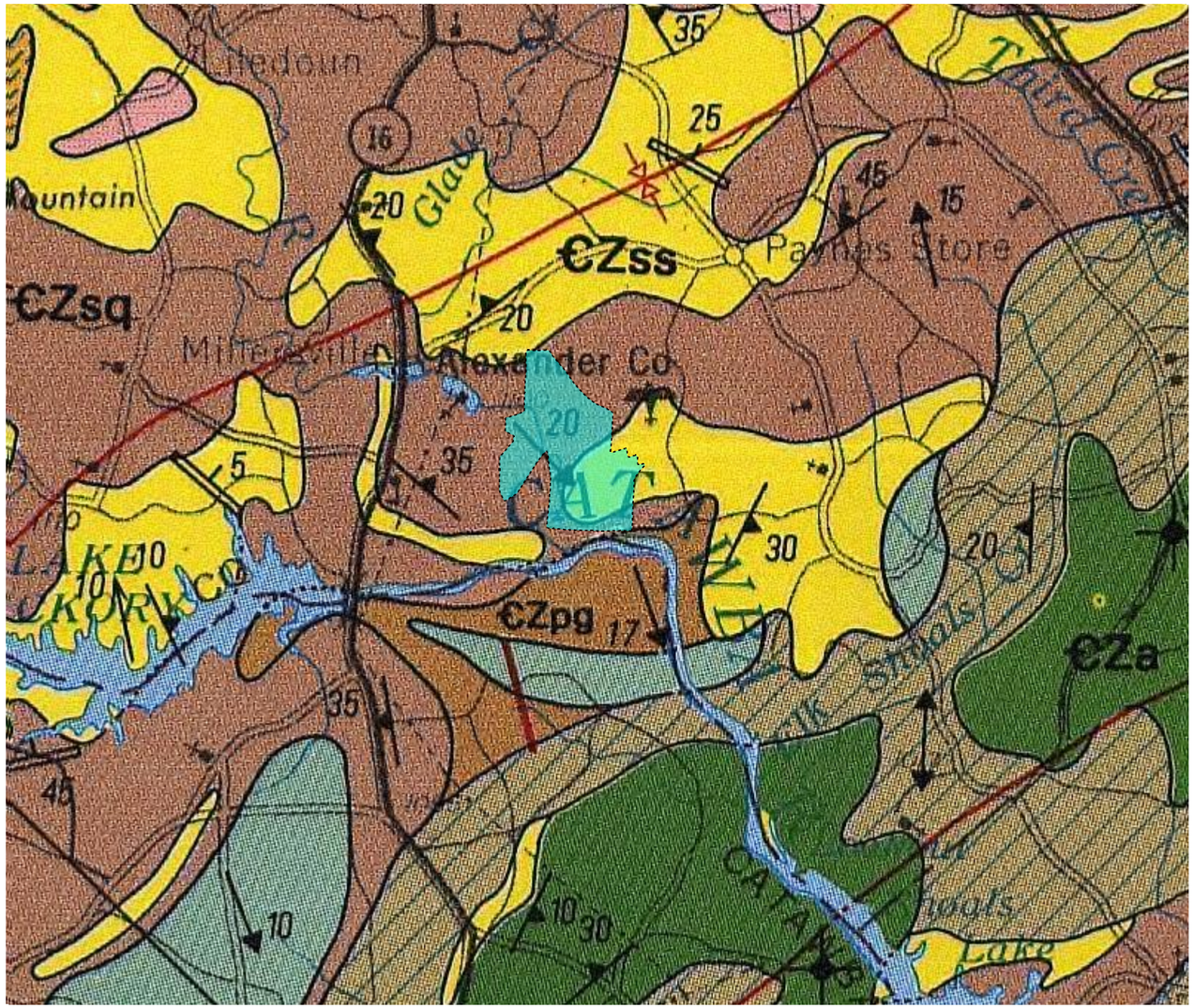
DATE	BY	REV.	DESCRIPTION

SITE MAP WITH SAMPLING LOCATIONS

SCALE:	1" = 100'
DATE:	04/09/08
DRWN. BY:	M. GERMAN
CHKD. BY:	E. CALDWELL
PROJECT NUMBER	G07060.0
DRAWING NO.	PLATE 3
SHEET NO.	1 OF 1

Regional Characterization Map

Assessment of Corrective Measures – Alexander County



5 0 5 MILES

Date Completed	11/19/2007
Created By	M. German
Project Name	Assessment of Corrective Measures
Site Name	Alexander County Landfill
Project Number	G07060.0

Municipal Engineering Services Company, PA

10 Strike and dip of bedding (inclined)

Formation boundary

40 Strike and Dip of folliation

Syncline

Anticline

GEOLOGIC MAP LEGEND

FORMATION DESCRIPTION

Inner Piedmont Belt

CZsq: Schist and Quartzite- Locally conglomeratic white mica schist and sillimanite mica schist, quartz mica schist and thinly bedded quartzite. (Not Shown)

CZss: Sillimanite-Mica Schist- Thin to thick bedded sillimanite mica schist and gneiss, variably garnetiferous, subordinate layers and lenses of biotite gneiss, and subordinate quartz schist, micaceous quartzite, and calc-silicate rock. Heterogeneous unit regarding texture and mineral composition.

CZbg: Biotite Gneiss – Grey to dark grey, thin to thick layered biotite, quartz, feldspar gneiss, garnetiferous, locally inequigranular and porphyroblastic, interlayered with calc-silicate rock, sillimanite-mica schist, mica schist, and amphibolite.

Czpg: Inequigranular Biotite Gneiss- Poorly layered to massive biotite-quartz plagioclase gniess with small plagioclase megacrysts and rare megacrysts of quartz and feldspar. Local inclustions of amphioblite and biotite gneiss.

CZa: Amphibolite- Dark grey, fine to medium grained, thin to thick layered amphibolite composed mostly of plagioclase, hornblende and smaller amounts of diopside, epidote, and quartz. pods and thin layers of calc-silicate rock are present. Small non-layered masses of metadiorite and metagabbro are included in the unit.

CZbga: biotite gneiss and amphibolite- Interlayered biotite gneiss, hornblende, gneiss, amphibolite, metagabbro, and subordinate mica schist. Locally contains much granitoid rock, forms migmatite resembling migmatic granitoid gneiss.

qd: Metamorphosed quartz diorite- Dark grey, gneissic, hornblende-biotite quartz diorite and diorite, locally garnetiferous.

OCtg: Toluca Granite- Early Ordovician and Cambrian, light grey, medium grained, weakly to well foliated biotite monzogranite and subordinate granodiorite. Garnet, monzanite, nadn muscovite are common accessories. Forms masses conformable with the regional foliation.

Chp: Henderson Gneiss- Cambrian, fine grained, Subhedral megacrysts commonly with rapakivi texture, generally arranged in a flow pattern. Commonly contains garnet. Possiblly a shallower, less sheared phase of the Henderson Gneiss Pluton east of the Cat Square Terrain.

Taken From: Goldsmith, R, Milton, D.J., Horton, J.W.Jr., The Charlotte 1°x2° Quadrangle, North and South Carolina, 1988.

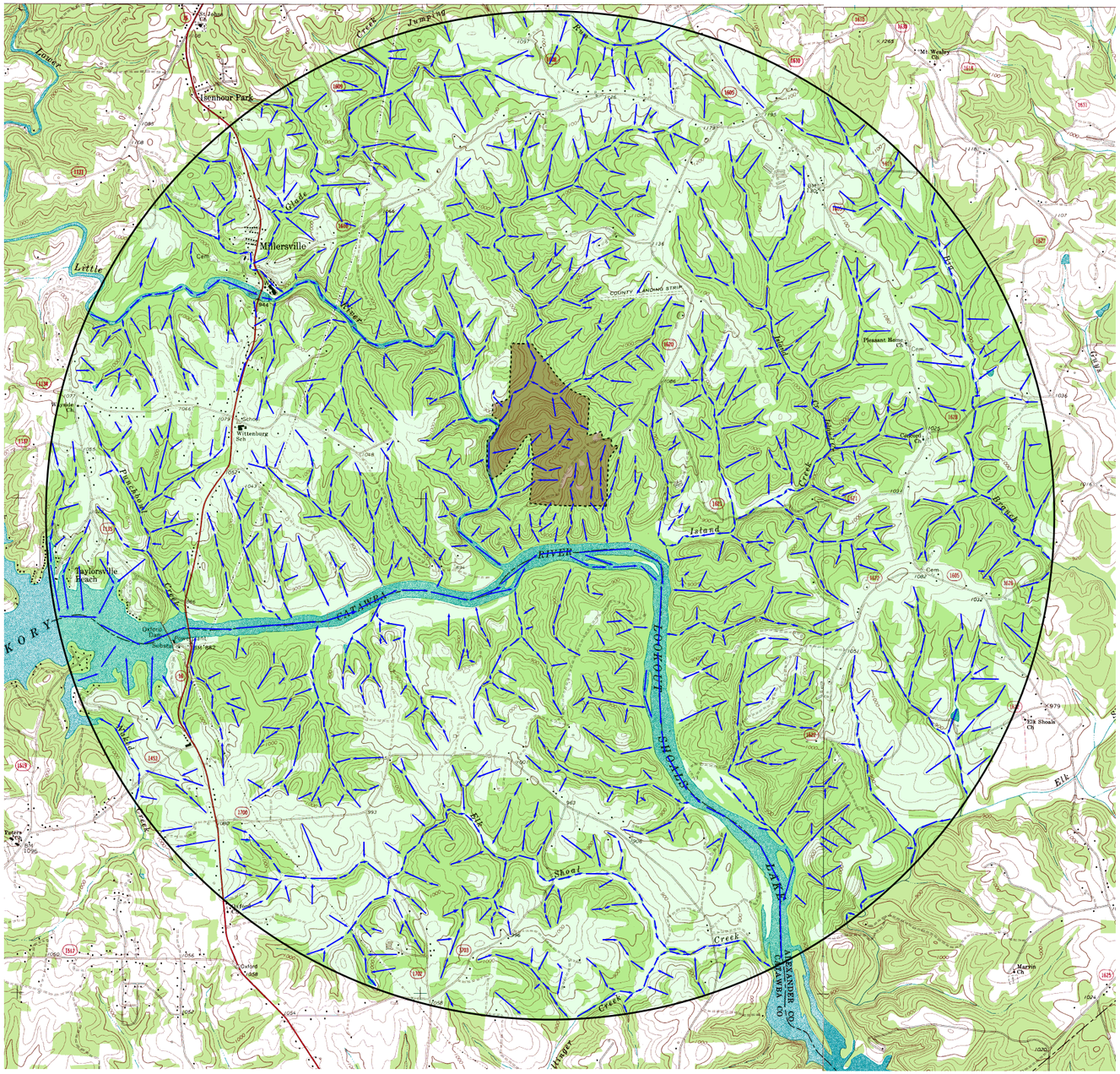
PLATE 4

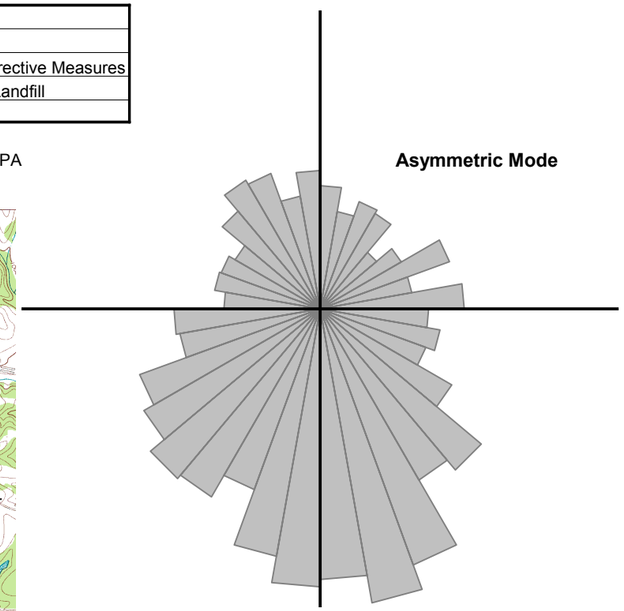
Stream Trace Analysis with Rose Diagram

Assessment of Corrective Measures – Alexander County Landfill

Date Completed	11/14/2007
Created By	M. German
Project Name	Assessment of Corrective Measures
Site Name	Alexander County Landfill
Project Number	G07060.0

Municipal Engineering Services Company, PA



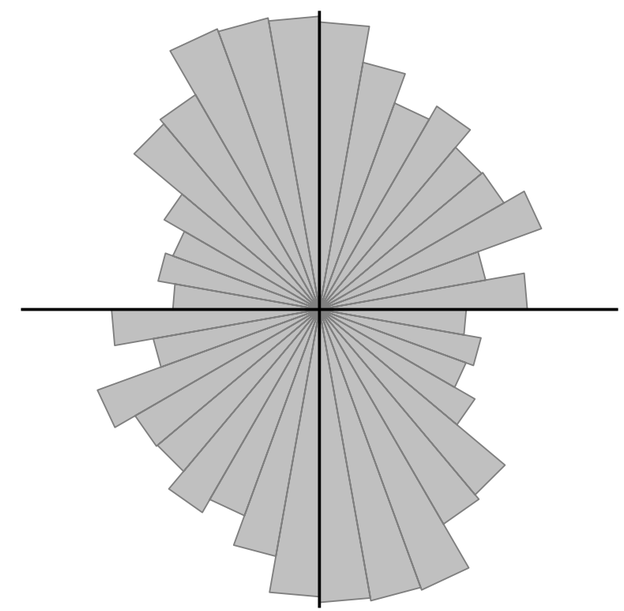


Asymmetric Mode

Range	Score
N80-90W	32%
N70-80W	36%
N60-70W	35%
N50-60W	33%
N40-50W	43%
N30-40W	50%
N20-30W	48%
N10-20W	38%
N0-10W	46%
N0-10E	41%
N10-20E	33%
N20-30E	38%
N30-40E	37%
N40-50E	25%
N50-60E	31%
N60-70E	46%
N70-80E	31%
N80-90E	48%

Range	Score
S80-90E	36%
S70-80E	41%
S60-70E	38%
S50-60E	51%
S40-50E	70%
S30-40E	66%
S20-30E	91%
S10-20E	100%
S0-10E	91%
S0-10W	93%
S10-20W	84%
S20-30W	64%
S30-40W	73%
S40-50W	74%
S50-60W	68%
S60-70W	64%
S70-80W	48%
S80-90W	49%

Range	Score
N80-90W	49%
N70-80W	55%
N60-70W	52%
N50-60W	60%
N40-50W	81%
N30-40W	83%
N20-30W	100%
N10-20W	99%
N0-10W	98%
N0-10E	96%
N10-20E	84%
N20-30E	74%
N30-40E	79%
N40-50E	71%
N50-60E	71%
N60-70E	79%
N70-80E	57%
N80-90E	70%



Symmetric Mode

QUADRANGLE LEGEND

ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route

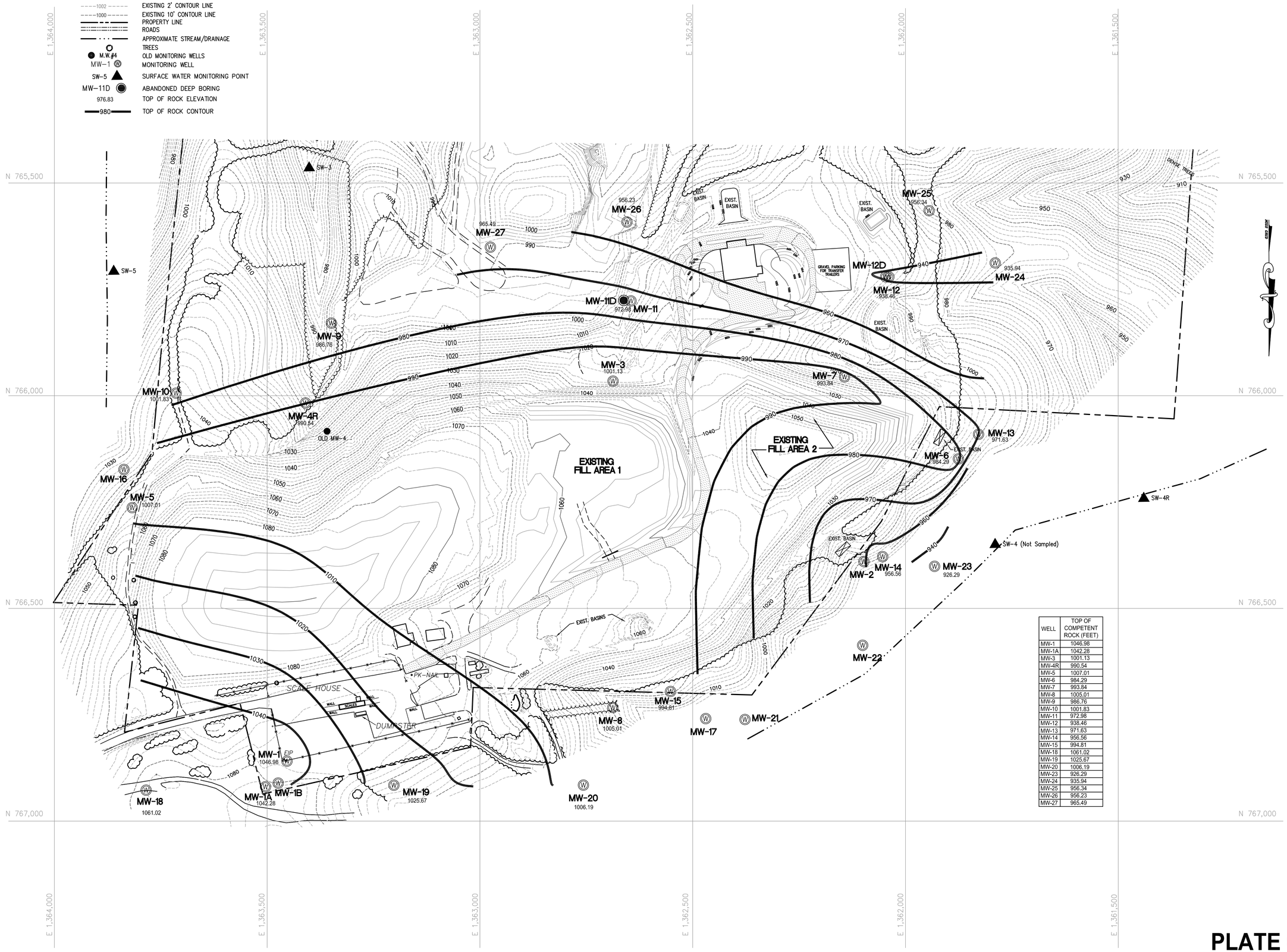
U. S. Route

State Route

NOTE: Topographical map assembled from corresponding USGS 7.5-min. quadrangles of the subject region.

1 0 1 MILE

PLATE 5



WELL	TOP OF COMPETENT ROCK (FEET)
MW-1	1046.98
MW-1A	1042.28
MW-3	1001.13
MW-4R	990.54
MW-5	1007.01
MW-6	984.29
MW-7	993.84
MW-8	1005.01
MW-9	986.76
MW-10	1001.83
MW-11	972.98
MW-12	938.46
MW-13	971.63
MW-14	956.56
MW-15	994.81
MW-18	1061.02
MW-19	1025.67
MW-20	1006.19
MW-23	926.29
MW-24	935.94
MW-25	956.34
MW-26	956.23
MW-27	965.49

PLATE 6

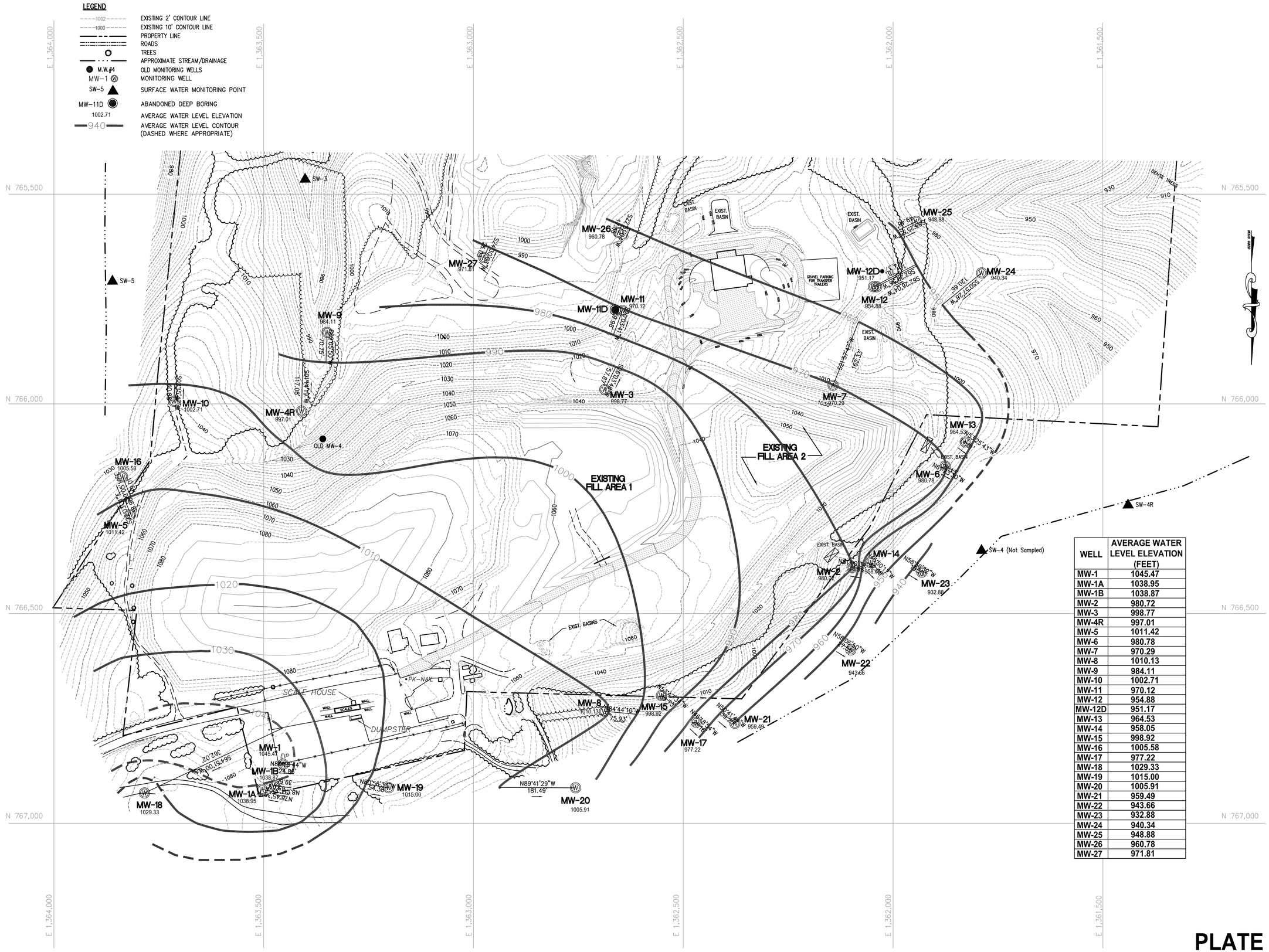
Municipal Engineering Services Company, P.A.
P.O. BOX 348 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393

CONSTRUCTION AND DEMOLITION LANDFILL FACILITY
ALEXANDER COUNTY NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

ESTIMATED TOP OF COMPETENT ROCK

SCALE: 1" = 100'
DATE: 04/09/08
DRWN. BY: M. GERMAN
CHKD. BY: E. CALDWELL
PROJECT NUMBER G07060.0
DRAWING NO. PLATE 6
SHEET NO. 1 OF 1



WELL	AVERAGE WATER LEVEL ELEVATION (FEET)
MW-1	1045.47
MW-1A	1038.95
MW-1B	1038.87
MW-2	980.72
MW-3	998.77
MW-4R	997.01
MW-5	1011.42
MW-6	980.78
MW-7	970.29
MW-8	1010.13
MW-9	984.11
MW-10	1002.71
MW-11	970.12
MW-12	954.88
MW-12D	951.17
MW-13	964.53
MW-14	958.05
MW-15	998.92
MW-16	1005.58
MW-17	977.22
MW-18	1029.33
MW-19	1015.00
MW-20	1005.91
MW-21	959.49
MW-22	943.66
MW-23	932.88
MW-24	940.34
MW-25	948.88
MW-26	960.78
MW-27	971.81

PLATE 7

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767

CONSTRUCTION AND DEMOLITION LANDFILL FACILITY
ALEXANDER COUNTY NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

AVERAGE POTENTIOMETRIC MAP WITH FLOW DIRECTIONS

SCALE: 1" = 100'
DATE: 04/09/08
DRWN. BY: M. GERMAN
CHKD. BY: E. CALDWELL
PROJECT NUMBER G07060.0
DRAWING NO. PLATE 7
SHEET NO. 1 OF 1

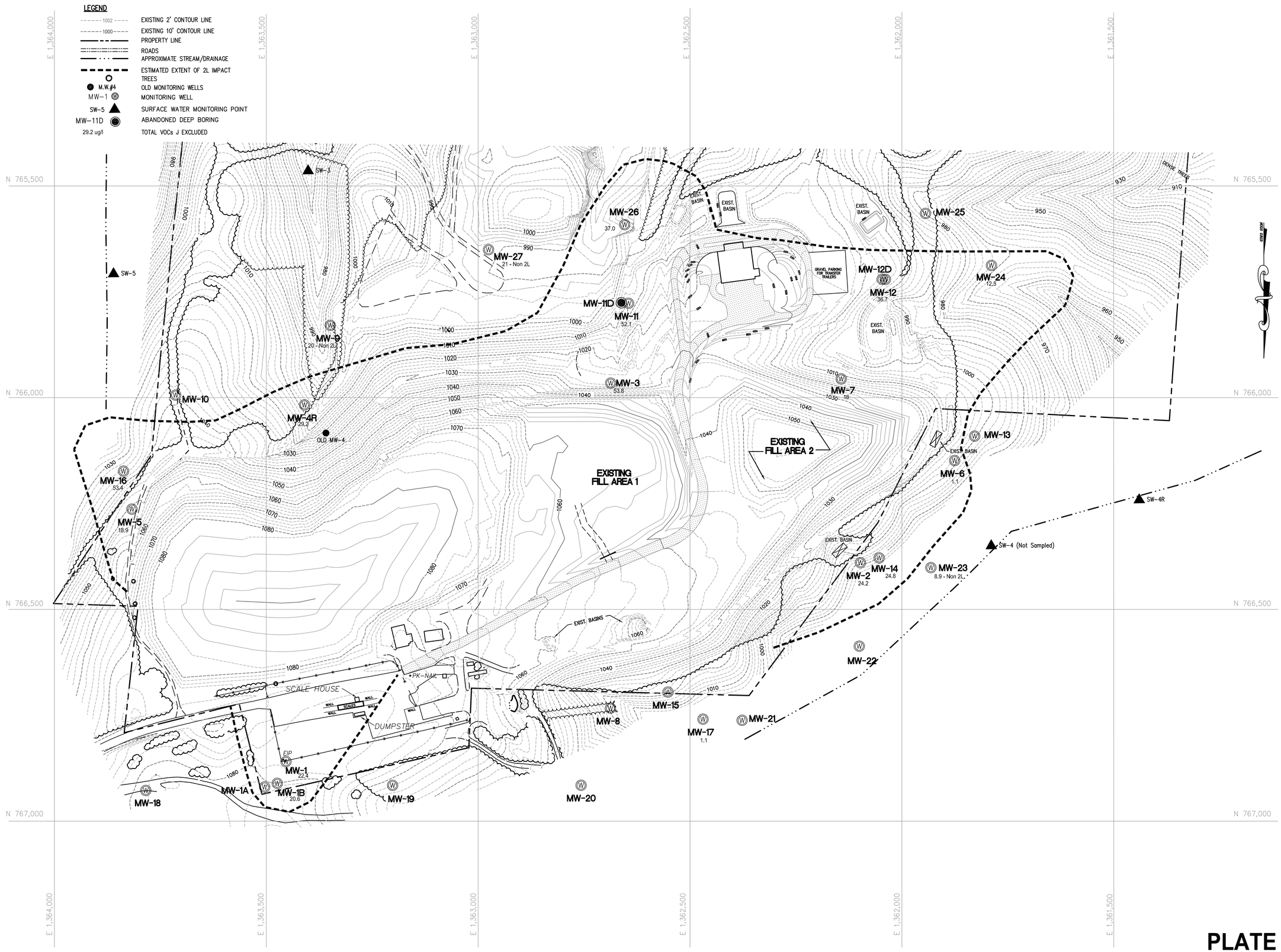


PLATE 8

Municipal Engineering Services Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767

CONSTRUCTION AND DEMOLITION LANDFILL FACILITY
ALEXANDER COUNTY NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

ISOCONCENTRATION MAP TOTAL VOC'S

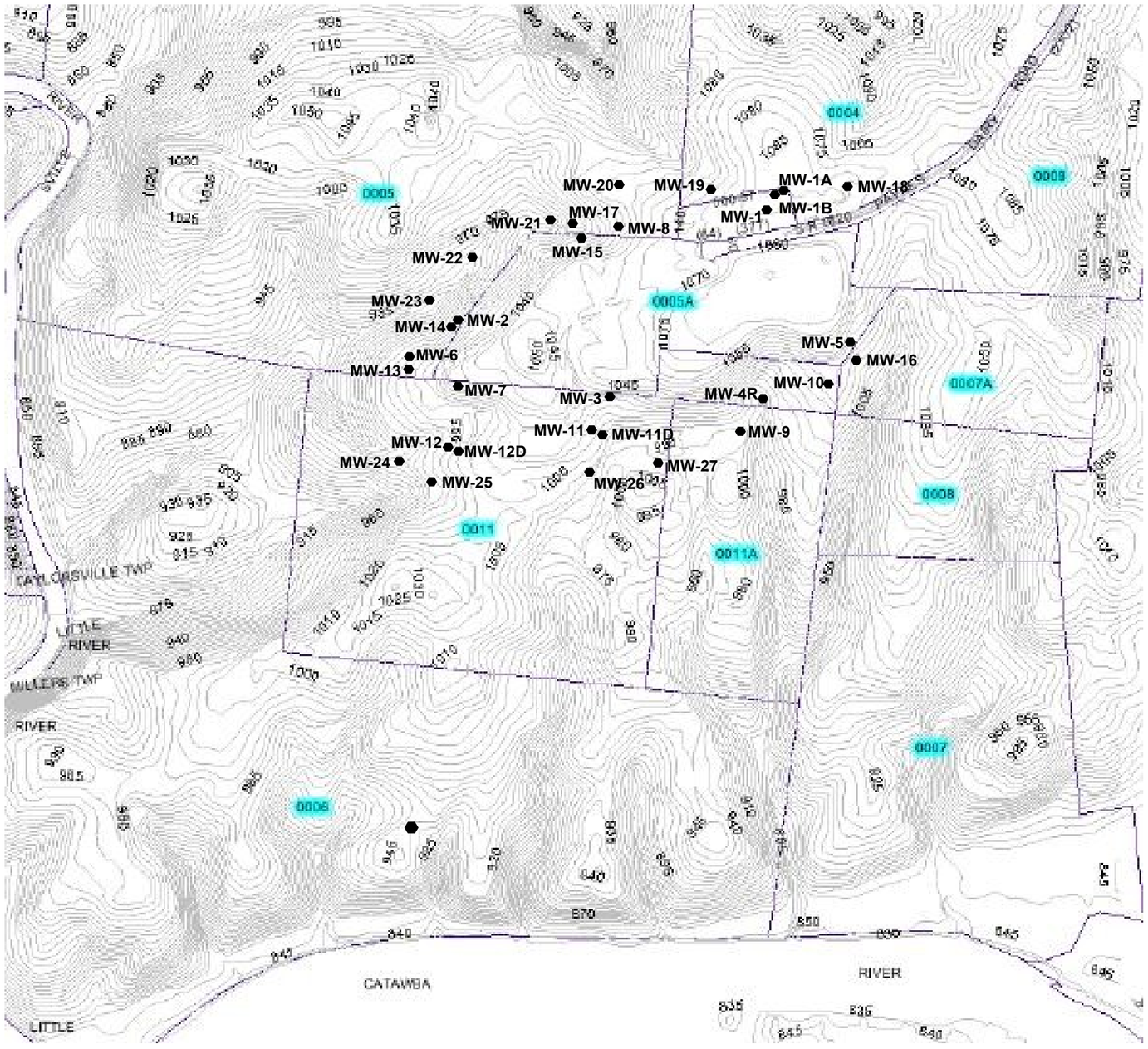
SCALE:	1" = 100'
DATE:	04/09/08
DRWN. BY:	M. GERMAN
CHKD. BY:	E. CALDWELL
PROJECT NUMBER	G07060.0
DRAWING NO.	PLATE 8
SHEET NO.	1 OF 1

TAX MAP

ASSESSMENT OF CORRECTIVE MEASURES – ALEXANDER COUNTY

Date Completed	04/03/2008
Created By	M. German
Project Name	Assessment of Corrective Measures
Site Name	Alexander County Landfill
Project Number	G07060.0

Municipal Engineering Services Company, PA

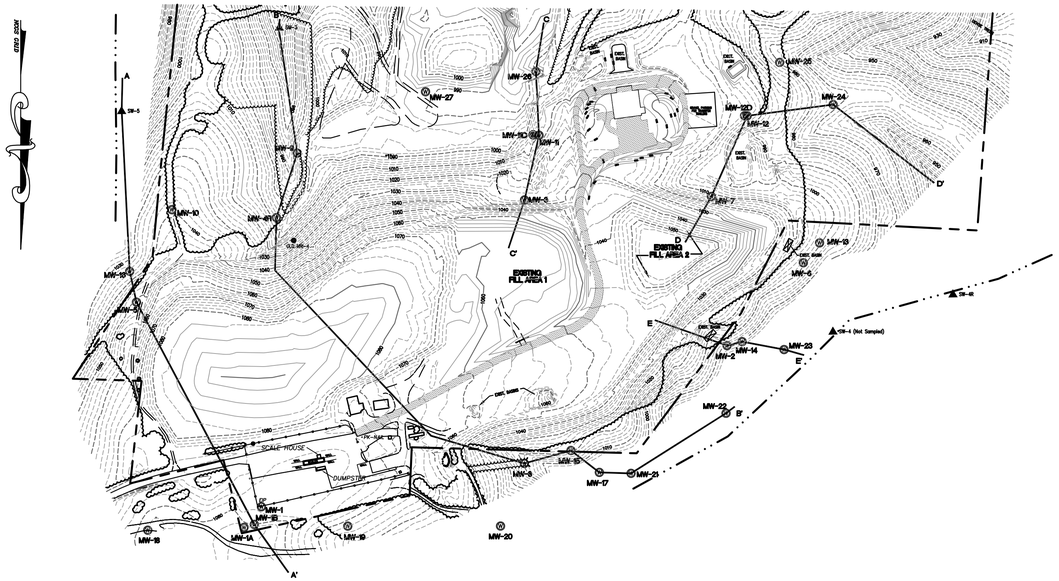


LEGEND :

MAP ID	OWNER
0011	Alexander County
0011A	Alexander County
0006	Sipe, Earl
0007	Crescent Resources Inc
0007A	Crescent Resources Inc
0008	Correll, Tony J
0014	NU-Made Manufacturing Inc
0005	Alexander County
0005A	Alexander County
0005B	Alexander County
0004	Gray Area Land LLC
0009	Correll, Tony J

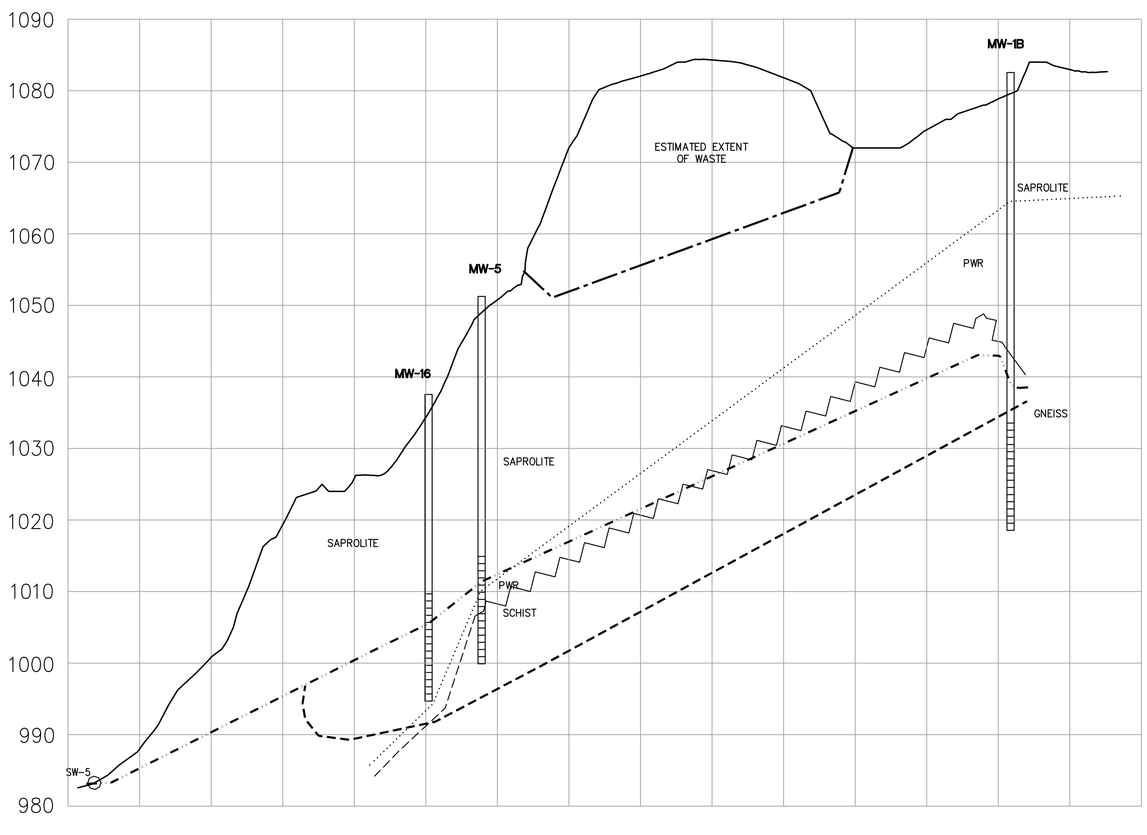
MW-25 **Monitoring Well (Approximate Location)**

PLATE 9



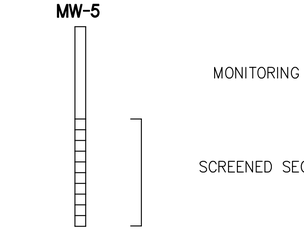
LEGEND

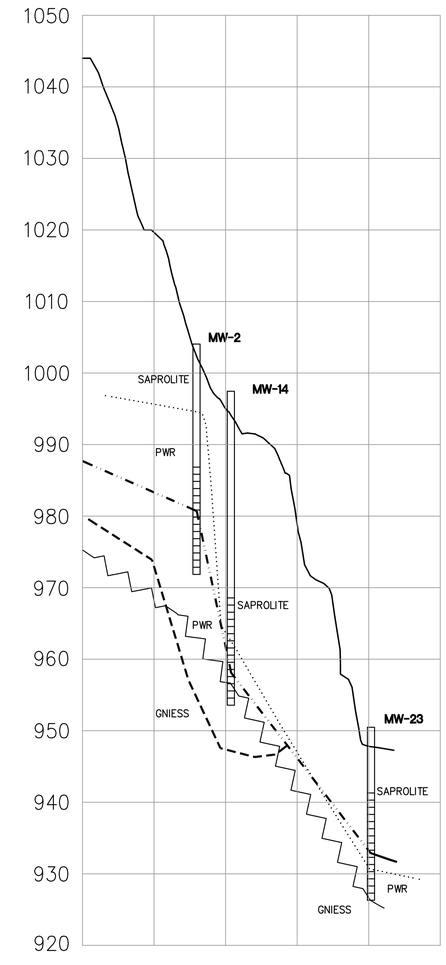
1002	EXISTING 2' CONTOUR LINE
1000	EXISTING 10' CONTOUR LINE
	PROPERTY LINE
	ROADS
	APPROXIMATE STREAM/DRAINAGE
	TREES
M.W.#4	OLD MONITORING WELLS
MW-1	MONITORING WELL
SW-5	SURFACE WATER MONITORING POINT
MW-11D	ABANDONED DEEP BORING



SECTION A-A'

APPROX. SCALE HORIZ. 1" = 100'
VERT. 1" = 10'





SECTION E-E'

APPROX. SCALE HORIZ. 1" = 100'
VERT. 1" = 10'

	GROUNDSURFACE
	AVERAGE GROUNDWATER
	TOP OF COMPETENT ROCK
	ESTIMATED STRATIGRAPHIC CONTENT
	ESTIMATED BASE OF MSW
	ESTIMATED EXTENT OF 2L IMPACT

NOTE:
- NUMBERS SHOWN IN THIS PLATE ARE IN UNITS OF FEET UNLESS INDICATED OTHERWISE.
- SOIL PROFILES SHOWN HEREIN ARE INTERPOLATED FROM AVAILABLE BORING RECORDS.
- SOIL PROFILE BOUNDARIES DO NOT NECESSARILY INDICATE ABRUPT CHANGE IN SOIL TEXTURES.

PLATE 10A

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-7767

CONSTRUCTION AND DEMOLITION LANDFILL FACILITY
ALEXANDER COUNTY NORTH CAROLINA

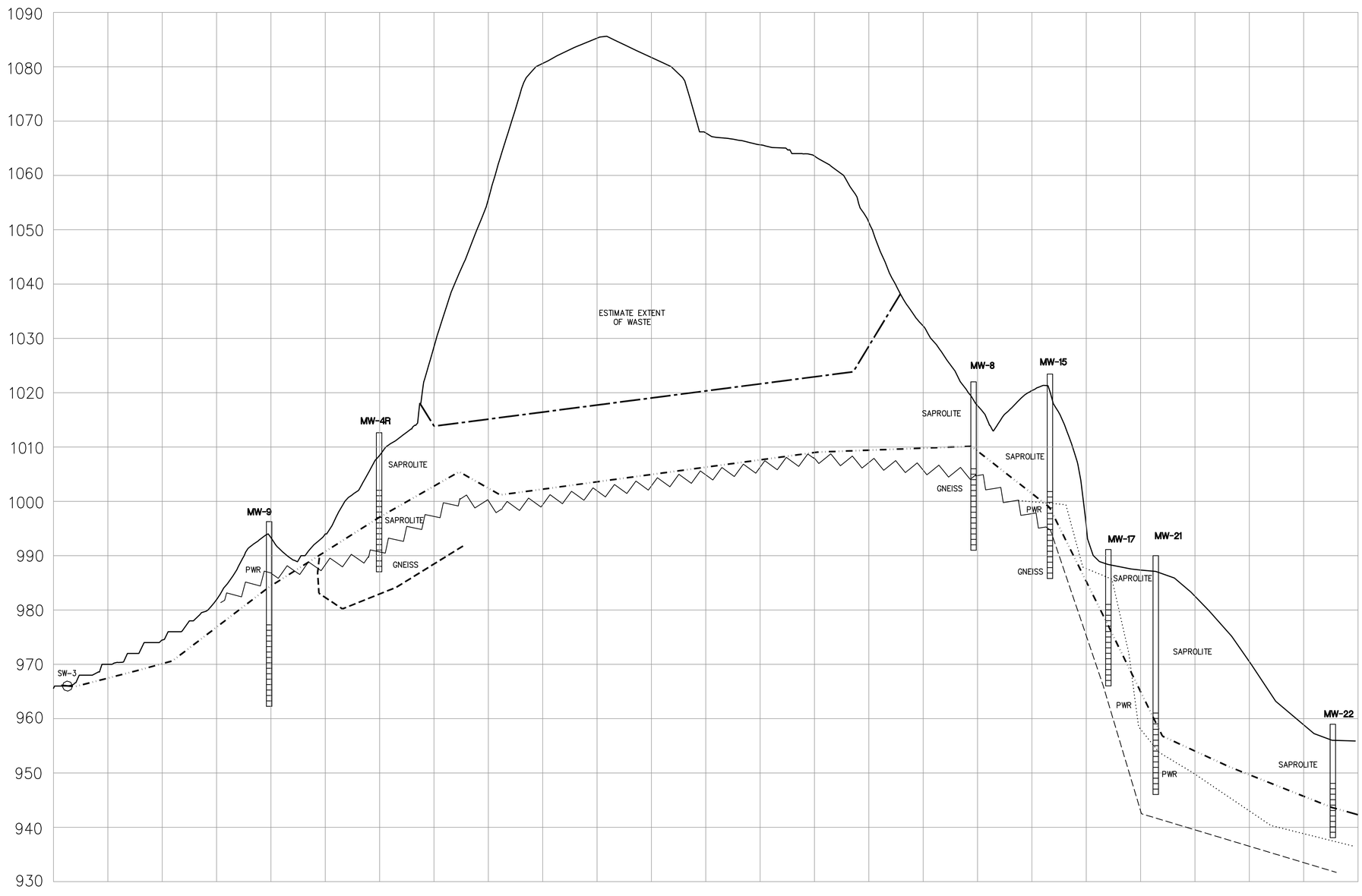
DATE	BY	REV.	DESCRIPTION

CROSS SECTION

SCALE:	1" = 100'
DATE:	04/09/08
DRWN. BY:	M. GERMAN
CHKD. BY:	E. CALDWELL
PROJECT NUMBER	G07060.0
DRAWING NO.	PLATE 10A
SHEET NO.	1 OF 1

NOTE:
- NUMBERS SHOWN IN THIS PLATE ARE IN UNITS OF FEET UNLESS INDICATED OTHERWISE.
- SOIL PROFILES SHOWN HEREIN ARE INTERPOLATED FROM AVAILABLE BORING RECORDS.
- SOIL PROFILE BOUNDARIES DO NOT NECESSARILY INDICATE ABRUPT CHANGE IN SOIL TEXTURES.

GROUNDSURFACE
AVERAGE GROUNDWATER
TOP OF COMPETENT ROCK
ESTIMATED TOP OF COMPETENT ROCK
ESTIMATED STRATIGRAPHIC CONTENT
ESTIMATED BASE OF MSW
ESTIMATED EXTENT OF 2L IMPACT



MW-9
MONITORING WELL
SCREENED SECTION

SECTION B-B'

APPROX. SCALE HORIZ. 1" = 100'
VERT. 1" = 10'

PLATE 10B

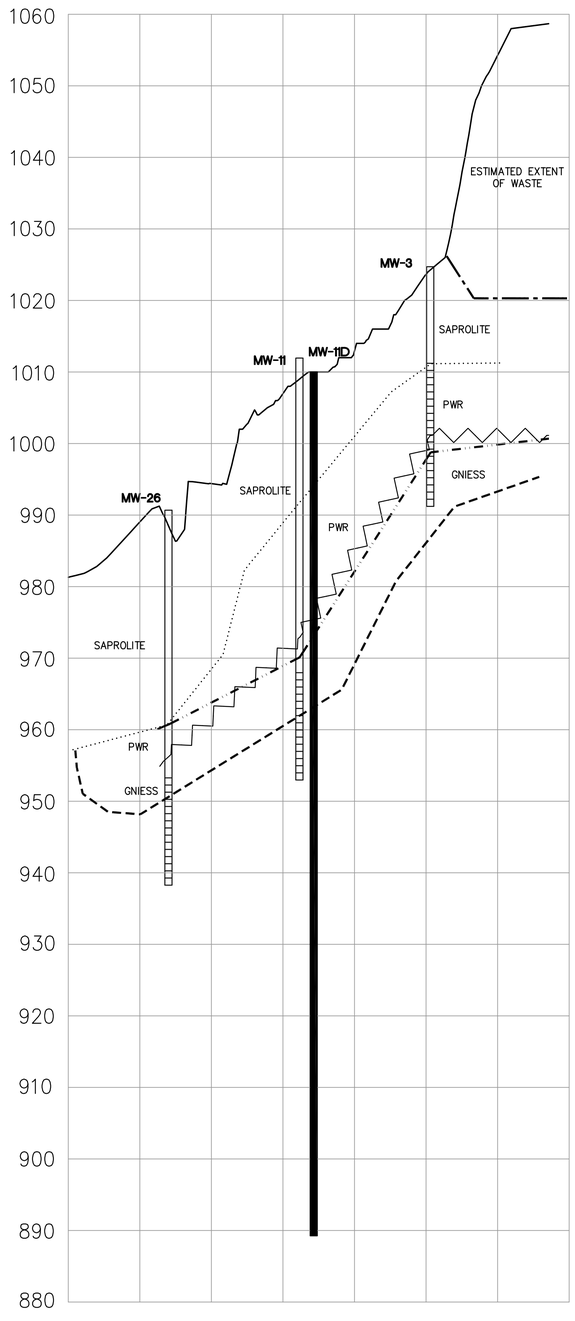
Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 348 BOONE, N.C. 28607 (828) 262-1767

CONSTRUCTION AND DEMOLITION LANDFILL FACILITY
ALEXANDER COUNTY NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

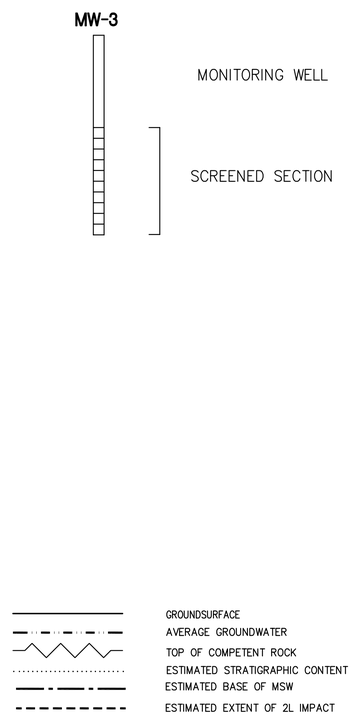
CROSS SECTION

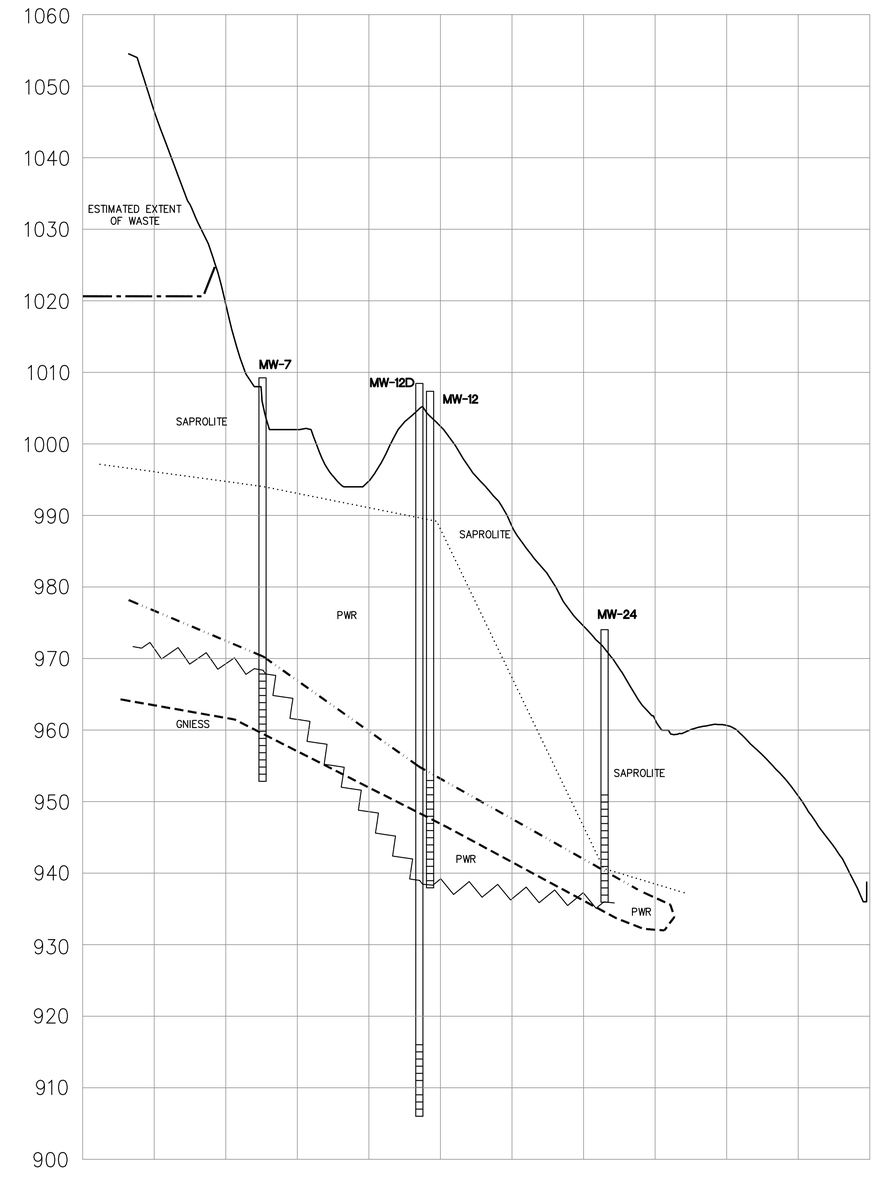
SCALE:	AS SHOWN
DATE:	04/09/08
DRWN. BY:	M. GERMAN
CHKD. BY:	E. CALDWELL
PROJECT NUMBER	G07060.0
DRAWING NO.	PLATE 10B
SHEET NO.	1 OF 1



SECTION C-C'

APPROX. SCALE HORIZ. 1" = 100'
VERT. 1" = 10'





SECTION D-D'

APPROX. SCALE HORIZ. 1" = 100'
VERT. 1" = 10'

NOTE:
- NUMBERS SHOWN IN THIS PLATE ARE IN UNITS OF FEET UNLESS INDICATED OTHERWISE.
- SOIL PROFILES SHOWN HEREIN ARE INTERPOLATED FROM AVAILABLE BORING RECORDS.
- SOIL PROFILE BOUNDARIES DO NOT NECESSARILY INDICATE ABRUPT CHANGE IN SOIL TEXTURES.
- SECTION E-E' SHOWN ON PLATE A.

PLATE 10C

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767

CONSTRUCTION AND DEMOLITION LANDFILL FACILITY
ALEXANDER COUNTY NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

CROSS SECTION

SCALE: 1" = 100'
DATE: 04/09/08
DRWN. BY: M. GERMAN
CHKD. BY: E. CALDWELL
PROJECT NUMBER G07060.0
DRAWING NO. PLATE 10C
SHEET NO. 1 OF 1

APPENDIX A

Depth	Description	Blows (0 10 20 30 40 60 80 100)	Sample
0.0	Very Dense Tan, Brown, and Orange Slightly Micaceous Silty Coarse to Fine SAND (Residual)	8	8+
3.0	Firm Tan, Brown, and Orange Silty Coarse to Fine SAND	29	
7.0	Very Dense Brown, White, and Orange Silty Coarse to Fine SAND	62	
11.5	Partially Weathered Rock When Sampled Becomes Brown, White, and Orange Slightly Micaceous Silty Coarse to Fine SAND		50/5.5"
16.0	Very Dense Brown, Orange, and Red Slightly Micaceous Silty Coarse to Fine SAND		50/5'"
19.0	Partially Weathered Rock When Sampled Becomes Tan and White Coarse to Fine SAND		
29.4	Graphite		
31.0	Biotite Gneiss with Quartz Seams and Amethyst and Pyrite Crystals Moderately Weathered and Fractured		32.5
41.0	Coring Terminated		

7.5
1½

BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

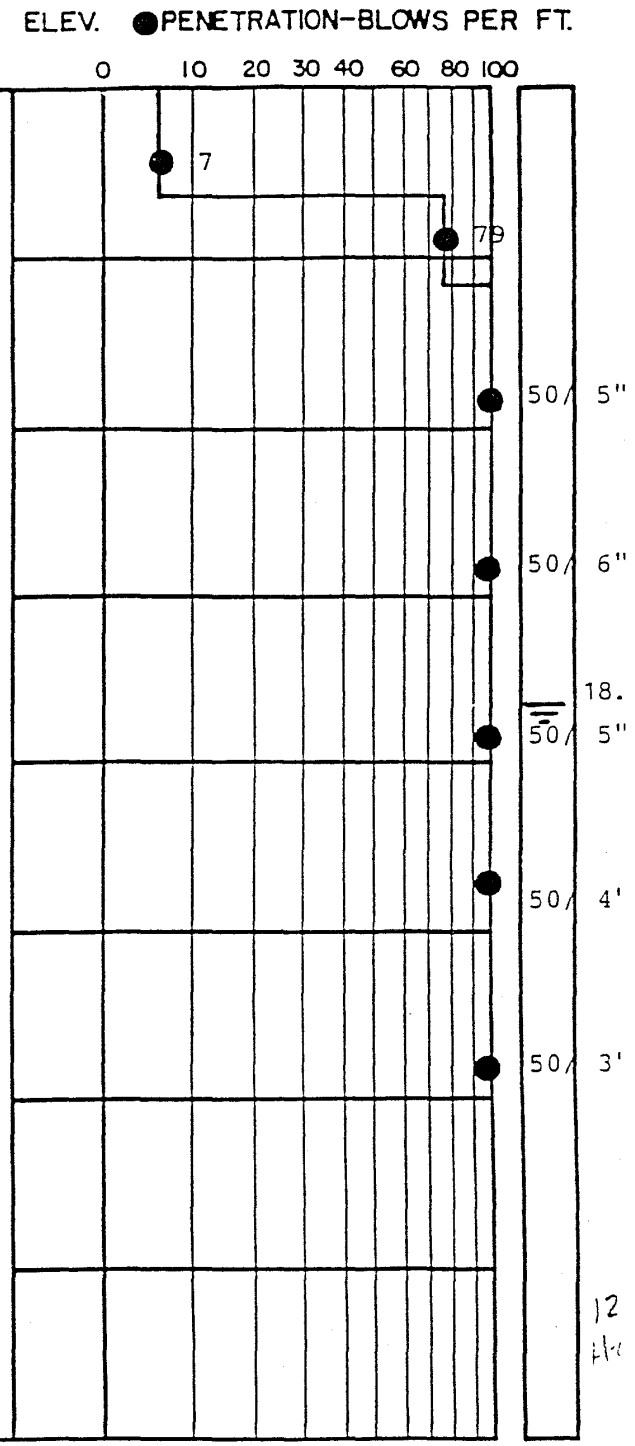
UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. MW-1
DATE DRILLED 9/14/90
JOB NO. 035-90-003

TRIGON

,H	DESCRIPTION
0.0	Firm Brown, Orange, and Tan Slightly Micaceous Medium to Fine Sandy SILT (Residual)
3.0	Very Dense Tan, Black, and Orange Slightly Micaceous Silty Coarse to Fine SAND
7.0	Partially Weathered Rock When Sampled Becomes Brown, Orange, and White Micaceous Silty Coarse to Fine SAND
31.0	Boring Terminated



BORING AND SAMPLING MEETS ASTM D-1586
ORE DRILLING MEETS ASTM D-2113

ENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

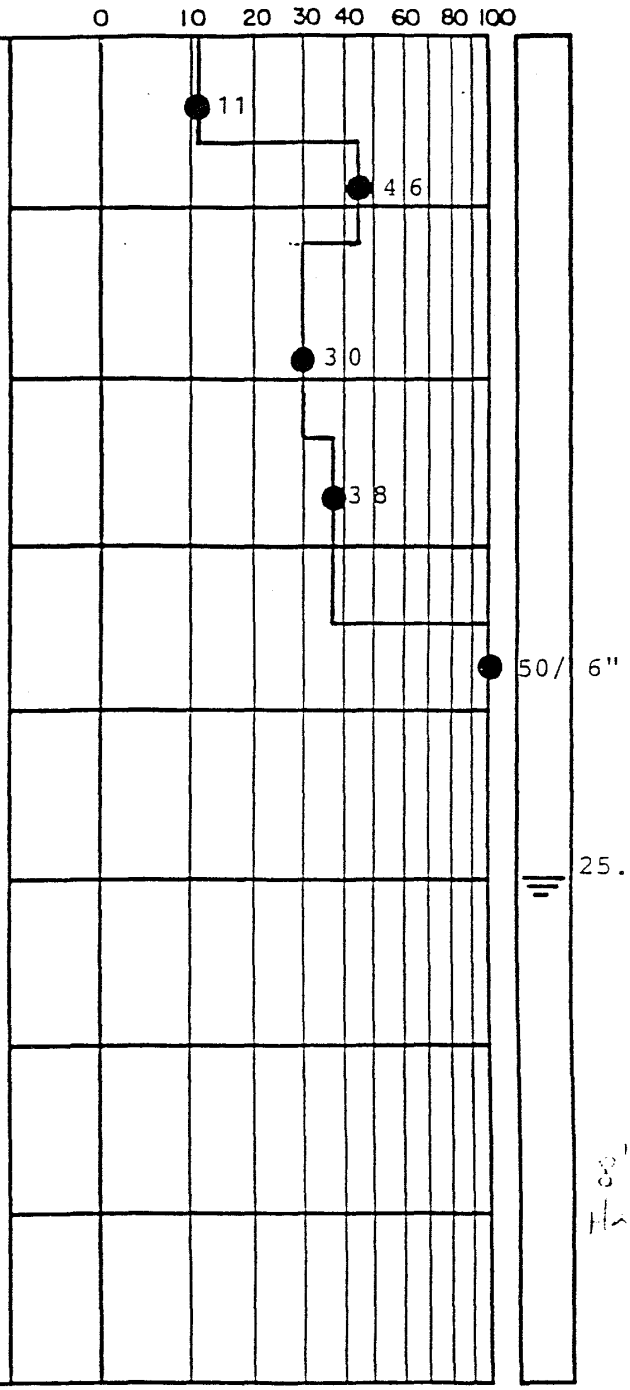
UNDISTURBED SAMPLE
50 % ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. MW-2
DATE DRILLED 9/6/90
JOB NO. 035-90-003

TRIGON

ΓH	DESCRIPTION
0.0	Stiff Orange-Brown Sandy Slightly Clayey SILT (Residual)
3.0	Dense Orange, Yellow, Tan Slightly Micaceous Fine Sandy SILT
7.0	Very Stiff Green, Yellow, Tan Slightly Micaceous Fine Sandy SILT
12.0	Dense White, Tan, Grey Micaceous Silty SAND with Rock Fragments
17.5	Partially Weathered Rock When Sampled Becomes Grey, Tan Slightly Micaceous Fine Sandy SILT
23.1	Biotite Gneiss with Pyrite Crystals and Prominent Water Bearing Quartz Seam at about 28 Feet Slightly Weathered
36.7	Coring Terminated



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

ETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER
LING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50 % ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

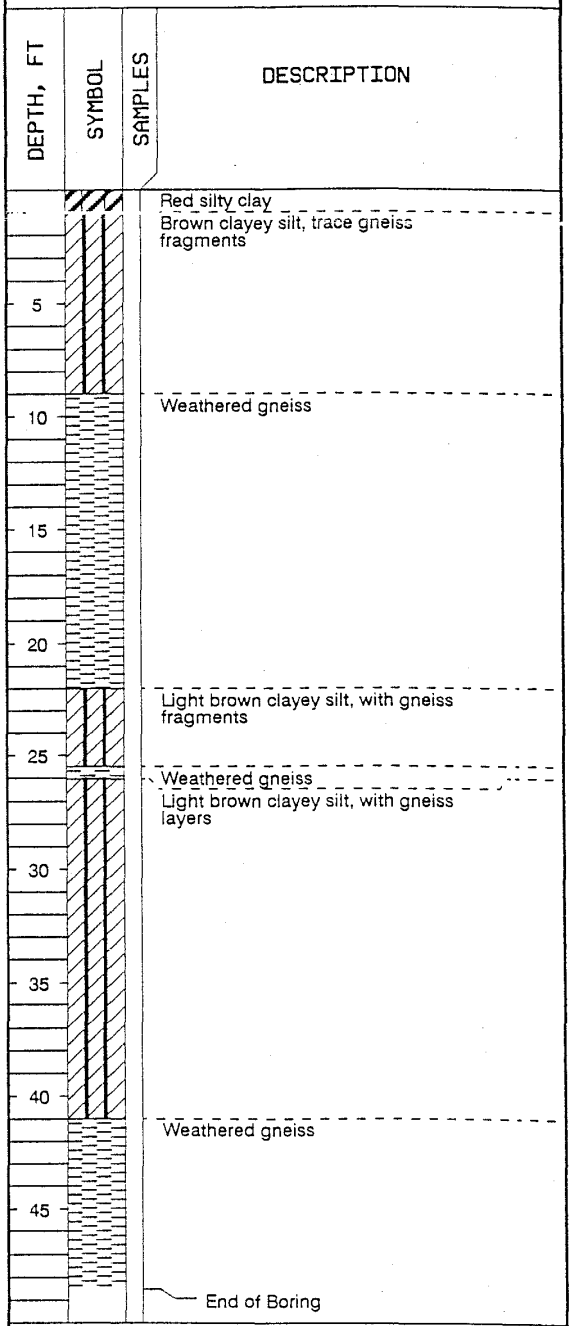
TEST BORING RECORD

BORING NO. MW-3
DATE DRILLED 9/19/90
JOB NO. 035-90-003

TRIGON

MONITORING WELL 1A

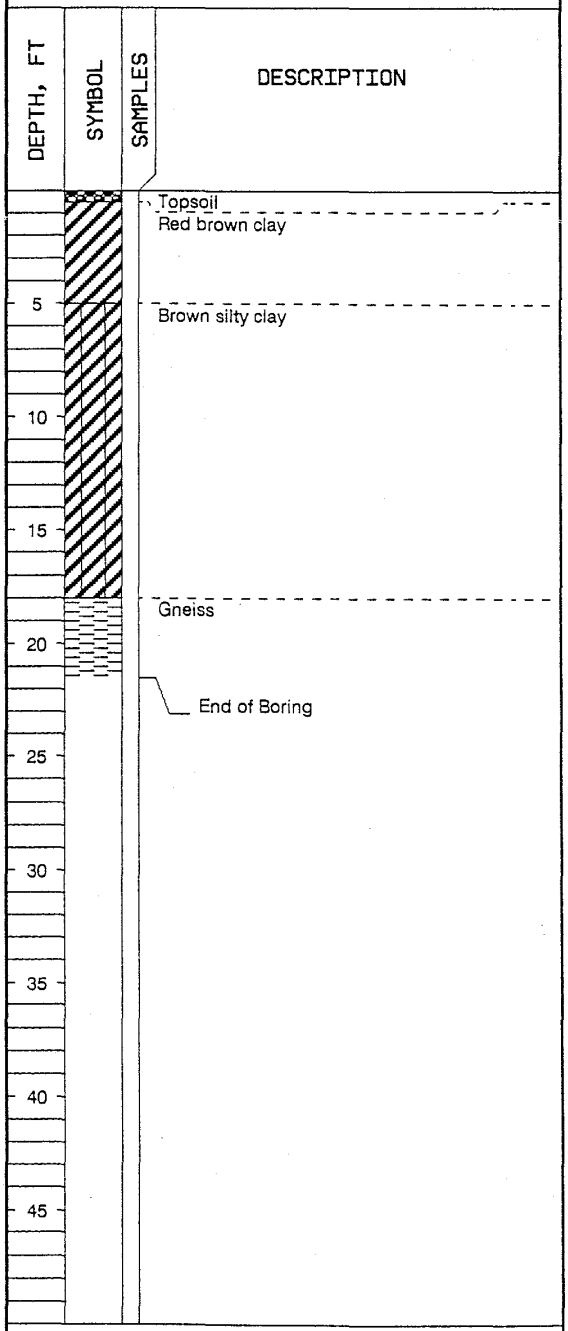
PROJECT: Alexander County Landfill
Taylorsville, North Carolina
LOCATION: see Landfill Plans



COMPLETION DEPTH: 48.5 ft DATE: 9-30-94
DEPTH TO WATER: 39.3 ft while drilling

MONITORING WELL 4R

PROJECT: Alexander County Landfill
Taylorsville, North Carolina
LOCATION: see Landfill Plans

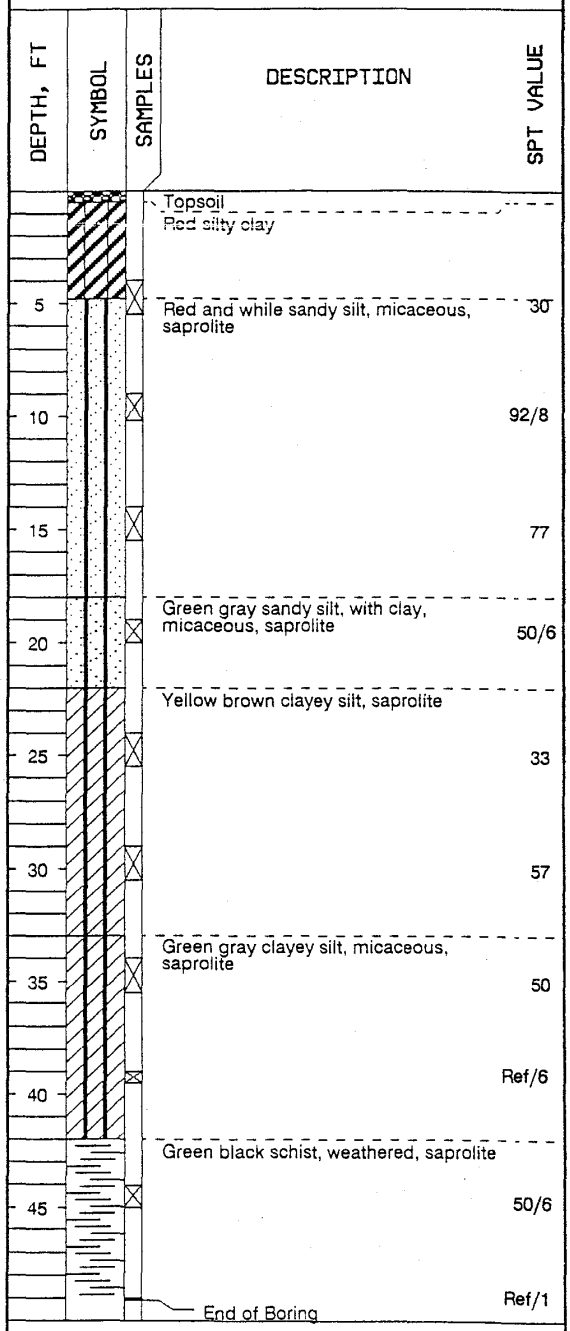


COMPLETION DEPTH: 21.5 ft DATE: 9-30-94
DEPTH TO WATER: 12 ft after drilling

GAI CONSULTANTS

MONITORING WELL 5

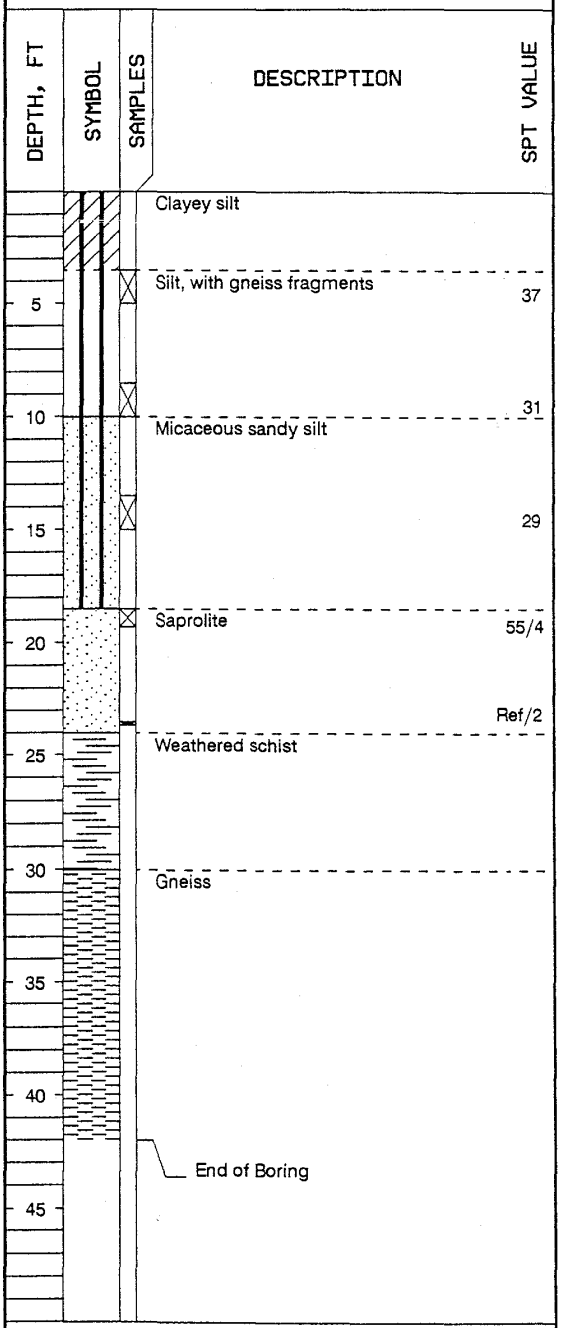
PROJECT: Alexander County Landfill
Taylorsville, North Carolina
LOCATION: see Landfill Plans



COMPLETION DEPTH: 49.1 ft DATE: 9-16-94
DEPTH TO WATER: 41.3 ft after drilling, 37.1 ft after 12 hrs

MONITORING WELL 6

PROJECT: Alexander County Landfill
Taylorsville, North Carolina
LOCATION: see Landfill Plans

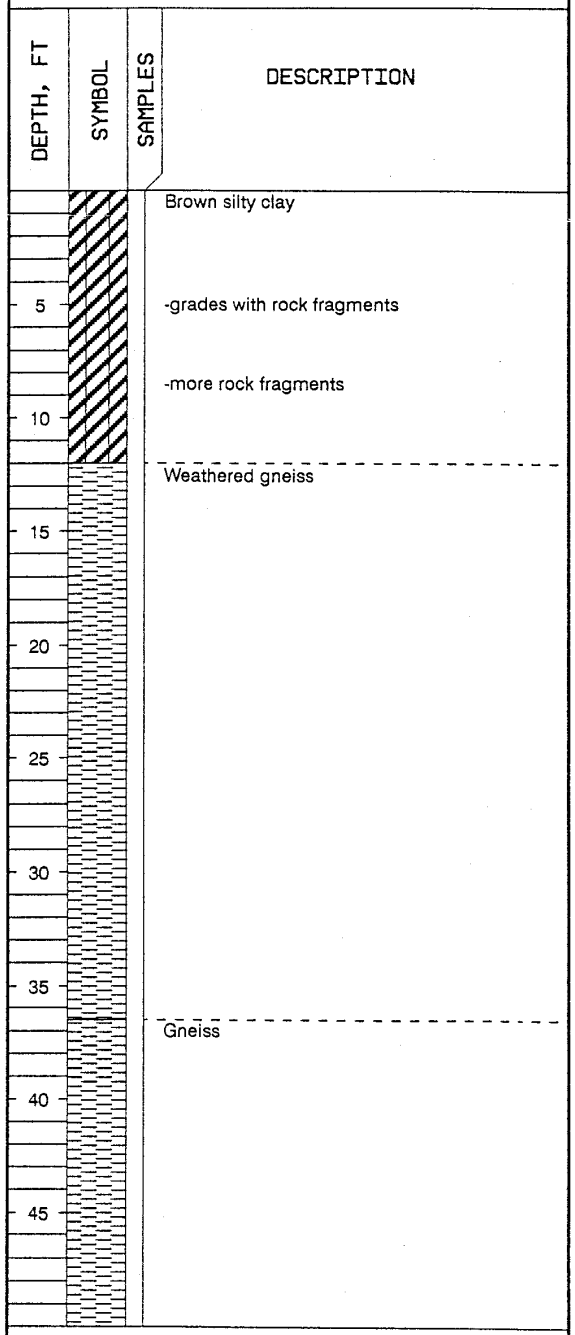


COMPLETION DEPTH: 42.0 ft DATE: 9-29-94
DEPTH TO WATER: 30 ft after drilling

GAI CONSULTANTS

MONITORING WELL 7

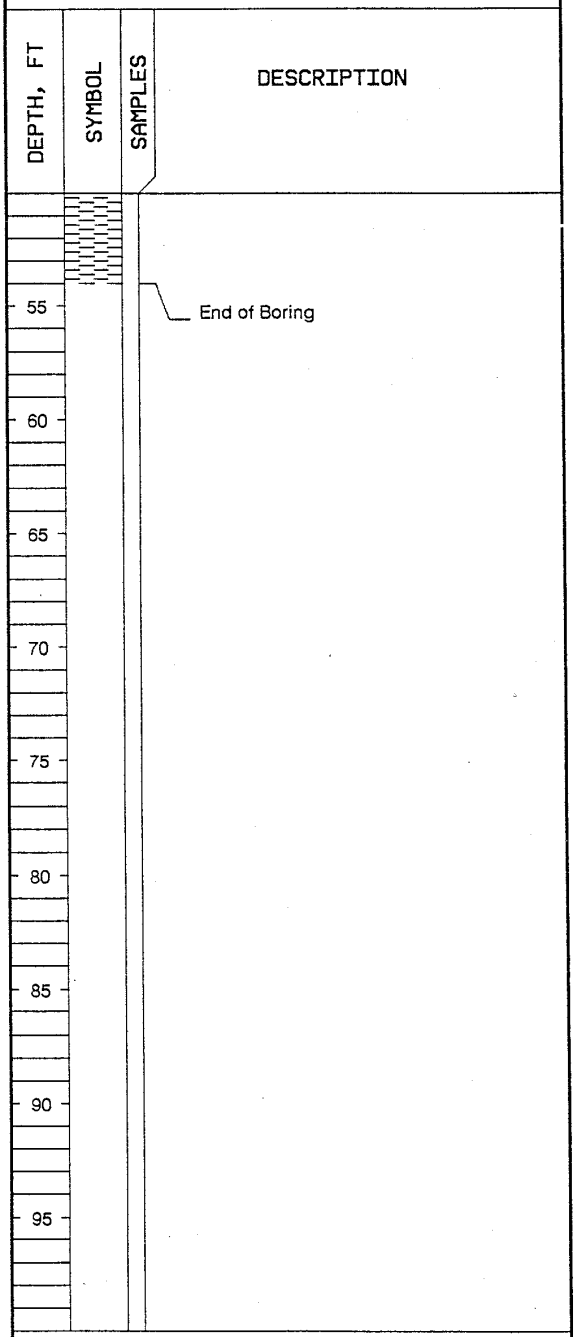
PROJECT: Alexander County Landfill
Taylorsville, North Carolina
LOCATION: see Landfill Plans



COMPLETION DEPTH: 54.0 ft DATE: 9-29-94
DEPTH TO WATER: 48 ft after 24 hrs

MONITORING WELL 7 (cont)

PROJECT: Alexander County Landfill
Taylorsville, North Carolina
LOCATION: see Landfill Plans

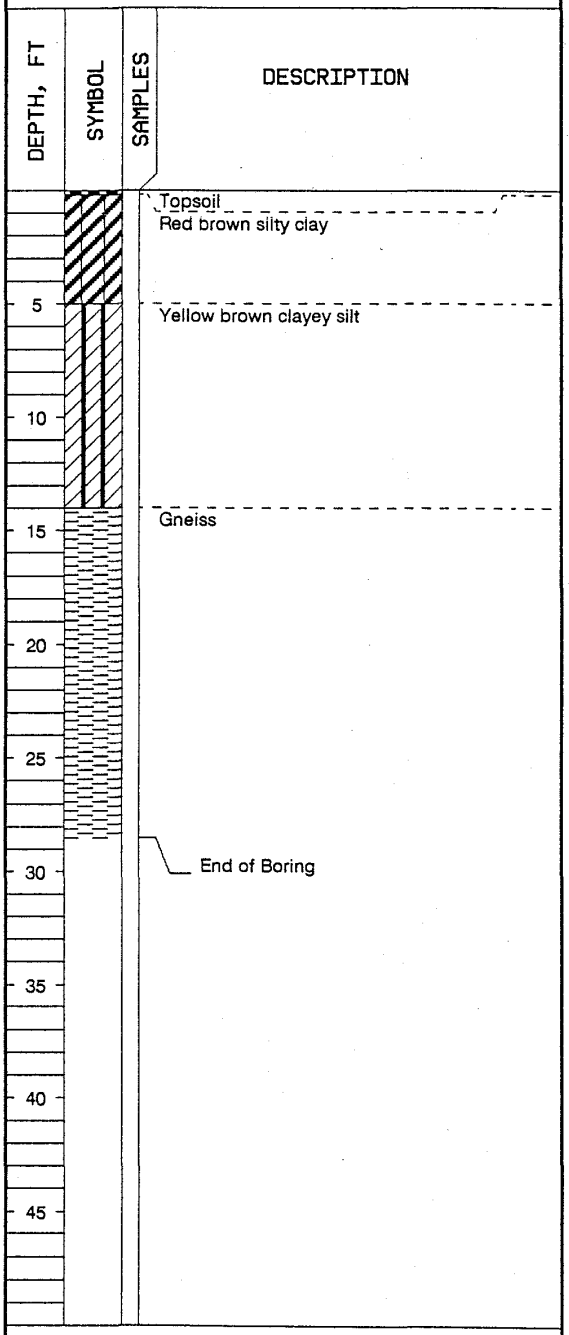


COMPLETION DEPTH: 54.0 ft DATE: 9-29-94
DEPTH TO WATER: 48 ft after 24 hrs

GAI CONSULTANTS

MONITORING WELL 8

PROJECT: Alexander County Landfill
Taylorsville, North Carolina
LOCATION: see Landfill Plans



COMPLETION DEPTH: 28.5 ft DATE: 9-29-94
DEPTH TO WATER: 12 ft after drilling

GAI CONSULTANTS

LOG OF BORING: MW-9

Alexander County Closed Landfill **Project No. G99006.0**

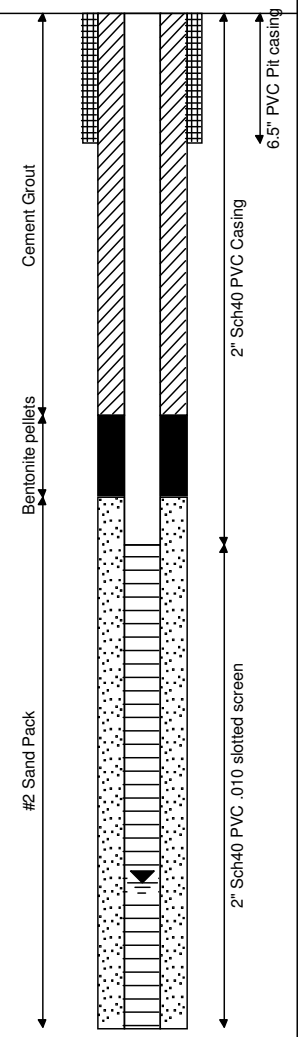
Drilling contractor: Graham & Currie
Drill rig & method: 6" O.D tricomb air rotary
Logged by: Jonathan Pfohl

Date started: 10/24/2000
Date ended: 10/24/2000
Completion depth: 31.50 ft
Stickup height: 3.00 ft

Surface elevation: 993.00 ft (MSL)
Top of pipe elevation: 996.00 ft (MSL)
Depth to water (TOB): -99999.00 ft
Depth to water (24hrs): 27.00 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
5				- 4 ft. placed 6.5 " I.D PVC pit casing to stabilize the boring due to soft fill material conditions.
10				- 7ft. Bluish gray weathered rock that becomes increasingly hard w/ depth.
15				
20				
25				
30				
				Boring terminated at 31.5 feet
35				
40				

Well Diagram



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LOG OF BORING: MW-10

Alexander County Closed Landfill **Project No. G99006.0**

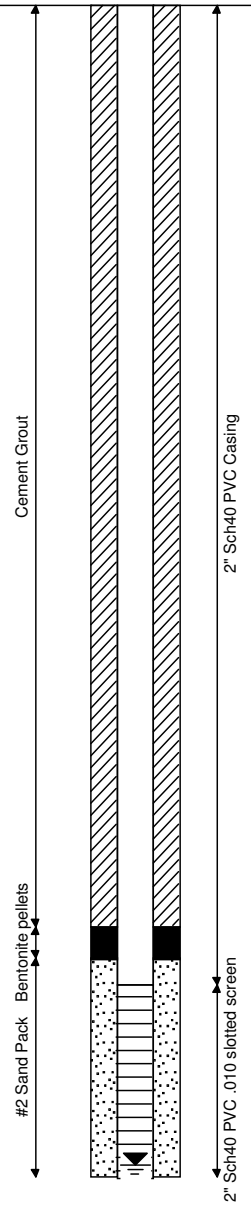
Drilling contractor: Graham & Currie
Drill rig & method: 6.5" O.D DTH
Logged by: Jonathan Pfohl

Date started:
Date ended:
Completion depth: 91.00 ft
Stickup height: 3.00 ft

Surface elevation: 1037.00 ft (MSL)
Top of pipe elevation: 1040.00 ft (MSL)
Depth to water (TOB): dry
Depth to water (24hrs): 90.00 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
5				
10				- 0' - 17' SILTY CLAY; Tannish Brown.
15				
20				
25				- 17' - 30' SILTY CLAY; brown, micaceous.
30				- 30' - 32' WEATHERED ROCK; Grayish blue.
35				
40				- 36' - 41' ROCK; Hard, bluish gray.
45				
50				- 41' - 61' ROCK; Bluish gray w/ fractures.
55				- Obvious rock fracture @ 55'.
60				
65				
70				
75				- 61' - 86' ROCK; Gray Competent hard rock.
80				
85				
90				- 86' - 91' ROCK; Bluish gray, competent w/ a few fractures.
95				Boring terminated at 91.0 feet
100				

Well Diagram



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LOG OF BORING: MW-11

Alexander County Closed Landfill **Project No. G99006.0**

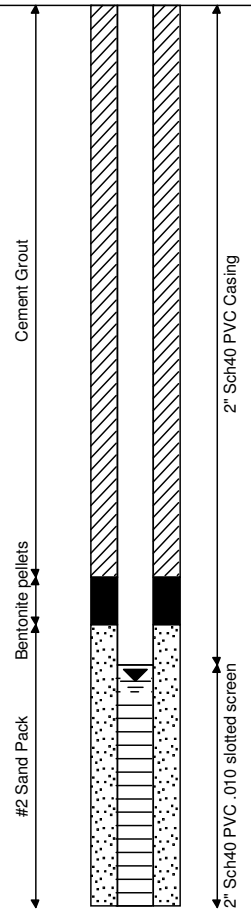
Drilling contractor: Graham & Currie
Drill rig & method: 6.5" O.D DTH
Logged by: Jonathan Pfohl

Date started: 10/24/2000
Date ended: 10/24/2000
Completion depth: 56.00 ft
Stickup height: 3.00 ft

Surface elevation: 1008.00 ft (MSL)
Top of pipe elevation: 1011.00 ft (MSL)
Depth to water (TOB): 42.00 ft
Depth to water (24hrs): 42.00 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				- 0' - 2' SANDY CLAY; Tannish Brown.
				- 2' - 4' CLAY; Oange, micaceous.
5				
10				
				- 4' - 17' SANDY SILT; Tannish brown.
15				
20				
25				
30				- 17' - 36' PARTIALLY WEATHERED ROCK; Bluish gray.
35				
40				
				- 36' - 56' ROCK; Bluish gray, competent.
45				- Tricomb refusal @ 46' convert to DTH.
50				
55				
				Boring terminated at 56.0 feet
60				
65				
70				
75				
80				

Well Diagram



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LOG OF BORING: MW-11D

Alexander County **Project No. G03003.0**

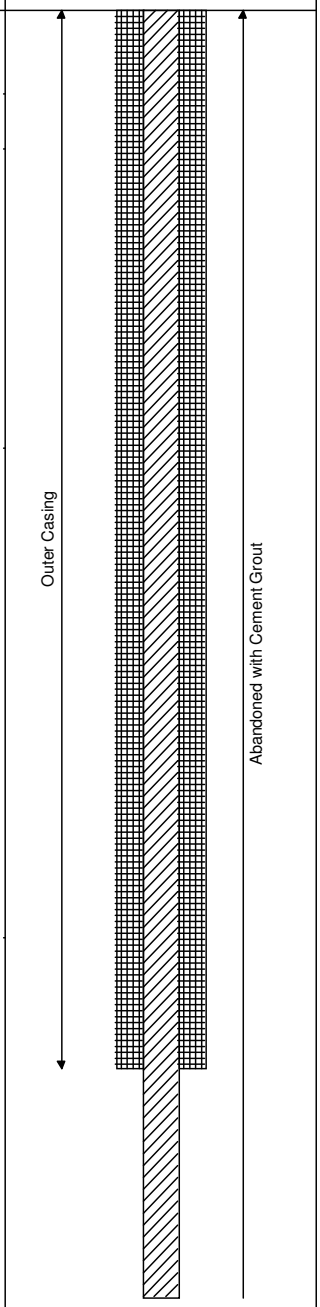
Drilling contractor: Accurate Drilling - Titan Atlantic
Drill rig & method: 6" DTH, 3 7/8 HQ Core
Logged by: J. Pfohl / E. Caldwell

Date started: 5/27/2003
Date ended: 5/28/2003
Completion depth: 120.75 ft
Stickup height:

Surface elevation:
Top of pipe elevation:
Depth to water (TOB):
Depth to water (24hrs): DRY

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Soil description from adjacent MW-11
				Sandy Clay, tannish brown
				Clay, orange, micaceous
5				Sandy Silt, tannish brown
10				
15				
				Partialy Weathered Rock - bluish gray
20				
25				
30				
35				
				Rock - buish gray
40				Run 1: (REC) 1.6'/5.0' = 32%, (RQD) 0.0/5.0 = 0%, Sillmanite Gneiss, fine grain, very fractured (41.1'-46.1')
45				Run 2: (REC) 0.9'/1.9' = 47%, (RQD) 0.0/1.9' = 0%, As above very fractured (46.1'-48.0')
				Run 3: (REC) 3.5'/5.0' = 70%, (RQD) 0.0/5.0 = 0%, As above very fractured (48.0'-53.0')
50				

Well Diagram



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LOG OF BORING: MW-11D

Alexander County **Project No. G03003.0**

Drilling contractor: Accurate Drilling - Titan Atlantic
Drill rig & method: 6" DTH, 3 7/8 HQ Core
Logged by: J. Pfohl / E. Caldwell

Date started: 5/27/2003
Date ended: 5/28/2003
Completion depth: 120.75 ft
Stickup height:

Surface elevation:
Top of pipe elevation:
Depth to water (TOB):
Depth to water (24hrs): DRY

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks	Well Diagram
55				Run 4: (REC) 5.0'/5.0' = 100%, (RQD) 5.0'/5.0' = 100%, Sillmanite Gneiss, heterogenous, minor quartz filled fractures, minor pyrite (53.0'-58.0')	Abandoned with Cement Grout
60				Run 5: (REC) 4.0/4.0 = 100%, (RQD) 4.0/4.0 = 100% As above with garnets (58.0'-62.0')	
65				Run 6: (REC) 5.0/5.0 = 100%, (RQD) 5.0/5.0 = 100% As above (62.0'-67.0')	
70				Run 7: (REC) 5.0/5.0 = 100%, (RQD) 5.0/5.0 = 100% As above (67.0'-72.0')	
75				Run 8: (REC) 3.75/3.75 = 100%, (RQD) 3.75/3.75 = 100% As above (72.0'-75.75')	
80				Run 9: (REC) 5.0/5.0 = 100%, (RQD) 5.0/5.0 = 100% As above, with interbedded mica schist (75.75'-80.75')	
85				Run 10: (REC) 5.2/5.2 = 100%, (RQD) 5.2/5.2 = 100% As above (80.75'-85.95')	
90				Run 11: (REC) 5.21/5.21 = 100%, (RQD) 5.21/5.21 = 100% As above (85.95'-91.16')	
95				Run 12: (REC) 4.59/4.59 = 100%, (RQD) 4.59/4.59 = 100% As above (91.16'-95.75')	
100				Run 13: (REC) 5.0/5.0 = 100%, (RQD) 5.0/5.0 = 100% As above (95.75'-100.75')	

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LOG OF BORING: MW-11D

Alexander County **Project No. G03003.0**

Drilling contractor: Accurate Drilling - Titan Atlantic
Drill rig & method: 6" DTH, 3 7/8 HQ Core
Logged by: J. Pfohl / E. Caldwell

Date started: 5/27/2003
Date ended: 5/28/2003
Completion depth: 120.75 ft
Stickup height:

Surface elevation:
Top of pipe elevation:
Depth to water (TOB):
Depth to water (24hrs): DRY

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks	Well Diagram
				Run 14: (REC) 5.0/5.0 = 100%, (RQD) 5.0/5.0 = 100% As above (100.75'-105.75')	Abandoned with Cement Grout
105				Run 15: (REC) 5.0/5.0 = 100%, (RQD) 5.0/5.0 = 100% As above (105.75'-110.75')	
110				Run 16: (REC) 5.0/5.0 = 100%, (RQD) 5.0/5.0 = 100% As above (110.75'-115.75')	
				Fracture, minor, pyrite, appears to be dry	
115				Run 17: (REC) 5.0/5.0 = 100%, (RQD) 5.0/5.0 = 100% As above (115.75'-120.75')	
120				Boring terminated at 120.8 feet	
125					
130					
135					
140					
145					
150					

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LOG OF BORING: MW-12

Alexander County Closed Landfill **Project No. G99006.0**

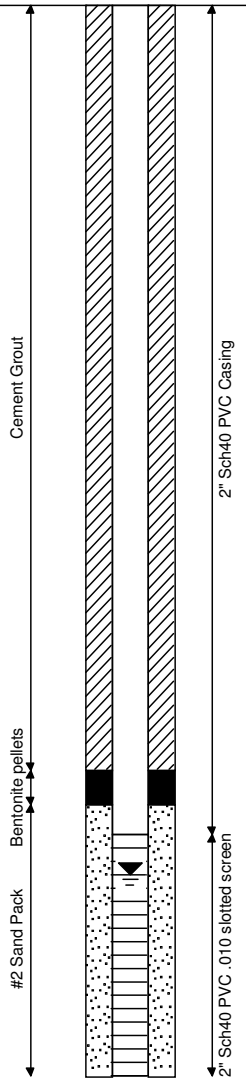
Drilling contractor: Graham & Currie
Drill rig & method: 6.0" O.D Tricomb air rotary
Logged by: Jonathan Pfohl

Date started: 10/23/2000
Date ended: 10/23/2000
Completion depth: 68.00 ft
Stickup height: 3.00 ft

Surface elevation: 1004.00 ft (MSL)
Top of pipe elevation: 1007.00 ft (MSL)
Depth to water (TOB): -99999.00 ft
Depth to water (24hrs): 54.00 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
5, 10, 15				- 0' - 18' SANDY SILT; Tannish Brown.
20, 25, 30, 35				- 18' - 38' PARTIALLY WEATHERED ROCK; Brownish Gray, micaceous.
40, 45, 50, 55				- 38' - 58' SILT; Grayish brown, harder w/ depth, micaceous.
60				- 58' - 66' SLIGHTLY WEATHERED ROCK; Bluish gray.
65				- 66' - 68' ROCK; Bluish gray, competent.
70				- Boring caved into 66.5' from 68'.
75, 80				Boring terminated at 68.0 feet

Well Diagram



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LOG OF BORING: MW-12D

Alexander County Landfill **Project No. G03003.0**

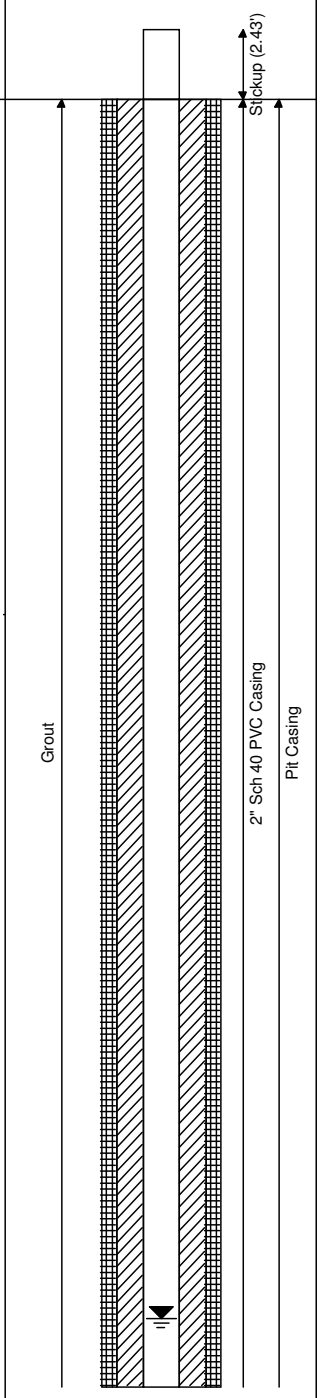
Drilling contractor: Titan Atlantic - sub. Accurate Drilling
Drill rig & method: 3 7/8 Tricomb 3 7/8 HQ Core
Logged by: J. Pfohl

Date started: 6/10/2003
Date ended: 6/10/2003
Completion depth: 102.50 ft
Stickup height: 2.43 ft

Surface elevation: 1006.03 ft (MSL)
Top of pipe elevation: 1008.46 ft (MSL)
Depth to water (TOB): Dry
Depth to water (24hrs): 42.58 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Soil description from adjacent MW-12
				Sandy Silt, tannish brown
5				
10				
15				
				Partially Weathered Rock - brownish gray, micaceous
20				
25				
30				
35				
				Silt, grayish brown, micacous
40				
45				

Well Diagram



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LOG OF BORING: MW-12D

Alexander County Landfill **Project No. G03003.0**

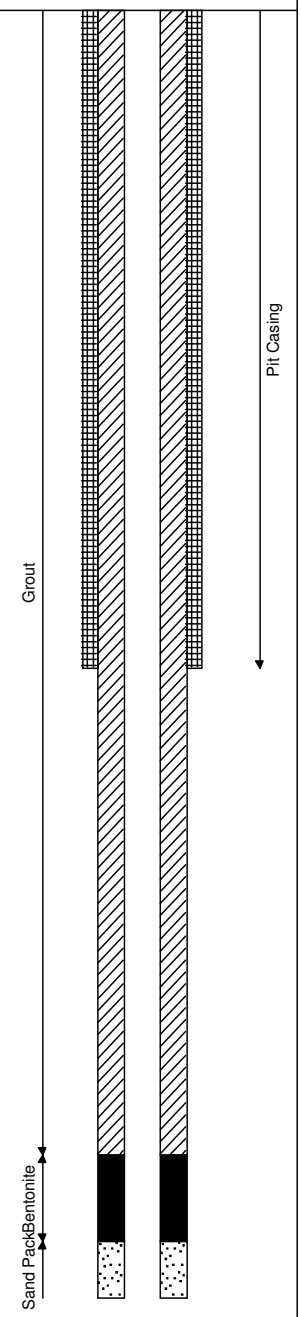
Drilling contractor: Titan Atlantic - sub. Accurate Drilling
Drill rig & method: 3 7/8 Tricomb 3 7/8 HQ Core
Logged by: J. Pfohl

Date started: 6/10/2003
Date ended: 6/10/2003
Completion depth: 102.50 ft
Stickup height: 2.43 ft

Surface elevation: 1006.03 ft (MSL)
Top of pipe elevation: 1008.46 ft (MSL)
Depth to water (TOB): Dry
Depth to water (24hrs): 42.58 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
50				
55				
				Slightly Weathered Rock - bluish gray
60				
65				Rock - bluish gray
70				Run 1: (REC) 5.4'/5.4' = 100%, (RQD) 5.0'/5.4' = 92.6%, Gneiss, micaceous (70.2'-75.6')
75				Run 2: (REC) 5.0'/5.0' = 100%, (RQD) 4.5'/5.0' = 90.0%, Gneiss quartzitic, interbedded schist (75.6'-80.6')
				fracture
80				Run 3: (REC) 5.0'/5.0' = 100%, (RQD) 3.4'/5.0' = 68.0%, As above (80.6'-85.6')
85				Run 4: (REC) 4.26'/4.26' = 100', (RQD) 3.4'/4.26' = 79.8%, As above (85.6'-89.86')
90				Run 5: (REC) 5.0/5.0' = 100%, (RQD) 5.0'/5.0' = 100% As above (89.86'-94.86')

Well Diagram



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LOG OF BORING: MW-12D

Alexander County Landfill **Project No. G03003.0**

Drilling contractor: Titan Atlantic - sub. Accurate Drilling
Drill rig & method: 3 7/8 Tricomb 3 7/8 HQ Core
Logged by: J. Pfohl

Date started: 6/10/2003
Date ended: 6/10/2003
Completion depth: 102.50 ft
Stickup height: 2.43 ft

Surface elevation: 1006.03 ft (MSL)
Top of pipe elevation: 1008.46 ft (MSL)
Depth to water (TOB): Dry
Depth to water (24hrs): 42.58 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks	Well Diagram
95				Run 6: (REC) 5.0'/5.0' = 100%, (RQD) 5.0'/5.0' = 100% As above (94.86'-99.86')	Sand Pack; 2" Sch 40 PVC 0.010 Slotted Pipe
100				Run 7: (REC) 2.6'/2.6' = 100%, (RQD) 2.6'/2.6' = 100% As above (99.86'-102.46')	
				Boring terminated at 102.5 feet	
105					
110					
115					
120					
125					
130					
135					

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LOG OF BORING: MW-13

Alexander County Closed Landfill **Project No. G99006.0**

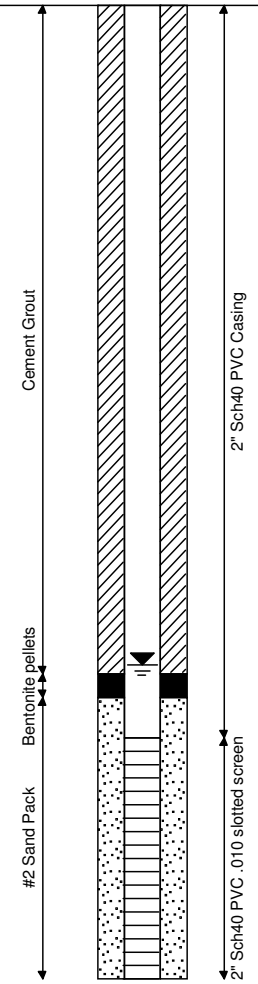
Drilling contractor: Graham & Currie
Drill rig & method: 6.5" O.D DTH
Logged by: Jonathan Pfohl

Date started: 10/25/2000
Date ended: 10/25/2000
Completion depth: 60.50 ft
Stickup height: 3.00 ft

Surface elevation: 1001.00 ft (MSL)
Top of pipe elevation: 1004.00 ft (MSL)
Depth to water (TOB): 57.00 ft
Depth to water (24hrs): 41.00 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				- 0' - 2' CLAYEY SILT; Tannish Brown.
5				
10				
15				
20				
25				
30				- 18' - 38' PARTIALLY WEATHERED ROCK; Brownish Gray, micaceous.
				- 30' - 37' ROCK; Bluish gray, hard.
35				
40				- 40' - 42' ROCK; Gray, competent.
45				- 44.5'- Tricomb rollerbit refusal converted to 6.5" O.D DTH.
50				- 42' - 61.5' ROCK; Gray competent Gneiss.
55				
60				Boring terminated at 60.5 feet
65				
70				
75				
80				

Well Diagram



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LOG OF BORING: MW-14

Alexander County Closed Landfill **Project No. G99006.0**

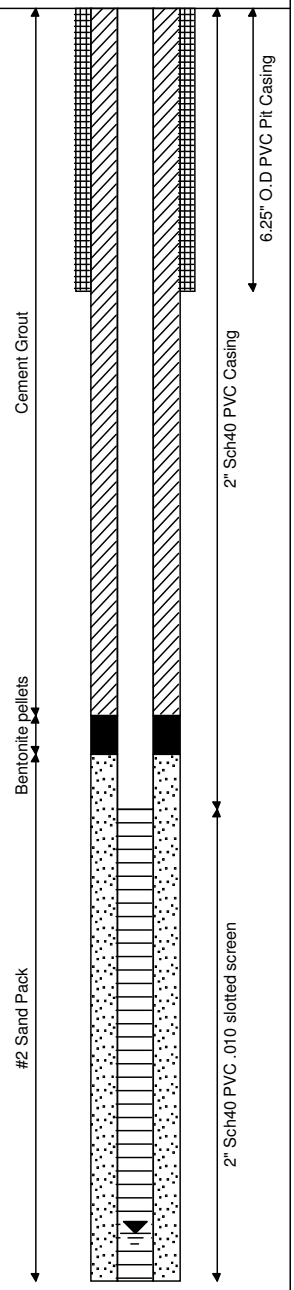
Drilling contractor: Graham & Currie
Drill rig & method: 6.0" O.D Tricomb air rotary
Logged by: Jonathan Pfohl

Date started: 10/26/2000
Date ended: 10/26/2000
Completion depth: 40.50 ft
Stickup height: 3.00 ft

Surface elevation: 994.00 ft (MSL)
Top of pipe elevation: 997.00 ft (MSL)
Depth to water (TOB): -99999.00 ft
Depth to water (24hrs): 39.00 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
5				- 0' - 10' CLAYEY SILT; Fill material placed for drill rig stabilization.
10				- 10' - 12.5' SANDY CLAY; Brown, hard pan.
15				
20				
25				- 12.5' - 33.5' SANDY SILT; Brown, soft, micas.
30				
35				- 33.5' - 37.5' WEATHERED ROCK; Bluish brown.
40				- 37.5' - 40.5' ROCK; Bluish Gray competent hard Gneiss.
				Boring terminated at 40.5 feet

Well Diagram



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LOG OF BORING: MW-15

Alexander County Closed Landfill **Project No. G99006.0**

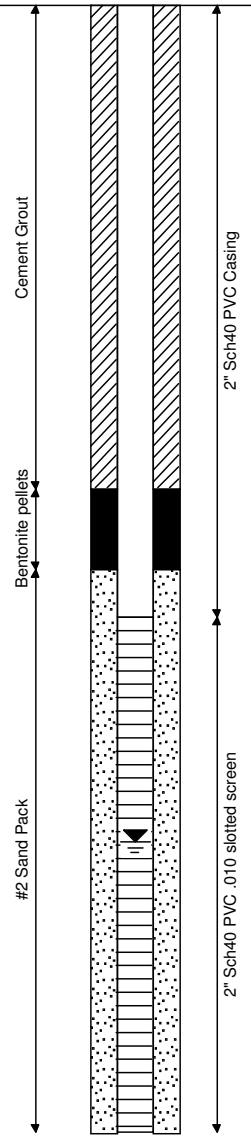
Drilling contractor: Graham & Currie
Drill rig & method: 6.0" O.D Tricomb air rotary
Logged by: Jonathan Pfohl

Date started: 10/25/2000
Date ended: 10/25/2000
Completion depth: 35.00 ft
Stickup height: 3.00 ft

Surface elevation: 1020.00 ft (MSL)
Top of pipe elevation: 1023.00 ft (MSL)
Depth to water (TOB): -99999.00 ft
Depth to water (24hrs): 26.00 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
5				
10				- 0' - 16' CLAYEY SILT; Tannish brown, soft.
15				
20				
25				- 21' - 26' WEATHERED ROCK; Grayish black, slightly harder w/ depth. - 25' WEATHERED ROCK turned from black to brown.
30				- 26' - 35' ROCK; Grayish blue, hard competent Gneiss.
35				Boring terminated at 35.0 feet
40				

Well Diagram



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PO Box 97, Garner, North Carolina 27529 (919) 772-5393 *PO Box 349, Boone, North Carolina 28607 (828) 262-1767*

LOG OF BORING: MW-16

Alexander County Closed MSWLF **Project No. G07060.0**

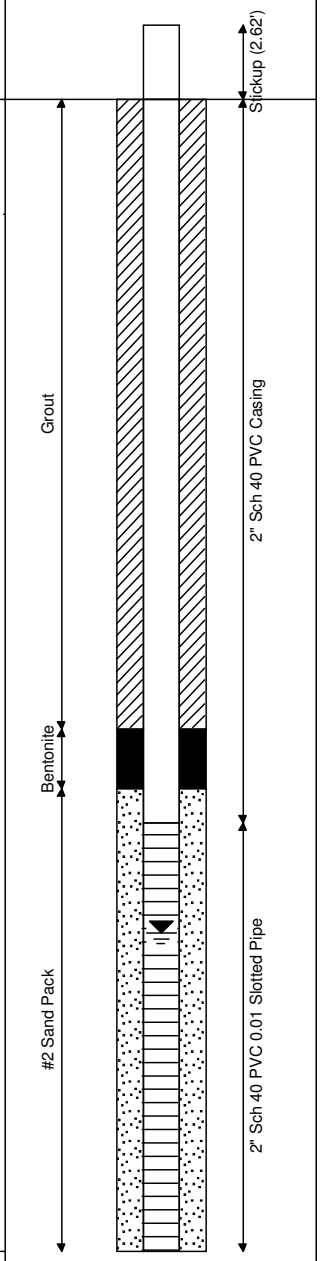
Drilling contractor: Derry's Well Drilling
Drill rig & method: 7.75" HSA
Logged by: J. Pfohl

Date started: 12/20/2007
Date ended: 12/20/2007
Completion depth: 40.25 ft
Stickup height: 2.62 ft

Surface elevation: 1034.94 ft (MSL)
Top of pipe elevation: 1037.56 ft (MSL)
Depth to water (TOB): 30.52 ft
Depth to water (24hrs): 29.13 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
	23			Silty Clay; red, slightly micaceous, cohesive, moist
	25			Sandy Silt; light brown, micaceous, dry
5				
10	46			Sandy Silt; same as above, more dense
15				
20	62			Silty Sand/Saprolite; medium brown, few quartz and gneiss fragments, micaceous, dry
25				
30	80			Silty Sand/Saprolite; same as above, moist
35				Bulk Sample - Silty Sand, Gravel = 6.71%, Sand = 66.26%, Silt & Clay = 27.03%, LL = 28%, PL = 26%, PI = 2%
40				Boring terminated at 40.3 feet
45				

Well Diagram



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LOG OF BORING: MW-17

Alexander County Landfill **Project No. G03003.0**

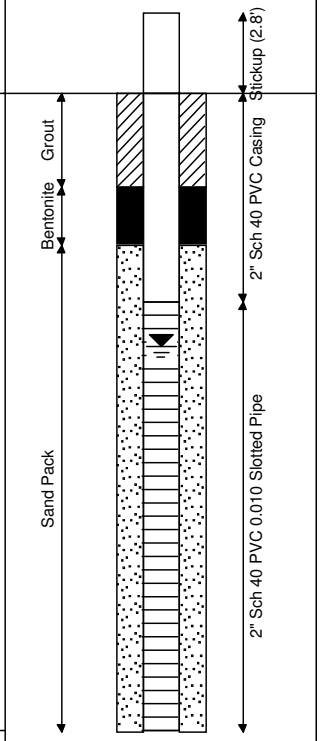
Drilling contractor: Titan Atlantic-sub. Accurate Drilling
Drill rig & method: 6" HSA OD
Logged by: J. Pfohl

Date started: 6/10/2003
Date ended: 6/10/2003
Completion depth: 22.30 ft
Stickup height: 2.80 ft

Surface elevation: 988.36 ft (MSL)
Top of pipe elevation: 991.16 ft (MSL)
Depth to water (TOB): 9.30 ft
Depth to water (24hrs): 8.86 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
	3			Top Soil, moist
	50/3"			Partially Weathered Rock - dry
5				
	50/5"			Partially Weathered Rock - interbeded soft layers
10				
15				
	50/2"			Partially Weathered Rock
20				
				Boring terminated at 22.3 feet
25				
30				
35				
40				
45				

Well Diagram



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LOG OF BORING: MW-18

Alexander County Closed MSWLF **Project No. G07060.0**

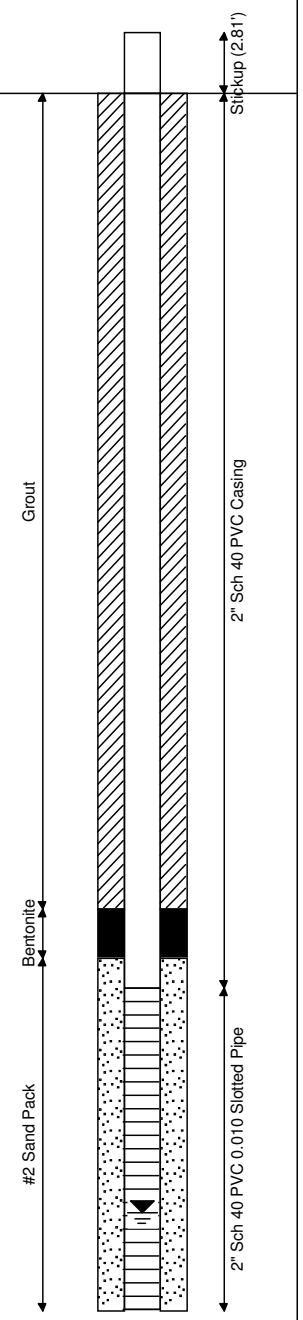
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH, no SPT
Logged by: J. Pfohl

Date started: 12/19/2007
Date ended: 12/19/2007
Completion depth: 56.70 ft
Stickup height: 2.81 ft

Surface elevation: 1081.52 ft (MSL)
Top of pipe elevation: 1084.33 ft (MSL)
Depth to water (TOB): 53.29 ft
Depth to water (24hrs): 52.17 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Silty Clay; red, slightly micaceous, cohesive, moist
5				Silty Sand; yellow red, poorly sorted, slightly micaceous, more dense with depth, dry
10				
15				Silty Sand/Saprolite; yellow red, same as above, more dense
				PWR; brown, interlayered with brown silty sand, trace gneiss fragments, dry
20				Top of Competent Rock = 1061.02 amsl - weathered, brown, dry
25				Gneiss; grey, competent, very hard, dry
30				
35				Clay Silt; brown, soft, dry
40				
45				Gneiss; grey, competent, few fractures
50				Gneiss; soft fracture, water zone
				Gneiss; grey, competent
55				
				Boring terminated at 56.7 feet
60				

Well Diagram



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LOG OF BORING: MW-19

Alexander County Closed MSWLF **Project No. G07060.0**

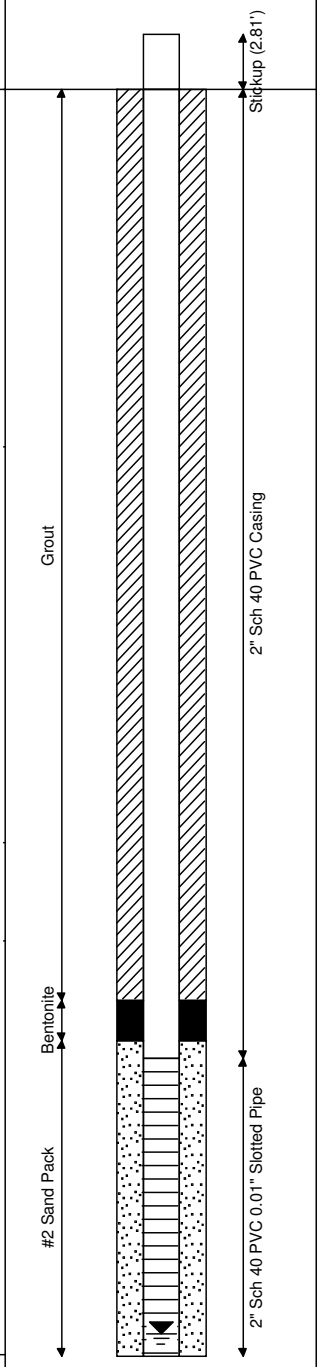
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH
Logged by: J. Pfohl

Date started: 12/20/2007
Date ended: 12/20/2007
Completion depth: 63.92 ft
Stickup height: 2.81 ft

Surface elevation: 1068.67 ft (MSL)
Top of pipe elevation: 1071.48 ft (MSL)
Depth to water (TOB): 63.71 ft
Depth to water (24hrs): 62.80 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Silty Clay; red, cohesive, micaceous, moist, cohesive
5				Clayey Silt; light to medium brown, micaceous, dense, dry
10				
15				
20				Silty Sand/Saprolite; yellow red, poorly sorted, slightly micaceous, more dense with depth, dry
25				
30				
35				
40				PWR; weathered gneiss, brown, few angular grains, dry.
45				Top of Competent Rock = 1025.67 amsl - Gneiss; grey, few fractures, dry
50				
55				7 Day water level
60				
65				Boring terminated at 63.9 feet

Well Diagram



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LOG OF BORING: MW-20

Alexander County Closed MSWLF **Project No. G07060.0**

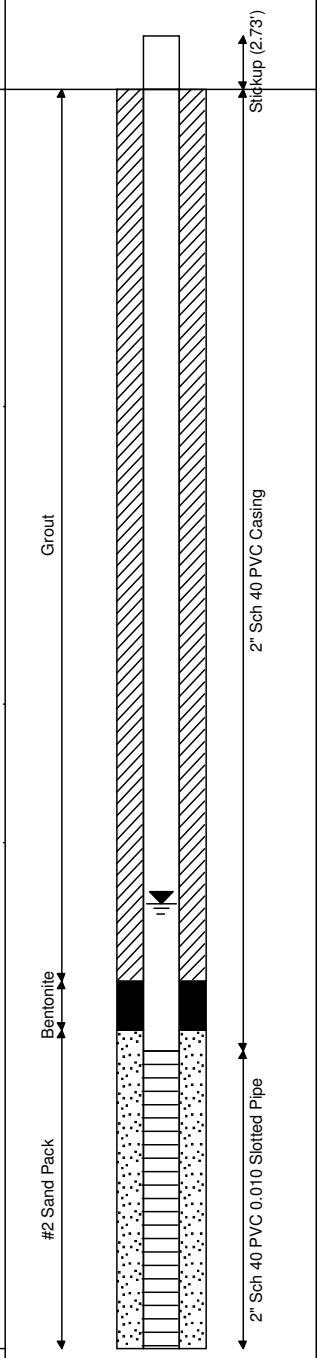
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH
Logged by: J. Pfohl

Date started: 12/20/2007
Date ended: 12/20/2007
Completion depth: 63.55 ft
Stickup height: 2.73 ft

Surface elevation: 1044.19 ft (MSL)
Top of pipe elevation: 1046.92 ft (MSL)
Depth to water (TOB): 42.38 ft
Depth to water (24hrs): 41.08 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Clayey Silt; red, cohesive, moist
				Clayey Silt; light brown, darker and more dense with depth, dry
5				
10				
15				
				Silty Sand/Saprolite; yellow red, fine grained silt interlayered with coarse grained micaceous sand, more dense with depth, dry
20				
25				
30				
				PWR; brown, weathered gneiss, layers of grey gneiss, angular fragments, micaceous, dry
35				
				Top of Competent Rock = 1006.19 amsl
40				Gneiss; grey, few fractures, dry
45				
50				
55				
60				
65				Boring terminated at 63.5 feet

Well Diagram



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LOG OF BORING: MW-21

Alexander County Closed MSWLF **Project No. G07060.0**

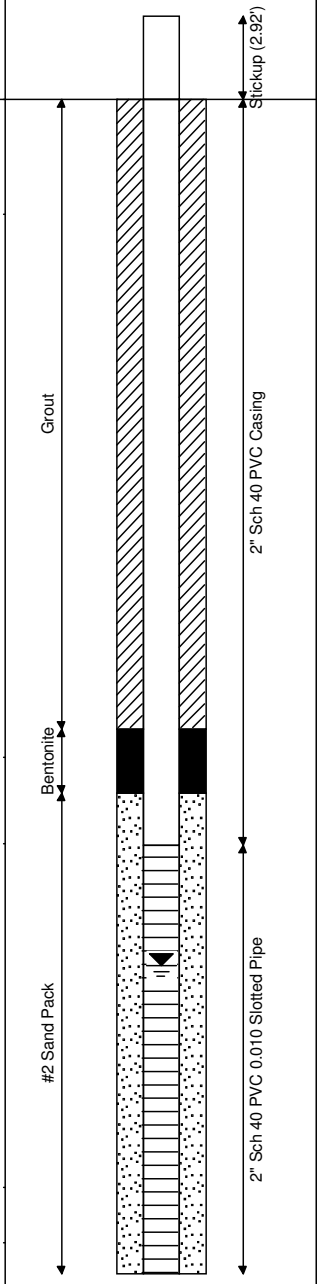
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH
Logged by: J. Pfohl

Date started: 12/19/2007
Date ended: 12/19/2007
Completion depth: 41.05 ft
Stickup height: 2.92 ft

Surface elevation: 987.08 ft (MSL)
Top of pipe elevation: 990.00 ft (MSL)
Depth to water (TOB): 32.27 ft
Depth to water (24hrs): 30.28 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Clayey Silt; red brown, cohesive, few root fragments, moist
5				Silty Sand; medium brown, poorly sorted, slightly micaceous, dry
10				Silty Sand; light brown, poorly sorted, few angluar rock fragments, more dense with depth, dry
15				
20				
				PWR; brown weatherd gneiss, dense, dry
25				Silty Sand; yellow orange, medium to fine grained sand, few PWR zones, micaceous, more dense with depth, dry
30				Silty Sand/Saprolite; yellow orange, darker with depth, micaceous, dry
35				
				PWR layer
40				Silty Sand/Saprolite
				Boring terminated at 41.0 feet
45				

Well Diagram



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LOG OF BORING: MW-22

Alexander County Closed MSWLF **Project No. G07060.0**

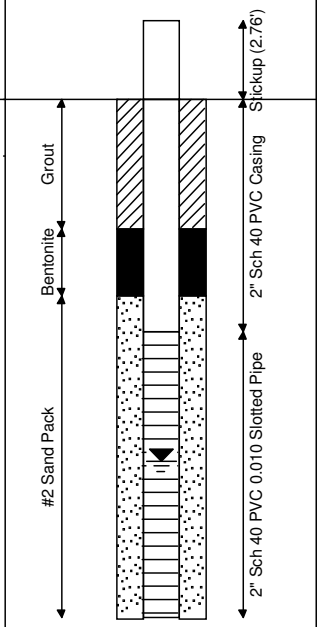
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH
Logged by: J. Pfohl

Date started: 12/19/2007
Date ended: 12/19/2007
Completion depth: 18.12 ft
Stickup height: 2.76 ft

Surface elevation: 956.21 ft (MSL)
Top of pipe elevation: 958.97 ft (MSL)
Depth to water (TOB): 12.76 ft
Depth to water (24hrs): 12.64 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Clayey Silt; red brown, cohesive, moist
				Silty Sand; medium brown, poorly sorted, micaceous, soft, dry
5				
				Silty Sand; dark brown, poorly sorted, dense, micaceous, moist
10				
15				
				Bulk Sample- Silty Sand, Gravel = 14.99%, Sand = 67.92%, Silt & Clay = 17.09%, LL = 28, PL = 26%, PI =2%
20				Boring terminated at 18.1 feet
25				
30				
35				
40				
45				

Well Diagram



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LOG OF BORING: MW-23

Alexander County Closed MSWLF **Project No. G07060.0**

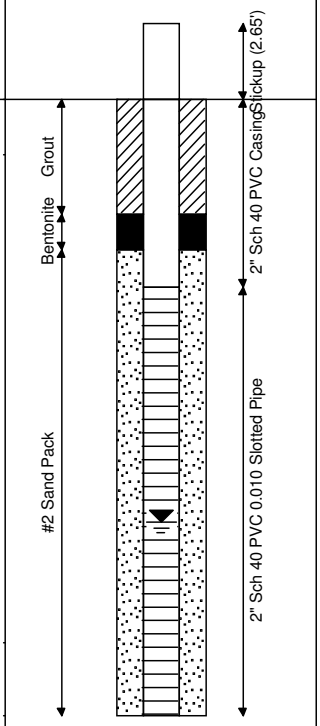
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH
Logged by: J. Pfohl

Date started: 12/19/2007
Date ended: 12/19/2007
Completion depth: 21.54 ft
Stickup height: 2.65 ft

Surface elevation: 947.83 ft (MSL)
Top of pipe elevation: 950.48 ft (MSL)
Depth to water (TOB): 15.71 ft
Depth to water (24hrs): 14.79 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Clayey Silt; red brown, cohesive, micaceous, moist
				Silty Sand/Saprolite; yellow orange, poorly sorted, several angualr gneiss fragments, more dense with depth
5				
10				
15				Silty Sand/Saprolite; dark brown, poorly sorted, several angular gravel sized gneiss fragments, highly micaceous, strong relict structure, moist
20				PWR; dark brown, moist
				Top of Competent Rock = 926.29 amsl - Gneiss, grey, competent
				Boring terminated at 21.5 feet
25				
30				
35				
40				
45				

Well Diagram



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Page 1 of 1

LOG OF BORING: MW-24

Alexander County Closed MSWLF **Project No. G07060.0**

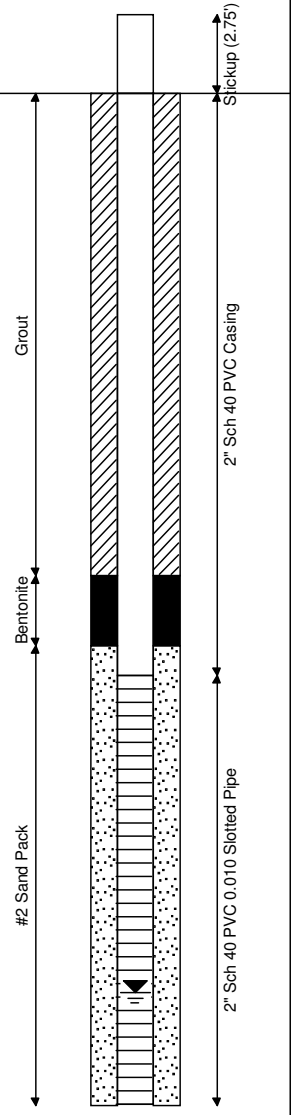
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH, no SPT
Logged by: J. Pfohl

Date started: 12/20/2007
Date ended: 12/20/2007
Completion depth: 35.35 ft
Stickup height: 2.75 ft

Surface elevation: 971.29 ft (MSL)
Top of pipe elevation: 974.04 ft (MSL)
Depth to water (TOB): 32.43 ft
Depth to water (24hrs): 31.43 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Silty Clay; red, cohesive, moist, soft
5				
				Silty Sand; red, fine grained, few cohesive clay nodules, slightly micaceous, dry
10				Sandy Silt; light brown, fine grained, soft, dry
				Silty Sand; brown, well sorted, fine grained, dense, dry, more dense with depth
15				
20				
25				Silty Sand; same as above with more gneiss fragments
30				
				PWR; light brown, schistose, high mica content, dense, dry
35				
				Top of Competent Rock = 935.94 amsl - Gneiss
				Boring terminated at 35.4 feet
40				
45				

Well Diagram



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LOG OF BORING: MW-25

Alexander County Closed MSWLF **Project No. G07060.0**

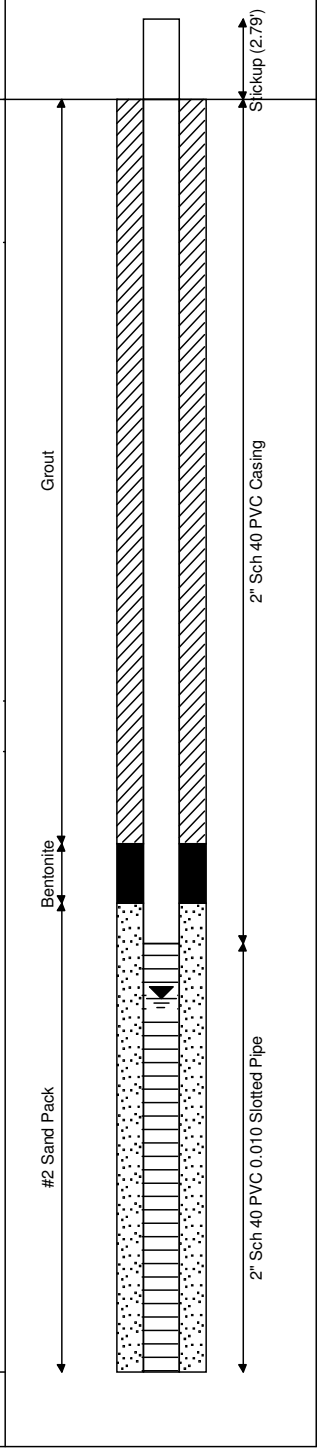
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH, no SPT
Logged by: J. Pfohl

Date started: 12/19/2007
Date ended: 12/19/2007
Completion depth: 44.48 ft
Stickup height: 2.79 ft

Surface elevation: 979.14 ft (MSL)
Top of pipe elevation: 981.93 ft (MSL)
Depth to water (TOB): 31.23 ft
Depth to water (24hrs): 31.39 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Silty Clay; red, cohesive, soft, moist
5				Silty Sand; dark brown, well sorted, fine grained, dry
				Silty Sand; medium brown, well sorted, fine grained, few rock fragments, dry
10				
15				Silty Sand/Saprolite; light brown, dense, large amount of angular gniess fragments relict structure, micaceous, dry
20				
				PWR; light brown schist, very micaceous, dense, dry
				Top of Competent Rock = 956.34 amsl - Gneiss; grey, hard
25				
30				Fracture Observed
35				
40				
45				Boring terminated at 44.5 feet

Well Diagram



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LOG OF BORING: MW-26

Alexander County Closed MSWLF **Project No. G07060.0**

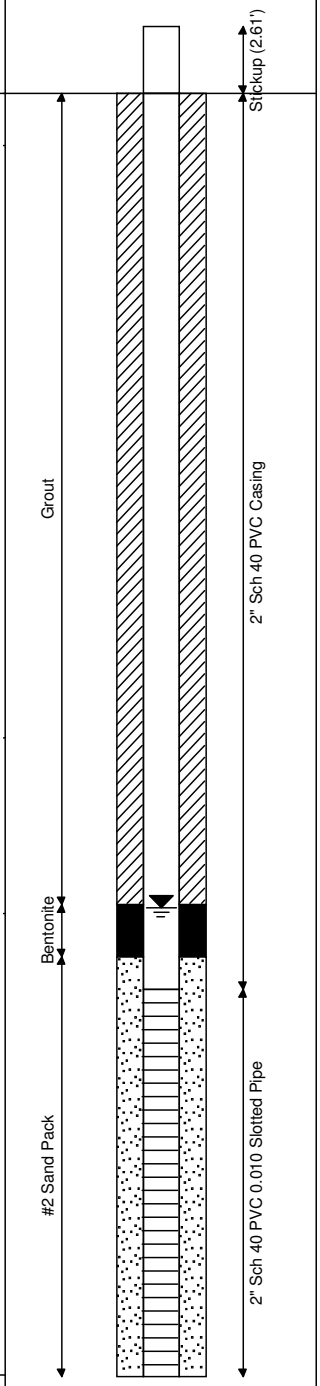
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH
Logged by: J. Pfohl

Date started: 12/19/2007
Date ended: 12/20/2007
Completion depth: 49.80 ft
Stickup height: 2.61 ft

Surface elevation: 988.08 ft (MSL)
Top of pipe elevation: 990.69 ft (MSL)
Depth to water (TOB): 37.24 ft
Depth to water (24hrs): 31.59 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Silty Clay; red, cohesive, moist
				Silty Sand; medium brown, poorly sorted, micaceous, dry
5				
10				Silty Sand/Saprolite; light brown, poorly sorted, predominantly gravel sized fragments, micaceous, dry, more dense with depth
15				
20				
25				PWR; light brown schist, schist and gneiss fragments, micaceous, dry
30				
				Top of Competent Rock = 956.23 amsl - Gniess; grey, hard,
35				
40				
45				Fracture zone (44.80' -46.00' BGS)
50				Boring terminated at 49.8 feet

Well Diagram



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LOG OF BORING: MW-27

Alexander County Closed MSWLF **Project No. G07060.0**

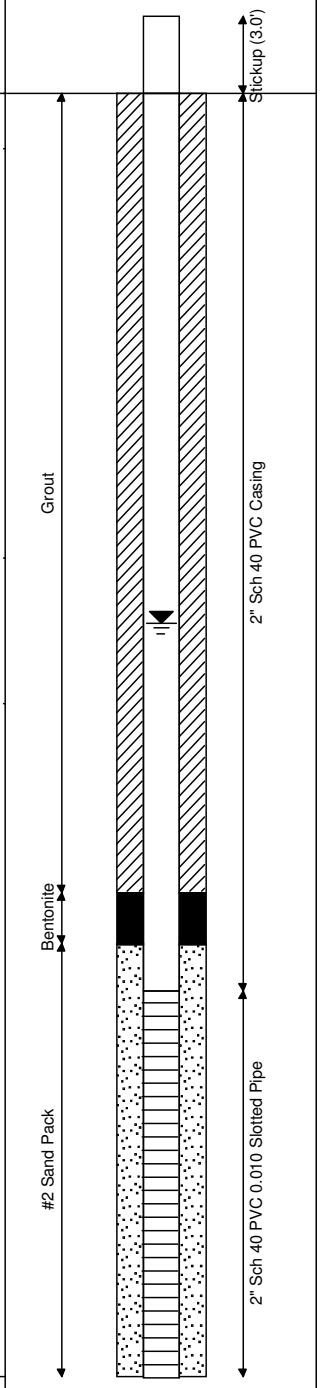
Drilling contractor: Derry's Well Drilling
Drill rig & method: 6" OD DTH
Logged by: J. Pfohl

Date started: 12/20/2007
Date ended: 12/20/2007
Completion depth: 49.82 ft
Stickup height: 3.00 ft

Surface elevation: 989.19 ft (MSL)
Top of pipe elevation: 992.19 ft (MSL)
Depth to water (TOB): 35.50 ft
Depth to water (24hrs): 20.57 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Silty Clay; red, cohesive, moist
				Silty Sand; medium brown, poorly sorted, micaceous, dry
5				
				Silty Sand/Saprolite; light brown, poorly sorted, gravel sized fragments, more dense with depth, micaceous, dry
10				
15				
				PWR; light grey gneiss, dense, schist and gneiss fragments, micaceous, dry
20				
				Top of Competent Rock = 965.49 amsl - Gneiss; grey, hard, few fractures
25				
30				
35				
40				
45				
				Fracture
50				Boring terminated at 49.8 feet

Well Diagram



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NORTH CAROL
DIVISI

H OFFICE USE ONLY
Serial No.
Long. Pc
Basin Code
Header Ent. GW-1 Ent.

WELL CONSTRUCTION RECORD

RILLING CONTRACTOR Trigon Engineering Consultants

DRILLER REGISTRATION NUMBER 813

STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

1 WELL LOCATION: (Show sketch of the location below)

Well No. MW-1

Nearest Town: Millersville

County: Alexander

(Road, Community, or Subdivision and Lot No.)

2. OWNER County of Alexander

ADDRESS 255 Liledoun Road (Street or Route No.)

Taylorsville (City or Town) NC (State) 28681 (Zip Code)

3 DATE DRILLED 9/14/90 USE OF WELL Monitor GW

4. TOTAL DEPTH 40' CUTTINGS COLLECTED ☐ Yes ☒ No

5 DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6 STATIC WATER LEVEL 35.0 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 2.5 FT. ABOVE LAND SURFACE.

7 YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): 40' to 32.5' below surface

9 CHLORINATION: Type N/A Amount

10. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0	25	2"	Sch.40	PVC

11. GROUT:

	Depth From	Depth To	Material	Method
	0	17.5	cement/bent.	poured
	17.5	23.0	Bentonite	

12 SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	25	40	2 in.	0.10 in.	PVC-40
			in.	in.	
			in.	in.	

13. GRAVEL PACK:

	Depth From	Depth To	Size	Material
	23	40	6"	sand

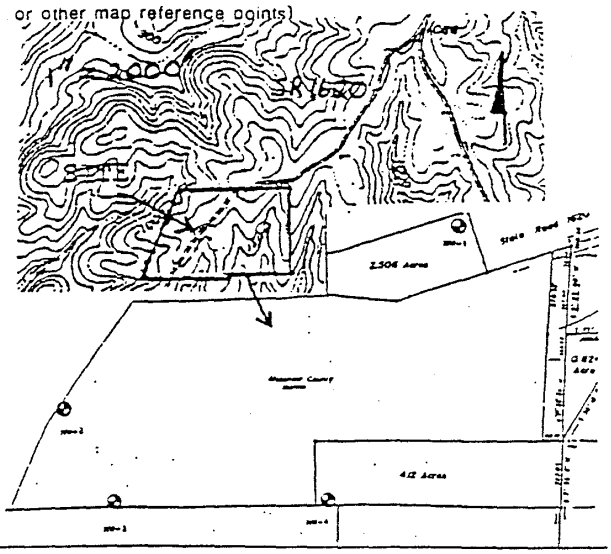
14 REMARKS: Bentonite seal from 17.5' to 23'

Depth From	Depth To	DRILLING LOG Formation Description
0	11.5	Firm to very dense silty coarse to fine SAND
11.5	16	Partially weathered rock sampled as silty coarse to fine SAND
16	19	Very dense silty coarse to fine SAND
19	29.4	Partially weathered rock sampled as coarse to fine SAND
29.4	31	Graphite seam
31	40	Biotite gneiss moderately weathered and fractured with pyrite, amethyst, and quartz crystals

If additional space is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT — DATE 10/17/90

GW-1 REVISED 2/90

Submit original to Division of Environmental Management and copy to well owner.

TRIGON

ENGINEERING CONSULTANTS, INC. Greensboro, N.C.

Job Number: 035-90-003
Project Name: Alexander County Landfill
Location: Alexander County North Carolina

ound Surface Elevation: _____
Well Number: MW-1

Total Depth of Well: 40'
Date Installed: 9/14/90

Granular Backfill Material: Sand
Slot Size: .010

Screen Material: Schedule 40 PVC
Screen Diameter: 2"

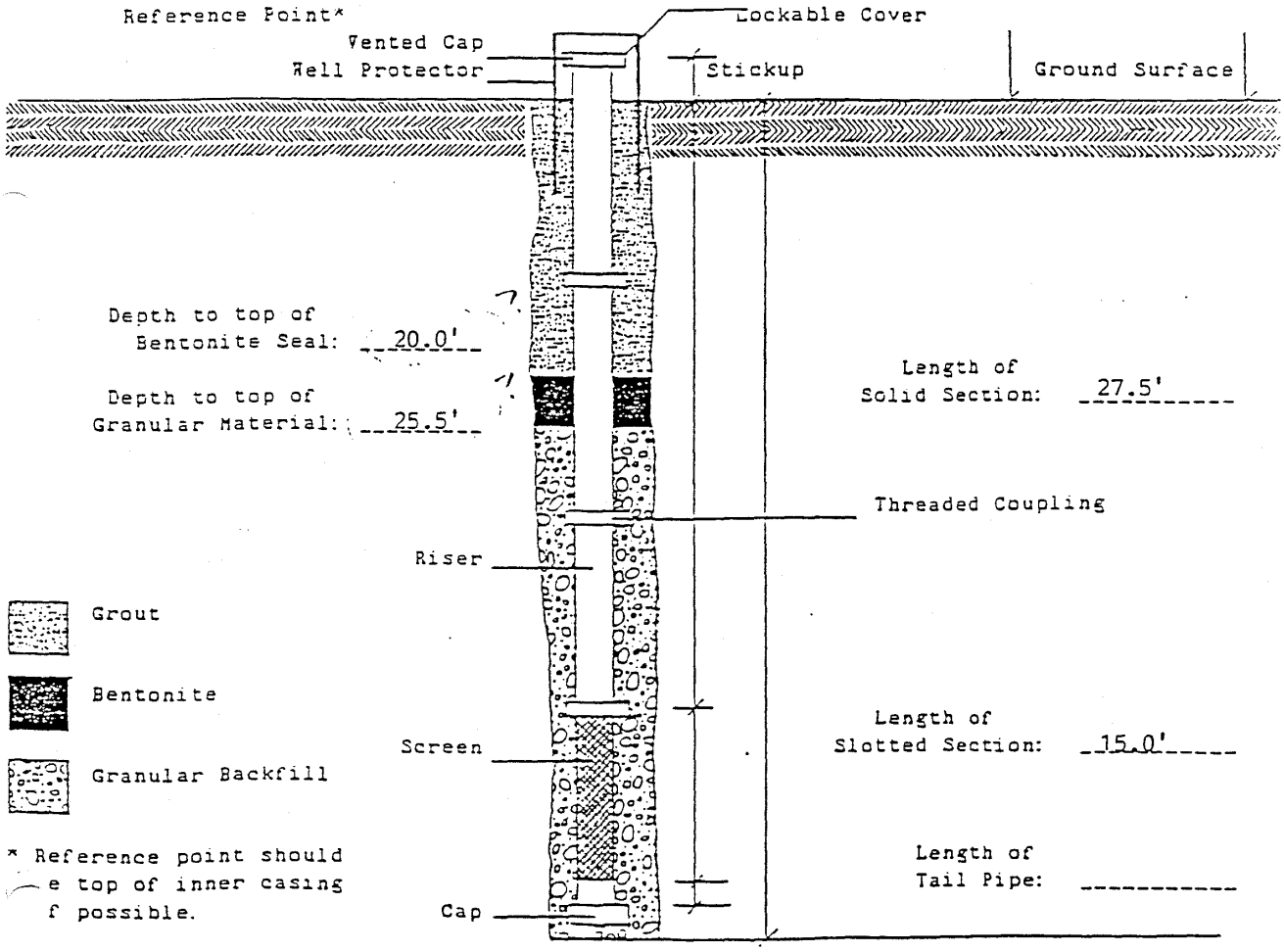
Riser Material: Schedule 40 PVC
Riser Diameter: 2"

Drilling Technique: Hollow stem auger/NX Coring
Driller: B. King

Borehole Diameter: 6"
Lock Data: _____

Key Code/Combination: _____

Stabilized Water Level: 32.5' feet below ground surface. Measured on: 9/18/90



* Reference point should e top of inner casing f possible.

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: GAI Consultants

DRILLER REGISTRATION NUMBER: 446

STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Taylorsville County: Alexander
   SR 1620
   (Road, Community, or Subdivision and Lot No.)
2. OWNER Alexander County Attn: Charles Mashburn
   ADDRESS Admin Bldg 255 Liledown Rd
   (Street or Route No.)
   Taylorsville NC 28681
   City or Town State Zip Code
3. DATE DRILLED 9-30-94 USE OF WELL Monitoring
4. TOTAL DEPTH 48.5'
5. CUTTINGS COLLECTED YES [ ] NO [x]
6. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]
7. STATIC WATER LEVEL Below Top of Casing: ± 43.5 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 3.0 FT. Above Land Surface*

* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): N/A METHOD OF TEST _____
10. WATER ZONES (depth): _____
11. CHLORINATION: Type N/A Amount _____
12. CASING:

	Depth From	Depth To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	+3.0	32.5		2"	Sch 40	PVC

13. GROUT:

	Depth From	Depth To	Ft.	Material	Method
	0	30.0		neat cement	grout
	30.0	31.0		bentonite	pellet

14. SCREEN:

	Depth From	Depth To	Ft.	Diameter	in.	Slot Size	in.	Material
	32.5	47.5		2		.010		PVC

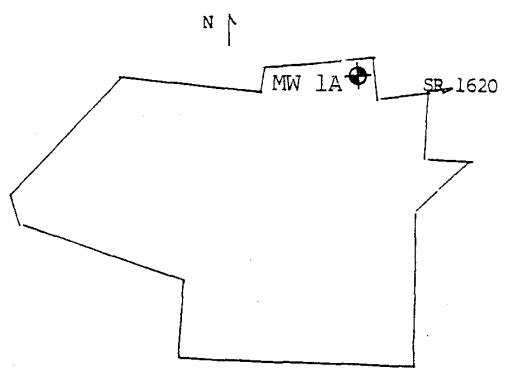
15. SAND/GRAVEL PACK:

	Depth From	Depth To	Ft.	Size	Material
	31.0	48.5		gravel	silica

16. REMARKS: Monitoring Well 1A

DEPTH From To	DRILLING LOG Formation Description
0 - 1	Red silty clay
1 - 9	Brown clayey silt, few gneiss fragments
9 - 22	Weathered gneiss
22 - 25.5	Light brown, clayey silt, gneiss fragments
25.5 - 26	Weathered gneiss
26 - 41	Light brown clayey silt with layers of gneiss
41 - 48.5	Weathered gneiss

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Cheryl Marks 10-5-94
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

MW-1B WELL CONSTRUCTION RECORD

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Derry Honeycutt CERTIFICATION # 2663

WELL CONTRACTOR COMPANY NAME Derry's Well Drilling PHONE # ( )

STATE WELL CONSTRUCTION PERMIT# _____ (if applicable) ASSOCIATED WQ PERMIT# _____ (if applicable)

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ■ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION:
Nearest Town: Taylorsville County Alexander
Paynes Dairy Rd.
(Street Name, Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land setting
☐ Ridge ☐ Slope ☐ Valley ■ Flat
(check appropriate box)
Latitude/longitude of well location
35.1716/-77.4234
(degrees/minutes/seconds)
Latitude/longitude source: ☐ GPS ■ Topographic map
(check box)

3. OWNER: Alexander Co. Solid Waste
Address 255 Liledown Rd.
(Street or Route No.)
Taylorsville NC 28681
City or Town State Zip Code
(828)-632-1101
Area code- Phone number

4. DATE DRILLED 5/21/03
5. TOTAL DEPTH: 61 ft.
6. DOES WELL REPLACE EXISTING WELL? YES ■ NO ☐
7. STATIC WATER LEVEL Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 3.00 FT. Above Land Surface*
***Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118.**
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): _____

DEPT From	DEPT To	DRILLING LOG Formation Description
0	1'	Red Silty Clay
1'	9'	Clayey Silt
9'	22'	Weathered Gneiss
22'	25'	Clayey Silt
25'	26'	Weathered Gneiss
26'	41'	Clayey Silt
41'	61'	Weathered Gneiss

Taken from Boring Log for MW-1A

11. DISINFECTION: Type N/A Amount N/A
12. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From +3.00	To 46	Ft.	2"	Sch 40	PVC
From	To	Ft.			
From	To	Ft.			

13. GROUT:

	Depth		Material	Method
From 43	To 44.5	Ft.	3/8" Bentonite	Pour
From 0	To 43	Ft.	neat cement	Tremie

14. SCREEN:

	Depth		Diameter	Slot Size	Material
From 46	To 61	Ft.	2 in.	.010 in.	PVC
From	To	Ft.	in.	in.	

15. SAND/GRAVEL PACK:

	Depth		Size	Material
From 43	To 44.5	Ft.	#2	Silica Sand
From	To	Ft.		

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include the road numbers and common road names.

16. REMARKS: Constructed to replace Background MW-1A which has been dry at times

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER

_____
SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit the original to the Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

GW-1 REV. 07/2001

CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, NC 27611-7687
PHONE (919)733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Trigon Engineering Consultants
DRILLER REGISTRATION NUMBER 813
STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

Well No MW-2

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Millersville
County: Alexander
Road, Community, or Subdivision and Lot No.)

OWNER County of Alexander
ADDRESS 255 Liledoun Road (Street or Route No.)
Taylorsville (City or Town) NC (State) 28681 (Zip Code)
DATE DRILLED 9/6/90 USE OF WELL Monitor GW
TOTAL DEPTH 30' CUTTINGS COLLECTED ☐ Yes ☒ No
DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
STATIC WATER LEVEL: 20.5 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 2.5 FT. ABOVE LAND SURFACE.
YIELD (gpm): NA METHOD OF TEST NA
WATER ZONES (depth): 30' to 18' below surface
CHLORINATION: Type NA Amount NA

Depth From	Depth To	DRILLING LOG Formation Description
0	3	Firm brown, orange, and tan slightly micaceous medium to fine sandy SILT (Residual)
3	7	Very dense tan, black, and orange slightly micaceous silty coarse to fine SAND
7	30	Partially weathered rock when sampled becomes brown, orange, and white micaceous silty coarse to fine SAND

If additional space is needed use back of form.

CASING:

From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
0	15		2	Sch.40	PVC

GROUT:

From	To	Ft.	Material	Method
0	11		Cement/Bent.	poured
11	13		Bentonite	

SCREEN:

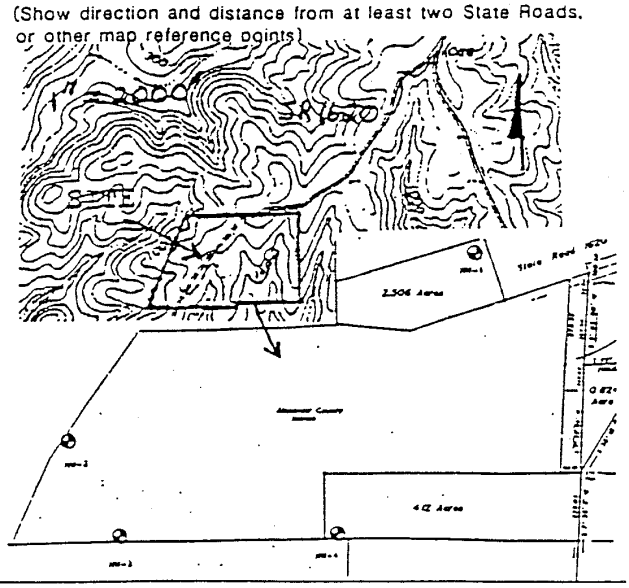
From	To	Ft.	Diameter	Slot Size	Material
15	30		2" in.	.010 in.	PVC-40
			in.	in.	
			in.	in.	

GRAVEL PACK:

From	To	Ft.	Size	Material
13	30		10"	sand

REMARKS: Bentonite seal 11 to 13'

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT — DATE 10/17/90

GW-1 REVISED 2/90

Submit original to Division of Environmental Management and copy to well owner.

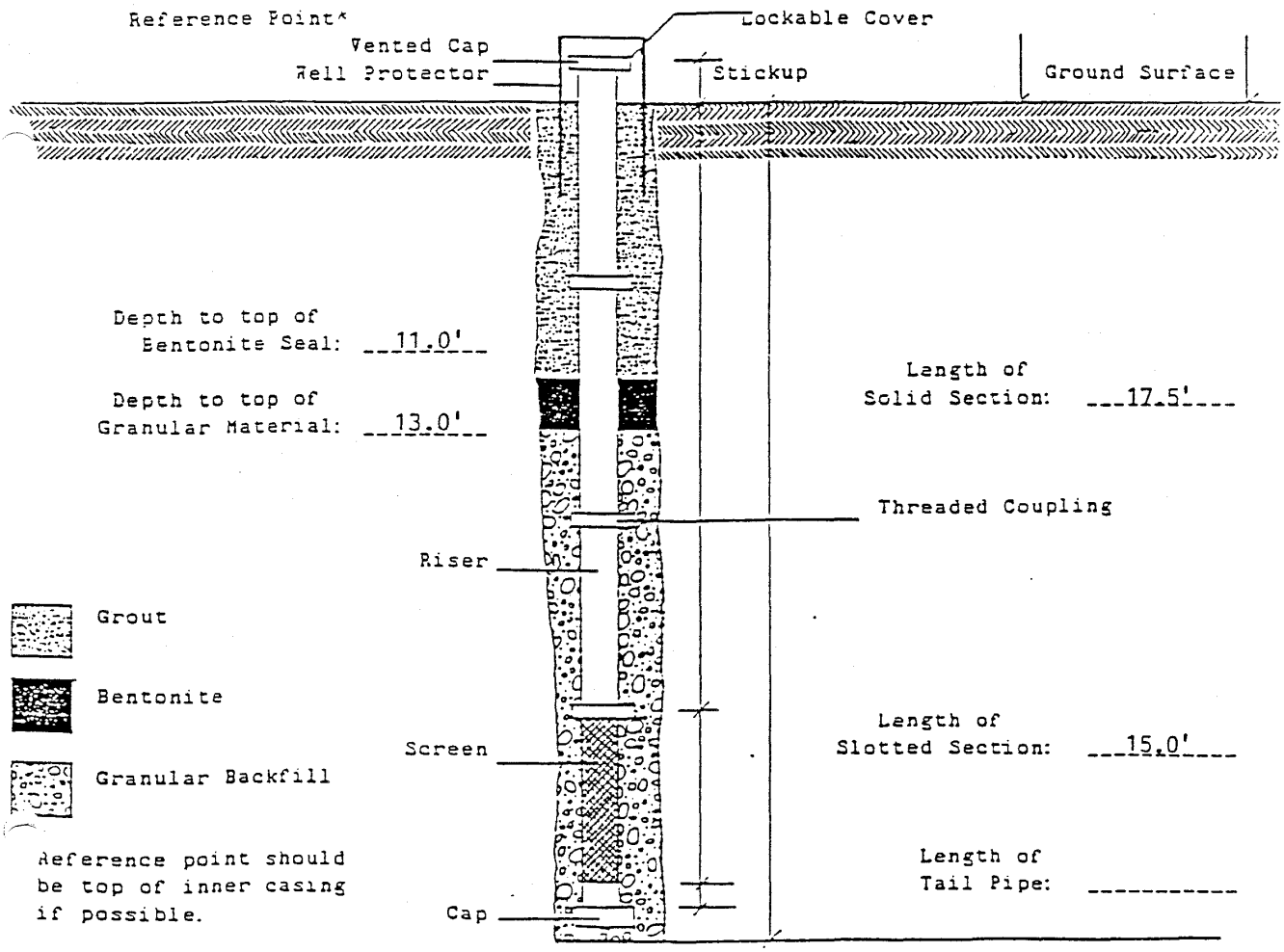
TRIGON

ENGINEERING CONSULTANTS, INC. Greensboro, N.C.

Date: 10/18/90
Job Number: 035-90-003
Project Name: Alexander County Landfill
Location: Alexander County North Carolina

Ground Surface Elevation: _____
Well Number: MW-2
Total Depth of Well: 30'
Date Installed: 9/~~12~~6/90
Granular Backfill Material: Sand
Slot Size: .010"
Screen Material: Schedule 40 PVC
Screen Diameter: 2"
Riser Material: Schedule 40 PVC
Riser Diameter: 2"
Drilling Technique: Hollow-stem auger
Driller: B. King
Borehole Diameter: 10"
Lock Data: _____
Key Code/Combination: _____

Stabilized Water Level: 18.0 feet below ground surface. Measured on: 9/12/90



*Reference point should be top of inner casing if possible.

CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, NC 27611-7687
PHONE (919)733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Trigon Engineering Consultants
DRILLER REGISTRATION NUMBER 813
STATE WELL CONSTRUCTION PERMIT NUMBER: NA

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Millersville
(Road, Community, or Subdivision and Lot No.)
OWNER County of Alexander
ADDRESS 255 Liledoun Road (Street or Route No.)
Taylorsville (City or Town) NC (State) 28681 (Zip Code)
DATE DRILLED 9/19/90 USE OF WELL Monitor GW
TOTAL DEPTH 33.0' CUTTINGS COLLECTED ☐ Yes ☒ No
DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
STATIC WATER LEVEL 27.0 FT. ☐ above ☒ below TOP OF CASING,
TOP OF CASING IS 2.0 FT. ABOVE LAND SURFACE.
YIELD (gpm): NA METHOD OF TEST NA
WATER ZONES (depth) 25' to 33' below surface
CHLORINATION: Type NA Amount _____

Well No. MW-3
County: Alexander

DRILLING LOG

Depth From	Depth To	Formation Description
0	3	Stiff orange-brown sandy slightly clayey SILT (Residual)
3	7	Dense orange, yellow, tan slightly micaceous fine sandy SILT
7	12	Very stiff green, yellow, tan slightly micaceous fine sandy SILT
12	17.5	Dense white, tan, grey micaceous silty SAND with rock fragments
17.5	23.1	Partially weathered rock when sampled becomes grey, tan slightl micaceous fine sandy SILT
		SEE BACK

If additional space is needed use back of form.

CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0	13	2"	Sch.40	PVC

GROUT:

	Depth From	Depth To	Material	Method
	8.0'	1.0'	cement/bent.	poured
	8	11	Bentonite	

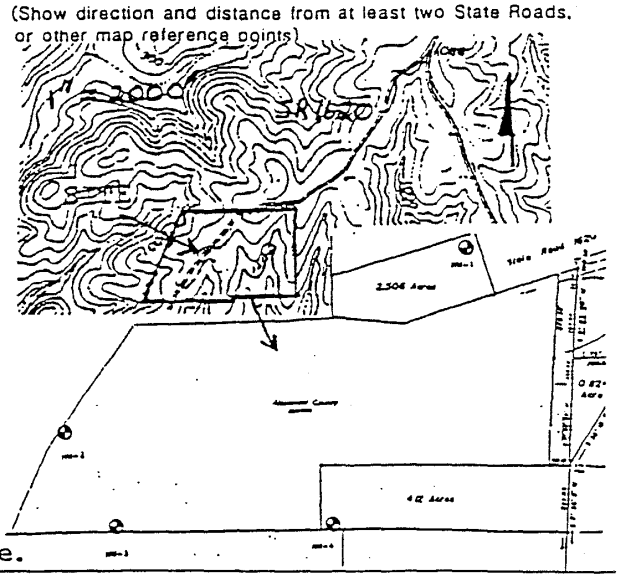
SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	13.0'	33.0'	2"	.010 in.	PVC/40

GRAVEL PACK:

Depth From	Depth To	Size	Material
11.0'	33.0'	6"	sand

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



REMARKS: Bentonite seal from 8' to 11' below surface.
Concrete from 1.0' to 0.0'. Locking cover.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT _____ DATE 10/18/90

GW-1 REVISED 2/90

Submit original to Division of Environmental Management and copy to well owner.

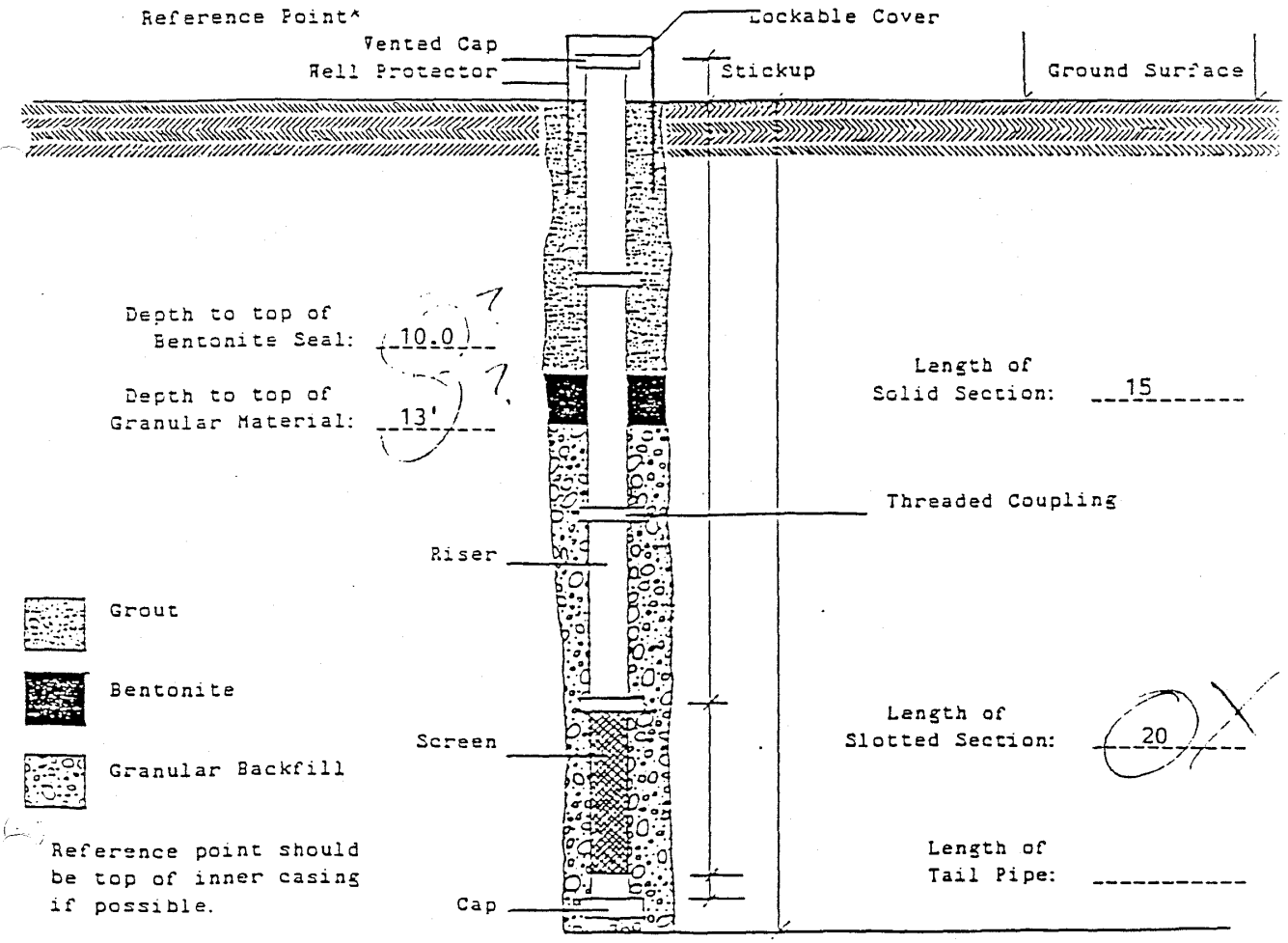
TRIGON

ENGINEERING CONSULTANTS, INC. Greensboro, N.C.

Date: 10/18/90
Job Number: 035-90-003
Project Name: Alexander County Landfill
Location: Alexander County

Ground Surface Elevation: _____
Well Number: MW-3
Total Depth of Well: 33.0'
Date Installed: 9/21/90
Granular Backfill Material: Sand
Slot Size: .010
Screen Material: Schedule 40 PVC
Screen Diameter: 2"
Riser Material: Schedule 40 PVC
Riser Diameter: 2"
Drilling Technique: Hollow-stem Auger/NX Coring
Driller: B. King
Borehole Diameter: 6"
Lock Data: _____
Key Code/Combination: _____

Stabilized Water Level: 25.0 feet below ground surface. Measured on: 9/21/90



North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: GAI Consultants

DRILLER REGISTRATION NUMBER: 446

STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Taylorsville County: Alexander
   SR 1620
   (Road, Community, or Subdivision and Lot No.)
2. OWNER Alexander County Attn: Charles Mashburn
   ADDRESS Admin Bldg 255 Liledown Rd
   (Street or Route No.)
   Taylorsville NC 28681
   City or Town State Zip Code
3. DATE DRILLED 9-30-94 USE OF WELL Monitoring
4. TOTAL DEPTH 21.5
5. CUTTINGS COLLECTED YES [ ] NO [x]
6. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]
7. STATIC WATER LEVEL Below Top of Casing: ± 11.7 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2.7 FT. Above Land Surface*
   * Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST _____
10. WATER ZONES (depth): _____

DEPTH From To	DRILLING LOG Formation Description
0 - 0.5	Top soil
0.5 - 5.0	Red brown clay
5.0 - 18.0	Brown silty clay
18.0 - 21.5	Gneiss

If additional space is needed use back of form

11. CHLORINATION: Type N/A Amount _____
12. CASING:

	Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	+ 2.7	25.5		2"	Sch 40	PVC

13. GROUT:

	Depth From	To	Ft.	Material	Method
	0	3.5		neat cement	grout
	3.5	4.5		bentonite	pellet

14. SCREEN:

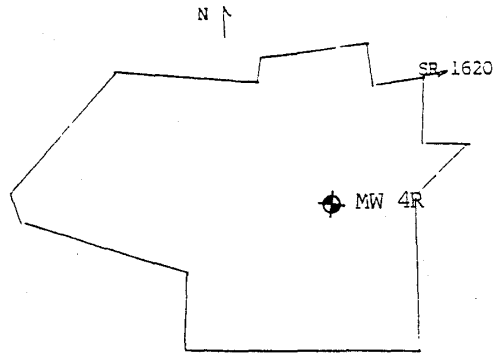
	Depth From	To	Ft	Diameter	in.	Slot Size	in.	Material
	5.5	20.5		2		.010		PVC

15. SAND/GRAVEL PACK:

	Depth From	To	Ft.	Size	Material
	4.5	21.5		gravel	silica

16. REMARKS: Monitoring Well 4R

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Cheryl Marks 10-5-94
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent.

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: GAI Consultants

DRILLER REGISTRATION NUMBER: 446

STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Taylorsville County: Alexander
   SR 1620
   (Road, Community, or Subdivision and Lot No.)
2. OWNER Alexander County Attn: Charles Mashburn
   ADDRESS Admin Bldg 255 Liledown Rd
   (Street or Route No.)
   Taylorsville NC 28681
   City or Town State Zip Code
3. DATE DRILLED 9-15-94 USE OF WELL Monitoring
4. TOTAL DEPTH 49.1'
5. CUTTINGS COLLECTED YES [ ] NO [x]
6. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]
7. STATIC WATER LEVEL Below Top of Casing: 39.11 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2.48 FT. Above Land Surface*

* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): N/A METHOD OF TEST _____
10. WATER ZONES (depth): 37 - 49'
11. CHLORINATION: Type N/A Amount _____
12. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From ±2.48	To 33.80	Ft.	2"	Sch 40	PVC
From	To	Ft.			
From	To	Ft.			

13. GROUT:

	Depth		Material	Method
From 0	To 30.1	Ft.	neat cement	grout
From 30.1	To 32.0	Ft.	bentonite	pellet

14. SCREEN:

	Depth		Diameter	Slot Size	Material
From 33.80	To 48.80	Ft	2 in.	.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

15. SAND/GRAVEL PACK:

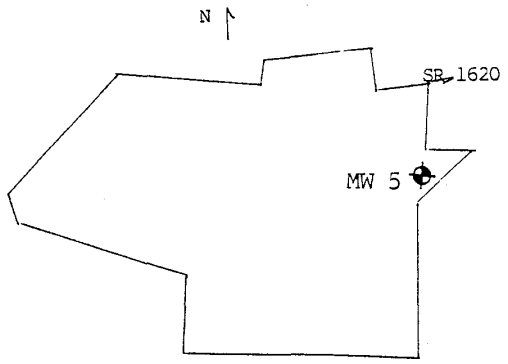
	Depth		Size	Material
From 32.0	To 49.1	Ft.	gravel	silica
From	To	Ft.		

16. REMARKS: Monitoring Well 5

DEPTH From To	DRILLING LOG Formation Description
0 - 6"	Topsoil
6"- 4.75'	Red silty clay
4.75 - 18	Red and white sandy silt micaceous, saprolite
18 - 22	Green gray, sandy silt clayey, micaceous saprolite
22 - 33	Yellow brown clayey silt saprolite
33 - 42	Green gray clayey silt micaeous, saprolite
42 - 49.1	Schist, green black, soft weathered, saprolite

If additional space is needed use back of form

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Edward A Cuatin Jr 10/6/94

SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner.

GW-1 REV. 9/91

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: GAI Consultants

DRILLER REGISTRATION NUMBER: 446

STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Taylorsville County: Alexander
   SR 1620
   (Road, Community, or Subdivision and Lot No.)
2. OWNER Alexander County Attn: Charles Mashburn
   ADDRESS Admin Bldg 255 Liledown Rd
   (Street or Route No.)
   Taylorsville NC 28681
   City or Town State Zip Code
3. DATE DRILLED 9-29-94 USE OF WELL Monitoring
4. TOTAL DEPTH 42.0'
5. CUTTINGS COLLECTED YES [ ] NO [x]
6. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]
7. STATIC WATER LEVEL Below Top of Casing: ±36.0 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2.5 FT. Above Land Surface*
   * Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST _____
10. WATER ZONES (depth): _____
11. CHLORINATION: Type N/A Amount _____
12. CASING:

	Depth From	Depth To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	+2.5	26.0		2"	Sch 40	PVC

13. GROUT:

	Depth From	Depth To	Ft.	Material	Method
	0	23.5		neat cement	grout
	23.5	24.5		bentonite	pellet

14. SCREEN:

	Depth From	Depth To	Ft.	Diameter	Slot Size	Material
	26.0	41.0		2 in.	.010 in.	PVC
				in.	in.	
				in.	in.	

15. SAND/GRAVEL PACK:

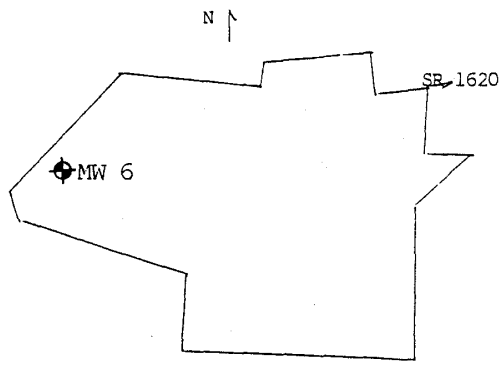
	Depth From	Depth To	Ft.	Size	Material
	24.5	42.0		gravel	silica

16. REMARKS: Monitoring Well 6

DEPTH From	DEPTH To	DRILLING LOG Formation Description
0	3.5	Clayey silt
3.5	10.0	Silt, gneiss fragments
10.0	18.5	Micaeous sandy silt
18.5	24.0	Saprolite
24.0	30.0	Weathered schist
30.0	42.0	Gneiss

If additional space is needed use back of form

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Cheryl Marks

SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: GAI Consultants

DRILLER REGISTRATION NUMBER: 446

STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Taylorsville County: Alexander
SR 1620
(Road, Community, or Subdivision and Lot No.)

2. OWNER Alexander County Attn: Charles Mashburn
ADDRESS Admin Bldg 255 Liledown Rd
(Street or Route No.)
Taylorsville NC 28681
City or Town State Zip Code

3. DATE DRILLED 9-29-94 USE OF WELL Monitoring
4. TOTAL DEPTH 54'
5. CUTTINGS COLLECTED YES [ ] NO [x]
6. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]
7. STATIC WATER LEVEL Below Top of Casing: ±50 FT.
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2 FT. Above Land Surface*
* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST _____
10. WATER ZONES (depth): _____
11. CHLORINATION: Type N/A Amount _____

DEPTH From	To	DRILLING LOG Formation Description
0	4.5	Brown silty clay
4.5	8.0	as above with rock fragments
8.0	12.0	Abundant rock fragments
12.0	36.5	Weathered gneiss
36.5	54.0	Gneiss

If additional space is needed use back of form

12. CASING:

From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
+2	38		2"	Sch 40	PVC

13. GROUT:

From	To	Ft.	Material	Method
0	36		neat cement	grout
36	37		bentonite	pellet

14. SCREEN:

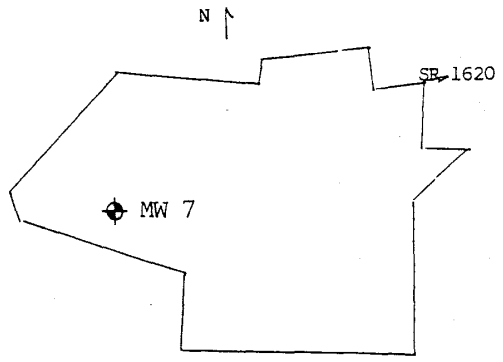
From	To	Ft.	Diameter	Slot Size	Material
38	53		2 in.	.010 in.	PVC
			in.	in.	
			in.	in.	

15. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
37	54		gravel	silica

16. REMARKS: Monitoring Well 7

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Cheryl Marks

SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner.

GW-1 REV. 9/91

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent.

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: GAI Consultants

DRILLER REGISTRATION NUMBER: 446

STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Taylorsville County: Alexander
   SR 1620
   (Road, Community, or Subdivision and Lot No.)
2. OWNER Alexander County Attn: Charles Mashburn
   ADDRESS Admin Bldg 255 Liledown Rd
   (Street or Route No.)
   Taylorsville NC 28681
   City or Town State Zip Code
3. DATE DRILLED 9-29-94 USE OF WELL Monitoring
4. TOTAL DEPTH 28.5
5. CUTTINGS COLLECTED YES [ ] NO [x]
6. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]
7. STATIC WATER LEVEL Below Top of Casing: ±12.8 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2.8 FT. Above Land Surface*
   * Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST _____
10. WATER ZONES (depth): _____
11. CHLORINATION: Type N/A Amount _____
12. CASING:

Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
±2.8	12.5		2"	Sch 40	PVC

13. GROUT:

Depth From	To	Ft.	Material	Method
0	10.5		neat cement	grout
10.5	11.5		bentonite	pellet

14. SCREEN:

Depth From	To	Ft.	Diameter	in.	Slot Size	in.	Material
12.5	27.5		2		.010		PVC

15. SAND/GRAVEL PACK:

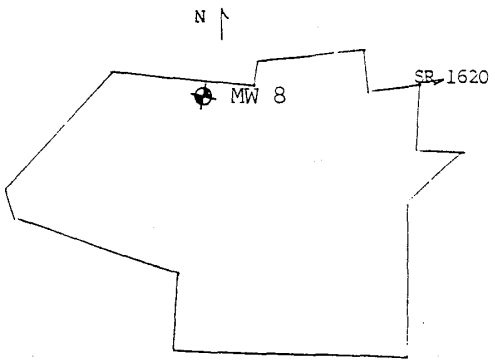
Depth From	To	Ft.	Size	Material
11.5	28.5		gravel	silica

16. REMARKS: Monitoring Well 8

DEPTH From	To	DRILLING LOG Formation Description
0	1.0	Top soil
1.0	5.0	Red brown silty clay
5.0	14.0	Yellow brown clayey silt
14.0	28.5	Gneiss

If additional space is needed use back of form

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1628 Mail Service Center, Raleigh, NC 27699-1628

WELL CONSTRUCTION RECORD
For MW - 9

Well Contractor; Graham & Currie Well Drilling Co., Inc.
Well Contractor Certification#; 2372
State Well Construction Permit No. N/A

1. WELL USE (Check Applicable Box): Residential [ ] Municipal [ ] Industrial [ ] Agricultural [ ] Monitoring [x] Recovery [ ] Heat Pump Water Injection [ ] Other [ ] If Other, List Use;
2. WELL LOCATION:
   Nearest Town: Taylorsville, NC — County: Alexander
   Paynes Dairy Rd
   (Road No., Community, or Subdivision and Lot No.)
3. OWNER: Alexander County Solid Waste
   Address: 255 Liledown Rd.
   (Street or Route No.)
   Taylorsville — NC — 28681
   City or Town — State — Zip Code
4. DATE DRILLED; 10/24/00
5. TOTAL DEPTH 32 ft.
6. CUTTINGS COLLECTED YES [ ] NO [x]
7. DOES WELL REPLACE EXISTING WELL? YES [] NO [X]
8. STATIC WATER LEVEL: n/a ft. below top of casing
9. TOP OF CASING IS 3 ft. above land surface.
   * Top of casing is terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. WELL YIELD: n/a gpm. / METHOD OF TEST
11. WATER ZONES (depth): ?'
12. CHLORINATION: Type N/A Amount
13. OUTER CASING:

Depth	Diameter	Wall Thickness or Weight/Ft.	Material
From 0 To 7 Ft.	6.25"	SDR21	pvc
From To Ft.			
From To Ft.			

14. GROUT OUTER CASING:

Depth	Material	Method
From 0 To 7 Ft.	Portland	Pour
From To Ft.		

15. INNER CASING:

Depth	Diameter	Wall Thickness or Weight/Ft.	Material
From +3 To 16.5 Ft.	2"	sch40	pvc
From To Ft.			
From To Ft.			

16. GROUT:

Depth	Material	Method
From 0 To 13.5 Ft.	cement	tremie
From To Ft.		

17. SCREEN;

Depth	Diameter	Slot Size	Material
From 16.5 To 32 Ft.	2 in.	.010 in.	pvc
From To Ft.	in.	in.	
From To Ft.	in.	in.	

18. SAND/GRAVEL PACK:

Depth	Size	Material
From 14 To 32 Ft.	10/30	silica
From To Ft.		

19. BENTONITE

Depth	Material
From 13 To 14 Ft.	Holeplug
From To Ft.	

DEPTH From	DEPTH To	DRILLING LOG Formation Description
0'	7'	Fill Material
7'	32'	Blue Rock

If additional space is needed use back of form

Location Sketch
(Show direction and distance from at least two state Roads, or other map reference points.)

I DO HERBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

FOR OFFICE USE ONLY
Quad No.
Serial No.

SIGNATURE OF PERSON CONSTRUCTING THE WELL

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1628 Mail Service Center, Raleigh, NC 27699-1628

WELL CONSTRUCTION RECORD
For MW - 10

Well Contractor; Graham & Currie Well Drilling Co., Inc.
Well Contractor Certification#; 2372
State Well Construction Permit No. N/A

1. WELL USE (Check Applicable Box): Residential [ ] Municipal [ ] Industrial [ ] Agricultural [ ] Monitoring [x] Recovery [ ] Heat Pump Water Injection [ ] Other [ ] If Other, List Use;
2. WELL LOCATION:
   Nearest Town: Taylorsville, NC — County: Alexander
   Paynes Dairy Rd
   (Road No., Community, or Subdivision and Lot No.)
3. OWNER: Alexander County Solid Waste
   Address: 255 Liledown Rd.
   (Street or Route No.)
   Taylorsville — NC — 28681
   City or Town — State — Zip Code
4. DATE DRILLED; 10/25/00
5. TOTAL DEPTH 92 ft.
6. CUTTINGS COLLECTED YES [ ] NO [x]
7. DOES WELL REPLACE EXISTING WELL? YES [] NO [X]
8. STATIC WATER LEVEL: n/a ft. below top of casing
9. TOP OF CASING IS 3 ft. above land surface.
   * Top of casing is terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. WELL YIELD: n/a gpm. / METHOD OF TEST
11. WATER ZONES (depth): 41' - 61'; 86' - 91
12. CHLORINATION: Type N/A Amount
13. OUTER CASING:

Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material

14. GROUT OUTER CASING:

Depth From	To	Ft.	Material	Method

15. INNER CASING:

Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
+3	76		2"	sch40	pvc

16. GROUT:

Depth From	To	Ft.	Material	Method
0	71.5		cement	tremie

17. SCREEN;

Depth From	To	Ft.	Diameter	Slot Size	Material
76	91		2 in.	.010 in.	pvc
			in.	in.	
			in.	in.	

18. SAND/GRAVEL PACK:

Depth From	To	Ft.	Size	Material
74	91		10/30	silica

19. BENTONITE

Depth From	To	Ft.	Material
71	74		Holeplug

DEPTH From	To	DRILLING LOG Formation Description
0'	17'	Tan Clays, Silts
17'	30'	Clays with Mica, Silts
30'	32'	Weathered Rock
32'	36'	tan color weathered rock
36'	41'	Hard bluish color rock fracture at 55 ft.
41'	61'	Blue Grey rock w/fractures
61'	66'	Competent grey rock
66'	72'	Competent grey rock
72'	86'	Competent grey rock
86'	91'	Blue grey rock w/fracture

If additional space is needed use back of form

Location Sketch
(Show direction and distance from at least two state Roads, or other map reference points.)

I DO HERBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

FOR OFFICE USE ONLY
Quad No.
Serial No.

SIGNATURE OF PERSON CONSTRUCTING THE WELL

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1628 Mail Service Center, Raleigh, NC 27699-1628

WELL CONSTRUCTION RECORD
For MW - 11

Well Contractor; Graham & Currie Well Drilling Co., Inc.
Well Contractor Certification#; 2573
State Well Construction Permit No. N/A

1. WELL USE (Check Applicable Box): Residential [ ] Municipal [ ] Industrial [ ] Agricultural [ ] Monitoring [x] Recovery [ ] Heat Pump Water Injection [ ] Other [ ] If Other, List Use;
2. WELL LOCATION:
   Nearest Town: Taylorsville, NC — County: Alexander
   Paynes Dairy Rd
   (Road No., Community, or Subdivision and Lot No.)
3. OWNER: Alexander County Solid Waste
   Address: 255 Liledown Rd. (Street or Route No.)
   Taylorsville (City or Town) NC (State) 28681 (Zip Code)
4. DATE DRILLED; 10/24/00
5. TOTAL DEPTH 56 ft.
6. CUTTINGS COLLECTED YES [ ] NO [x]
7. DOES WELL REPLACE EXISTING WELL? YES [] NO [X]
8. STATIC WATER LEVEL: n/a ft. below top of casing
9. TOP OF CASING IS 3 ft. above land surface.
   * Top of casing is terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. WELL YIELD: n/a gpm. / METHOD OF TEST
11. WATER ZONES (depth): 42' to 56'
12. CHLORINATION: Type N/A Amount
13. OUTER CASING:
    From To Ft. Diameter Wall Thickness or Weight/Ft. Material
    From To Ft.
    From To Ft.
14. GROUT OUTER CASING:
    From To Ft. Depth Material Method
    From To Ft.
15. INNER CASING:
    From +3 To 41 Ft. Depth 2" Diameter sch40 Wall Thickness or Weight/Ft. pvc Material
    From To Ft.
    From To Ft.
16. GROUT:
    From 0 To 35 Ft. Depth cement Material tremie Method
    From To Ft.
17. SCREEN;
    From 41 To 56 Ft. Depth 2 in. Diameter .010 in. Slot Size pvc Material
    From To Ft. in. in.
    From To Ft. in. in.
18. SAND/GRAVEL PACK:
    From 38.5 To 36 Ft. Depth 10/30 Size silica Material
    From To Ft.
19. BENTONITE
    From 35.5 To 38.5 Ft. Depth Holeplug Material
    From To Ft.

DEPTH From	DEPTH To	DRILLING LOG Formation Description
0'	2'	Sand & Clay
2'	4'	Orange Clay
4'	17'	Clay, Sand Silt
17'	33'	Weathered Rock
33'	36'	Silts, and Rock
36'	42'	Rock
42'	56'	Grey Metamorphic Rock

If additional space is needed use back of form

Location Sketch
(Show direction and distance from at least two state Roads, or other map reference points.)

I DO HERBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

FOR OFFICE USE ONLY
Quad No.
Serial No.

SIGNATURE OF PERSON CONSTRUCTING THE WELL

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1628 Mail Service Center, Raleigh, NC 27699-1628

WELL CONSTRUCTION RECORD
For MW - 12

Well Contractor; Graham & Currie Well Drilling Co., Inc.
Well Contractor Certification#; 2372
State Well Construction Permit No. N/A

1. WELL USE (Check Applicable Box): Residential [ ] Municipal [ ] Industrial [ ] Agricultural [ ] Monitoring [x]
Recovery [ ] Heat Pump Water Injection [ ] Other [ ] If Other, List Use;
2. WELL LOCATION:
Nearest Town: Taylorsville, NC County: Alexander
Paynes Dairy Rd
(Road No., Community, or Subdivision and Lot No.)
3. OWNER: Alexander County Solid Waste
Address: 255 Liledown Rd.
(Street or Route No.)
Taylorsville NC 28681
City or Town State Zip Code
4. DATE DRILLED; 10/23/00
5. TOTAL DEPTH 68 ft.
6. CUTTINGS COLLECTED YES [ ] NO [x]
7. DOES WELL REPLACE EXISTING WELL? YES [] NO [X]
8. STATIC WATER LEVEL: n/a ft. below top of casing
9. TOP OF CASING IS 3 ft. above land surface.
* Top of casing is terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. WELL YIELD: n/a gpm. / METHOD OF TEST
11. WATER ZONES (depth): 38' to 68'
12. CHLORINATION: Type N/A Amount
13. OUTER CASING:

Depth	Diameter	Wall Thickness or Weight/Ft.	Material
From To Ft.			
From To Ft.			
From To Ft.			

14. GROUT OUTER CASING:

Depth	Material	Method
From To Ft.		
From To Ft.		

15. INNER CASING:

Depth	Diameter	Wall Thickness or Weight/Ft.	Material
From +3 To 53 Ft.	2"	sch40	pvc
From To Ft.			
From To Ft.			

16. GROUT:

Depth	Material	Method
From 0 To 49 Ft.	cement	tremie
From To Ft.		

17. SCREEN;

Depth	Diameter	Slot Size	Material
From 53 To 68 Ft.	2 in.	.010 in.	pvc
From To Ft.	in.	in.	
From To Ft.	in.	in.	

18. SAND/GRAVEL PACK:

Depth	Size	Material
From 51 To 68 Ft.	10/30	silica
From To Ft.		

19. BENTONITE

Depth	Material
From 49 To 51 Ft.	Holeplug
From To Ft.	

DEPTH From	DEPTH To	DRILLING LOG Formation Description
0'	18'	Sand & Silt
18'	23'	Sand, weathered Rock
23'	28'	Weathered Rock, Silts
28'	38'	Weathered Rock
38'	42'	Silts, Mica
42'	48'	Silts, Mica
48'	58'	Silts, Mica
58'	66'	Medium Hardness Rock
66'	68'	Hard Competent Rock

If additional space is needed use back of form

Location Sketch
(Show direction and distance from at least two state Roads, or other map reference points.)

I DO HERBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

FOR OFFICE USE ONLY
Quad No.
Serial No.

SIGNATURE OF PERSON CONSTRUCTING THE WELL

JUL 1 4 2003

WELL CONSTRUCTION RECORD

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Sherwood Gower CERTIFICATION # 2984

WELL CONTRACTOR COMPANY NAME Accurate Drilling Inc. PHONE # (919) 510-0806

STATE WELL CONSTRUCTION PERMIT# _____ (if applicable) ASSOCIATED WQ PERMIT# _____ (if applicable)

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☑ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION:
Nearest Town: Taylersville County Al
MSW Landfill
(Street Name, Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land setting
☐Ridge ☐Slope ☐Valley ☐Flat
(check appropriate box)
Latitude/longitude of well location
_____ (degrees/minutes/seconds)
Latitude/longitude source: ☐GPS ☐Topographic map
(check box)

3. OWNER: _____
Address _____ (Street or Route No.)
_____ City or Town State Zip Code
(____)- _____ Area code- Phone number

4. DATE DRILLED 6-11-03
5. TOTAL DEPTH: 102.5
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑
7. STATIC WATER LEVEL Below Top of Casing: ? FT. (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118.
9. YIELD (gpm): _____ METHOD OF TEST _____
10. WATER ZONES (depth): _____

DEPTH From	To	DRILLING LOG Formation Description

11. DISINFECTION: Type _____ Amount _____
12. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From 0.0	To 68	Ft.	4"	sch 40	PVC
From 2.5	To 90	Ft.	2"	sch 40	PVC
From	To	Ft.			

13. GROUT:

	Depth		Material	Method
From 0.0	To 68	Ft.	Portland	Trimmie
From 90.0	To 0.0	Ft.	Portland	Trimmie

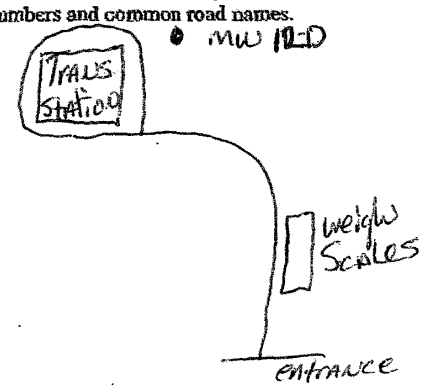
14. SCREEN:

	Depth		Diameter	Slot Size	Material
From 100'	To 90'	Ft.	2" in.	.010 in.	PVC
From	To	Ft.	in.	in.	

15. SAND/GRAVEL PACK:

	Depth		Size	Material
From 102.5	To 88'	Ft.	#2	Sand
From	To	Ft.		

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include the road numbers and common road names.



16. REMARKS: _____

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER

Sherwood Gower 6-11-03
SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit the original to the Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days. GW-1 REV. 07/2001

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1628 Mail Service Center, Raleigh, NC 27699-1628

WELL CONSTRUCTION RECORD
For MW - 13

Well Contractor; Graham & Currie Well Drilling Co., Inc.
Well Contractor Certification#; 2372
State Well Construction Permit No. N/A

1. WELL USE (Check Applicable Box): Residential [ ] Municipal [ ] Industrial [ ] Agricultural [ ] Monitoring [x] Recovery [ ] Heat Pump Water Injection [ ] Other [ ] If Other, List Use;
2. WELL LOCATION:
   Nearest Town: Taylorsville, NC — County: Alexander
   Paynes Dairy Rd
   (Road No., Community, or Subdivision and Lot No.)
3. OWNER: Alexander County Solid Waste
   Address: 255 Liledown Rd.
   (Street or Route No.)
   Taylorsville — NC — 28681
   City or Town — State — Zip Code
4. DATE DRILLED; 10/25/00
5. TOTAL DEPTH 61.5 ft.
6. CUTTINGS COLLECTED YES [ ] NO [x]
7. DOES WELL REPLACE EXISTING WELL? YES [] NO [X]
8. STATIC WATER LEVEL: n/a ft. below top of casing
9. TOP OF CASING IS 3 ft. above land surface.
   * Top of casing is terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. WELL YIELD: n/a gpm. / METHOD OF TEST
11. WATER ZONES (depth): unknown
12. CHLORINATION: Type N/A Amount
13. OUTER CASING:
    Depth — Diameter — Wall Thickness or Weight/Ft. — Material
    From To Ft.
    From To Ft.
    From To Ft.
14. GROUT OUTER CASING:
    Depth — Material — Method
    From To Ft.
    From To Ft.
15. INNER CASING:
    Depth — Diameter — Wall Thickness or Weight/Ft. — Material
    From +3 To 46.5 Ft. 2" sch40 pvc
    From To Ft.
    From To Ft.
16. GROUT:
    Depth — Material — Method
    From 0 To 41.5 Ft. cement tremie
    From To Ft.
17. SCREEN;
    Depth — Diameter — Slot Size — Material
    From 46.5 To 60.5 Ft. 2 in. .010 in. pvc
    From To Ft. in. in.
    From To Ft. in. in.
18. SAND/GRAVEL PACK:
    Depth — Size — Material
    From 43 To 61.5 Ft. 10/30 silica
    From To Ft.
19. BENTONITE
    Depth — Material
    From 41 To 43 Ft. Holeplug
    From To Ft.

DEPTH From	DEPTH To	DRILLING LOG Formation Description
0'	2'	Tan Clays, Silts
2'	17.5'	clays, silts, weathered rock
17.5'	30'	silt, clay, weathered rock
30'	37'	grayish blue rock, hard
37'	40'	gray blue rock, soft
40'	42'	grey rock
42'	61.5'	gneiss

If additional space is needed use back of form

Location Sketch
(Show direction and distance from at least two state Roads, or other map reference points.)

I DO HERBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

FOR OFFICE USE ONLY
Quad No.
Serial No.

SIGNATURE OF PERSON CONSTRUCTING THE WELL

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1628 Mail Service Center, Raleigh, NC 27699-1628

WELL CONSTRUCTION RECORD
For MW - 14

Well Contractor; Graham & Currie Well Drilling Co., Inc.
Well Contractor Certification#; 2372
State Well Construction Permit No. N/A

1. WELL USE (Check Applicable Box): Residential [ ] Municipal [ ] Industrial [ ] Agricultural [ ] Monitoring [x] Recovery [ ] Heat Pump Water Injection [ ] Other [ ] If Other, List Use;
2. WELL LOCATION:
   Nearest Town: Taylorsville, NC — County: Alexander
   Paynes Dairy Rd
   (Road No., Community, or Subdivision and Lot No.)
3. OWNER: Alexander County Solid Waste
   Address: 255 Liledown Rd.
   (Street or Route No.)
   Taylorsville — NC — 28681
   City or Town — State — Zip Code
4. DATE DRILLED; 10/26/00
5. TOTAL DEPTH 40.5 ft.
6. CUTTINGS COLLECTED YES [ ] NO [x]
7. DOES WELL REPLACE EXISTING WELL? YES [] NO [X]
8. STATIC WATER LEVEL: n/a ft. below top of casing
9. TOP OF CASING IS 3 ft. above land surface.
   * Top of casing is terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. WELL YIELD: n/a gpm. / METHOD OF TEST
11. WATER ZONES (depth): Unknown
12. CHLORINATION: Type N/A Amount
13. OUTER CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
0	12	6.25"	sdr 21	pvc

14. GROUT OUTER CASING:

Depth From	To	Material	Method
0	12	portland	pour

15. INNER CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
+3	25.5	2"	sch40	pvc

16. GROUT:

Depth From	To	Material	Method
0	22.5	cement	tremie

17. SCREEN;

Depth From	To	Diameter	Slot Size	Material
25.5	40.5	2 in.	.010 in.	pvc
		in.	in.	
		in.	in.	

18. SAND/GRAVEL PACK:

Depth From	To	Size	Material
23.5	40.5	10/30	silica

19. BENTONITE

Depth From	To	Material
22.5	23.5	Holeplug

DEPTH From	To	DRILLING LOG Formation Description
0'	10'	Fill material
10'	12'	Hard pan clays
12'	23.5'	soft sands, silts
23.5'	33.5'	soft sands, silts
33.5'	37.5'	bluish brown weathered rock
37.5'	40.5'	Competent and hard bluish rock

If additional space is needed use back of form

Location Sketch
(Show direction and distance from at least two state Roads, or other map reference points.)

I DO HERBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

FOR OFFICE USE ONLY
Quad No.
Serial No.

SIGNATURE OF PERSON CONSTRUCTING THE WELL

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1628 Mail Service Center, Raleigh, NC 27699-1628

WELL CONSTRUCTION RECORD
For MW - 15

Well Contractor; Graham & Currie Well Drilling Co., Inc.
Well Contractor Certification#; 2372
State Well Construction Permit No. N/A

1. WELL USE (Check Applicable Box): Residential [ ] Municipal [ ] Industrial [ ] Agricultural [ ] Monitoring [x]
Recovery [ ] Heat Pump Water Injection [ ] Other [ ] If Other, List Use;
2. WELL LOCATION:
Nearest Town: Taylorsville, NC County: Alexander
Paynes Dairy Rd
(Road No., Community, or Subdivision and Lot No.)
3. OWNER: Alexander County Solid Waste
Address: 255 Liledown Rd.
(Street or Route No.)
Taylorsville NC 28681
City or Town State Zip Code
4. DATE DRILLED; 10/25/00
5. TOTAL DEPTH 35 ft.
6. CUTTINGS COLLECTED YES [ ] NO [x]
7. DOES WELL REPLACE EXISTING WELL? YES [] NO [X]
8. STATIC WATER LEVEL: n/a ft. below top of casing
9. TOP OF CASING IS 3 ft. above land surface.
* Top of casing is terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. WELL YIELD: n/a gpm. / METHOD OF TEST
11. WATER ZONES (depth): unknown
12. CHLORINATION: Type N/A Amount
13. OUTER CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
	Ft.			
	Ft.			
	Ft.			

14. GROUT OUTER CASING:

Depth From	To	Material	Method
	Ft.		
	Ft.		

15. INNER CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
+3	19 Ft.	2"	sch40	pvc
	Ft.			
	Ft.			

16. GROUT:

Depth From	To	Material	Method
0	14.5 Ft.	cement	tremie
	Ft.		

17. SCREEN;

Depth From	To	Diameter	Slot Size	Material
19	35 Ft.	2 in.	.010 in.	pvc
	Ft.	in.	in.	
	Ft.	in.	in.	

18. SAND/GRAVEL PACK:

Depth From	To	Size	Material
17	35 Ft.	10/30	silica
	Ft.		

19. BENTONITE

Depth From	To	Material
14.5	17 Ft.	Holeplug
	Ft.	

DEPTH From	To	DRILLING LOG Formation Description
0'	16'	Tan Silts, Clay
16'	21'	Tan Silts, Clay
21'	26'	gray weathered rock
26'	32'	grayish blue rock, hard
32'	35'	gray blue rock, hard

If additional space is needed use back of form

Location Sketch
(Show direction and distance from at least two state Roads, or other map reference points.)

I DO HERBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

FOR OFFICE USE ONLY
Quad No.
Serial No.

SIGNATURE OF PERSON CONSTRUCTING THE WELL

MW-16

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704) 982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-16

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/20/07

TIME COMPLETED 8:00 AM ■ PM ☐

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
■ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)

LATITUDE N 35.8370

LONGITUDE W-81.14645

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828) 632-9467
Area code - Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 40.25'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ■

c. **WATER LEVEL** Below Top of Casing: 31.75 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** na **METHOD OF TEST** na

f. **DISINFECTION: Type** na **Amount** na

g. **WATER ZONES** (depth):
From 28.75 To >40.25 From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	25.25	2		sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	22		Bent. Grout	Tremie
22	24.10		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter in.	Slot Size in.	Material
25.25	40.25	2		.01	PVC

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
24.10	40.25		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	2	Silty Clay - Red
2	14	Sandy Silt - Lt. Brown
14	40.25	Silty Sand - Med. Brown

12. REMARKS:

~~Unconfined aquifer.~~

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

WELL CONSTRUCTION RECORD

JUN 1 4 2003

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Sherwood Gower CERTIFICATION # 2984

WELL CONTRACTOR COMPANY NAME Accurate Drilling Inc PHONE # (919) 510 0806

STATE WELL CONSTRUCTION PERMIT# _____ (if applicable) ASSOCIATED WQ PERMIT# _____ (if applicable)

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☐ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION:
Nearest Town: Taylorsville County Al
MSW Landfill
(Street Name, Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land setting
☐Ridge ☐Slope ☐Valley ☐Flat
(check appropriate box)
Latitude/longitude of well location
(degrees/minutes/seconds)
Latitude/longitude source: ☐GPS ☐Topographic map
(check box)

3. OWNER: _____
Address _____
(Street or Route No.)
City or Town State Zip Code
(___)-_____
Area code- Phone number

4. DATE DRILLED 6-11-03
5. TOTAL DEPTH: 22.3
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑
7. STATIC WATER LEVEL Below Top of Casing: _____ FT. (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118.
9. YIELD (gpm): _____ METHOD OF TEST _____
10. WATER ZONES (depth): _____

DEPTH From	To	DRILLING LOG Formation Description

11. DISINFECTION: Type _____ Amount _____
12. CASING:

From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
2.5	7.3		2"	Sch 40	PVC

13. GROUT:

From	To	Ft.	Material	Method
0.0	3.3		Cement	mix Poor

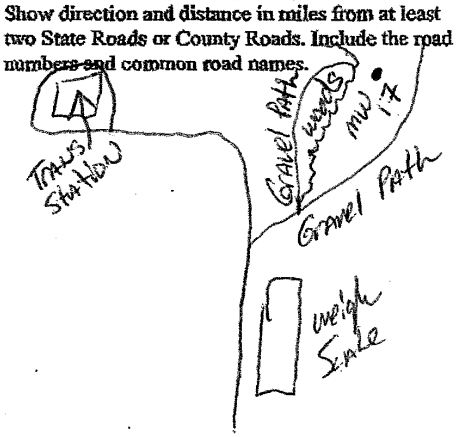
14. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
22.3	7.3		2" in.	.010 in.	PVC
			in.	in.	

15. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
22.3	5.3		#2	PVC

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include the road numbers and common road names.



16. REMARKS: _____

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER

Sherwood Gower 6/11/03
SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit the original to the Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days. GW-1 REV. 07/2001

MW-18

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704) 982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-18

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/19/07

TIME COMPLETED 10:00 AM ■ PM ☐

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☐ Flat ■ Ridge ☐ Other
(check appropriate box)

LATITUDE N35.83907

LONGITUDE W-81.14716

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828) 632-9467
Area code - Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 56.70'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ■

c. WATER LEVEL Below Top of Casing: 54.98 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): na METHOD OF TEST na

f. DISINFECTION: Type na Amount na

g. WATER ZONES (depth):
From 51.98 To 53.00 From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	41.70		2"	sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	38		Bent. Grout	Tremie
38	40.25		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter in.	Slot Size in.	Material
41.70	56.70		2	0.01	PVC

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
40.25	56.70		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	3	Silty Clay - Red
3	16	Silty Sand - Yellowish Red
16	20.5'	PWR - Brown
20.5	35	Rock - Gneiss Gray
35	45	Clayey Silt - Brown
45	56.70	Rock : Gneiss Gray

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

MW-19

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704) 982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-19

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/20/07

TIME COMPLETED 10:00 AM ■ PM ☐

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☐ Flat ■ Ridge ☐ Other
(check appropriate box)

LATITUDE N35.83925

LONGITUDE W-81.14874

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828) 632-9467
Area code - Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 63.92'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ■

c. WATER LEVEL Below Top of Casing: 62.61 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): na METHOD OF TEST na

f. DISINFECTION: Type na Amount na

g. WATER ZONES (depth):
From 53.50 To 59.00 From To
From To From To
From To From To

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	48.92		2"	sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	46		Bent. Grout	Tremie
46	48		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter in.	Slot Size in.	Material
48.92	63.92		2	0.01	PVC

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
48	63.92		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	6	Silty Clay - Red
6	18	Clayey Silt - Med. Brown
18	38	Silty Sand - Y. Red Saprolite
38	43	PWR - Brown
43	63.92	Rock ; Gneiss Gray

12. REMARKS:

~~Water not static in 6c.~~ ▽56.50' Below Casing 7 Days

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

MW-20

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704)-982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-20

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/20/07

TIME COMPLETED 1:00 AM ☐ PM ■

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
■ Slope ☐ Valley ☐ Flat ■ Ridge ☐ Other
(check appropriate box)

LATITUDE N35.83899

LONGITUDE W-81.15020

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828)-632-9467
Area code - Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 63.55'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ■

c. **WATER LEVEL** Below Top of Casing: 40.81 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** na **METHOD OF TEST** na

f. **DISINFECTION: Type** na **Amount** na

g. **WATER ZONES** (depth):
From 55.00 To 56.00 From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	48.55		2"	sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	45		Bent. Grout	Tremie
45	47.50		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
48.55	63.55		2 in.	0.01 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
47.50	63.55		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	2	Clayey Silt; Red
2	16	Clayey Silt; Y. Red Saprolite
16	31	Silty Sand; Y. Red Saprolite
31	38	PWR; Brown
38	63.55	Rock; Gneiss Gray

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

MW-21

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704) 982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-21

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/19/07

TIME COMPLETED 1:00 AM ☐ PM ■

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☐ Flat ☑ Ridge ☐ Other
(check appropriate box)

LATITUDE N35.83875

LONGITUDE W-81.151270

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828) 632-9467
Area code - Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 41.05'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: 33.20 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** na **METHOD OF TEST** na

f. **DISINFECTION: Type** na **Amount** na

g. **WATER ZONES** (depth):

From	To	From	To
30.20	>41.05		

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	26.05	2"		sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	22		Bent. Grout	Tremie
22	24.25		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
26.05	41.05	2	in.	0.01 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
24.25	41.05		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	4	Clayey Silt - Reddish Brown
4	23	Silty Sand - Med. Brown
23	26	PWR - Brown
26	38	Silty Sand, Y. Orange
38	39	PWR - Brown
39	41.05	Silty Sand - Y. Orange saprolite

12. REMARKS:

~~Unconfined aquifer~~

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

MW-22

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704) 982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-22

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/19/07

TIME COMPLETED 6:00 AM ☐ PM ■

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ■ Valley ☐ Flat ☑ Ridge ☐ Other
(check appropriate box)

LATITUDE N35.8381

LONGITUDE W-81.15243

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828) 632-9467
Area code - Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 18.12'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ■

c. WATER LEVEL Below Top of Casing: 15.41 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): na METHOD OF TEST na

f. DISINFECTION: Type na Amount na

g. WATER ZONES (depth):
From 12.41 To >18.12 From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	8.12	2"		sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	4.5		Bent. Grout	Tremie
4.5	6.85		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
8.12	18.12	2	in.	0.01 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
6.85	18.12		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	2	Clayey Silt; Red. Brown
2	18.12	Silty Sand; Dark Brown Saprolite

12. REMARKS:

~~Unconfined aquifer.~~ Very wet.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

MW-23

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle NC 28001
City or Town State Zip Code

(704) 982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-23

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/19/07

TIME COMPLETED 2:30 AM ☐ PM ■

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☑ Slope ■ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)

LATITUDE N35.837554

LONGITUDE W-81.529997

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville NC 28681
City or Town State Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville NC 28681
City or Town State Zip Code

(828) 632-9467
Area code - Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 21.54'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ■

c. WATER LEVEL Below Top of Casing: 17.44 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): na METHOD OF TEST na

f. DISINFECTION: Type na Amount na

g. WATER ZONES (depth):

From	To	From	To
14.44	>21.54		

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	6.54		2"	sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	4		Bent. Grout	Tremie
4	5		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
6.54	21.54		2 in.	0.01 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
5.25	21.54		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	1	Clayey Silt; Red. Brown
1	19	Silty Sand; Dark Brown saprolite
19	21.54	PWR; Dark Brown
21.54		Rock; Gneiss Gray

12. REMARKS:

~~Unconfined aquifer~~

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev 12/07

MW-24

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704)-982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-24

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/20/07

TIME COMPLETED 3:00 AM ☐ PM ■

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ■ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)

LATITUDE N35.835694

LONGITUDE W-81.153318

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828)-632-9467
Area code - Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 35.35'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ■

c. WATER LEVEL Below Top of Casing: 34.18 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): na METHOD OF TEST na

f. DISINFECTION: Type na Amount na

g. WATER ZONES (depth):
From 31.18 To >35.35 From To
From To From To
From To From To

7. CASING:

Depth From	To	Diameter Ft.	Thickness/Weight	Material
0	20.35	2"	sch40	PVC

8. GROUT:

Depth From	To	Material	Method
0	16.85	Bent. Grout	Tremie
16.85	19.30	Bent. Pellets	Pour

9. SCREEN:

Depth From	To	Diameter Ft.	in.	Slot Size	in.	Material
20.35	35.35	2		0.01		PVC

10. SAND/GRAVEL PACK:

Depth From	To	Size Ft.	Material
19.30	35.35	#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	6	Silty Clay; Red
6	10	Silty Sand; Red
10	13	Sandy Silt; Lt. Brown
13	31	Silty Sand; Brown Saprolite
31	35.35	PWR; Brown
35.35		Rock Gneiss; Gray

12. REMARKS:

~~Unconfined aquifer~~

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

MW-25

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle NC 28001
City or Town State Zip Code

(704)-982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-25

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/19/07

TIME COMPLETED 4:00 AM ☐ PM ■

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)

May be in degrees, minutes, seconds or in a decimal format

LATITUDE N 35.835299

LONGITUDE W-81.152769

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville NC 28681
City or Town State Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville NC 28681
City or Town State Zip Code

(828)-632-9467
Area code - Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 44.48'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☐

c. WATER LEVEL Below Top of Casing: 34.18 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): na METHOD OF TEST na

f. DISINFECTION: Type na Amount na

g. WATER ZONES (depth):

From	To	From	To
33.00	33.50	41.00	41.50

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	20.35		2"	sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	26		Bent. Grout	Tremie
26	28.10		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
29.48	44.48		2 in.	0.01 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
28.10	44.48		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	5	Silty Clay; Red
5	16	Silty Sand; Dark Brown
16	21	Silty Sand; Light Brown Saprolite
21	22.80	PWR; Brown
22.80	44.48	Rock; Gneiss Gray

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

MW-26

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704)-982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-26

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/20/07

TIME COMPLETED 7:00 AM ☐ PM ■

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ☒ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)

LATITUDE N 35. 8358888

LONGITUDE W-81. 15051975

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828)-632-9467
Area code - Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 49.80'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ■

c. WATER LEVEL Below Top of Casing: 34.18 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): na METHOD OF TEST na

f. DISINFECTION: Type na Amount na

g. WATER ZONES (depth):
From 44.80 To 46.00 From ___ To ___
From ___ To ___ From ___ To ___
From ___ To ___ From ___ To ___

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	34.80		2"	sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	31.50		Bent. Grout	Tremie
31.50	33.50		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
34.80	49.80		2 in.	0.01 in.	PVC

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
33.50	49.80		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	2	Silty Clay; Red
2	25	Silty Sand; Lt-Brown Saprolite
25	31.85	PWR; Lt. Brown
31.85	49.80	Rock; Gneiss Gray

12. REMARKS:

Water appears confined.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

MW-27

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2663

1. WELL CONTRACTOR:

Derry Huneycutt
Well Contractor (Individual) Name

Derry's Well Drilling Inc.
Well Contractor Company Name

STREET ADDRESS 44283-A NC 24/27/73

Albemarle | NC | 28001
City or Town | State | Zip Code

(704) 982-3070
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW-27

WELL CONSTRUCTION PERMIT#(if applicable)

OTHER ASSOCIATED PERMIT #(if applicable) Landfill 02-01

3. WELL USE (Check Applicable Box) Monitoring ■ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12/20/07

TIME COMPLETED 5:00 AM ☐ PM ■

4. WELL LOCATION:

CITY: Taylorsville COUNTY Alexander

2500 Payne Dairy Rd Taylorsville, NC 28681
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ■ Flat ☑ Ridge ☐ Other
(check appropriate box)

LATITUDE N 35.835567

LONGITUDE W-81.149379

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ■ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Alexander Co. Landfill

STREET ADDRESS 2500 Payne Dairy Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

CONTACT PERSON Mr. Josh Mitchell

MAILING ADDRESS 621 Liledoun Road

Taylorsville | NC | 28681
City or Town | State | Zip Code

(828) 632-9467
Area code - Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 49.82'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ■

c. **WATER LEVEL** Below Top of Casing: 23.57 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** na **METHOD OF TEST** na

f. **DISINFECTION: Type** na **Amount** na

g. **WATER ZONES** (depth):
From 48.00 To 49.00 From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

7. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
0	34.82		2"	sch40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	31		Bent. Grout	Tremie
31	33		Bent. Pellets	Pour

9. SCREEN:

From	To	Ft.	Diameter in.	Slot Size in.	Material
34.82	49.82		2	0.01	PVC

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
33	49.82		#2	Silica Filter Sand

11. DRILLING LOG

From	To	Formation Description
0	1	Silty Clay; Red
1	18	Silty Sand; Med. Brown
18	23.70	PWR; Lt. Gray
23.70	49.82	Rock; Gneiss; Gray

12. REMARKS:

Water appears to be confined in Rock. Fracture @ 48' BGS.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE 12-28-07

Derry Huneycutt
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev.12/07

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section - 1636 Mail Service Center - Raleigh, NC 27699-1639 - Phone No. (919) 733-3221

WELL ABANDONMENT RECORD WELL CONTRACTOR Sherwood Gower

WELL CONTRACTOR CERTIFICATION # 2984

1. WELL USE (Check Applicable Box): Residential ☐ Municipal ☐ Industrial ☐ Agricultural ☐ Monitoring ☑ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use:

2. WELL LOCATION: (Show a sketch of the location on back of form.)
Nearest Town: Taylersville County Al Co.
MSW Landfill
(Road Name and Number, Community, Subdivision, Lot No.) Quadrangle No.

3. OWNER: Al Co.

4. ADDRESS:

5. TOPOGRAPHY: draw, slope, hilltop, valley, flat (circle one)

6. TOTAL DEPTH: 120' DIAMETER 2"

7. CASING REMOVED:

feet	diameter
110'	2"

8. DISINFECTION: N/A Dry
(Amount of 70% hypochlorite used:)

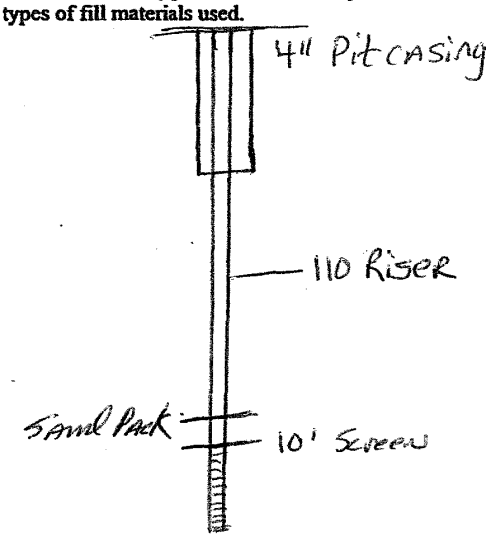
9. SEALING MATERIAL:

Neat Cement	Sand Cement
bags of cement	bags of cement
gallons of water	gallons of water

Other
Type material Easy Grout
Amount 200 lbs @ 96 gal

10. EXPLAIN METHOD EMPLACEMENT OF MATERIAL.
Trimmie grout w/ Pump

WELL DIAGRAM: Draw a detailed sketch of the well showing total depth, depth and diameter of screens remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.



11. DATE WELL ABANDONED June 11, 03

I do hereby certify that this well was abandoned in accordance with 15A NCAC 2C, well construction standards, and that a copy of the record has been provided to the well owner.

Signature of person abandoning the well Sherwood Gower Date June 11, 03

WELL LOCATION: Draw a location sketch on the reverse of this sheet, showing the direction and distance of the well to at least two (2) nearby reference points such as roads, intersections and streams. Identify roads with State Highway road identification numbers.

Submit original to the Division of Water Quality, Groundwater Section, one copy to the owner within 30 days from completion of abandonment.

GW-30 Revised 12/99

APPENDIX B

Sampling History

Date	Action
September 1990	Installed Monitoring Wells MW-1, MW-2, MW-3, MW-4
September 1994	Installed Monitoring Wells MW-1A, MW-5, MW-6, MW-7, MW-8
October 1, 1994	Background Sampling – Appendix I
January 31, 1995	Background Sampling – Appendix I
February 15, 1995	Background Sampling – Appendix I
March 7, 1995	Background Sampling – Appendix I
December 6, 1995	Sampling – Appendix I
May 7, 1996	Sampling – Appendix I
November 11, 1996	Sampling – Appendix I
June 24, 1997	Sampling – Appendix I
December 3, 1997	Sampling – Appendix II
March 23, 1998	Sampling – Background – Appendix II
April 2, 1998	Sanitas GW sampling report
April 30, 1998	Sampling – Background – Appendix II
June 4, 1998	Sampling – Background – Appendix II
November 18, 1998	Sampling – Appendix I and select Appendix II
May 13, 1999	Sampling – Appendix I and select Appendix II
December 6, 1999	Sampling – Appendix I with Mercury
May 17, 2000	Sampling – Appendix I
October 2000	Installed Monitoiring Wells MW-9, MW-10, MW-11, MW-12S, MW-13, MW-14, MW-15
December 11, 2000	Sampling – Appendix I and select Appendix II
June 11, 2001	Sampling – Appendix I
October 31, 2001	Completed Groundwater Assessment and Corrective Measures
December 27, 2001	Sampling – Appendix I
June 12, 2002	Sampling – Appendix I, Appendix II (MW-3, MW-11)
July 16, 2002	Response to ACM from NCDENR
September 4, 2002	Responded to ACM Letter
January 2, 2003	Sampling – Appendix I, Appendix II (MW-3, MW-11)
May 2003	Installed Monitoring Well MW-1B
June 2003	Installed Monitoring Wells MW-12D, MW-17 – Attempted MW-11D
June 24, 2003	Sampling – Appendix I
December 11, 2003	Sampling – Appendix I
June 15, 2004	Sampling – Appendix I
December 29, 2004	Sampling – Appendix I
June 22, 2005	Sampling – Appendix I
January 12, 2006	Sampling – Appendix I
July 6, 2006	Sampling – Appendix I
December 14, 2006	Sampling – Appendix I
June 27, 2007	Sampling – Appendix I – Select Appendix II – Appendix II (MW-11, MW-12, MW-14, MW-15, MW-17)
December 19,2007	Sampling – Appendix I
December 2007	Installed Monitoring Wells MW-16, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, MW-26, MW-27
January 9, 2008	Sampling – Appendix I

Background Sampling

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-1	1,1-Dichloroethane	10/01/1994	19	ug/l	5	70	
MW-1	1,1-Dichloroethane	01/31/1995	17	ug/l	5	70	
MW-1	1,1-Dichloroethane	02/15/1995	17	ug/l	5	70	
MW-1	1,1-Dichloroethane	03/07/1995	15	ug/l	5	70	
MW-2	1,1-Dichloroethane	10/01/1994	33	ug/l	5	70	
MW-2	1,1-Dichloroethane	01/31/1995	26	ug/l	5	70	
MW-2	1,1-Dichloroethane	02/15/1995	26	ug/l	5	70	
MW-2	1,1-Dichloroethane	03/07/1995	26	ug/l	5	70	
MW-3	1,1-Dichloroethane	10/01/1994	22	ug/l	5	70	
MW-3	1,1-Dichloroethane	01/31/1995	13	ug/l	5	70	
MW-3	1,1-Dichloroethane	02/15/1995	18	ug/l	5	70	
MW-3	1,1-Dichloroethane	03/07/1995	13	ug/l	5	70	
MW-4	1,1-Dichloroethane	10/01/1994	14	ug/l	5	70	
MW-4R	1,1-Dichloroethane	10/01/1994	14	ug/l	5	70	
MW-4R	1,1-Dichloroethane	01/31/1995	17	ug/l	5	70	
MW-4R	1,1-Dichloroethane	02/15/1995	17	ug/l	5	70	
MW-4R	1,1-Dichloroethane	03/07/1995	14	ug/l	5	70	
MW-5	1,1-Dichloroethane	10/01/1994	11	ug/l	5	70	
MW-5	1,1-Dichloroethane	01/31/1995	12	ug/l	5	70	
MW-5	1,1-Dichloroethane	02/15/1995	8	ug/l	5	70	
MW-5	1,1-Dichloroethane	03/07/1995	7	ug/l	5	70	
MW-7	1,1-Dichloroethane	10/01/1994	16	ug/l	5	70	
MW-7	1,1-Dichloroethane	01/31/1995	26	ug/l	5	70	
MW-7	1,1-Dichloroethane	02/15/1995	29	ug/l	5	70	
MW-7	1,1-Dichloroethane	03/07/1995	25	ug/l	5	70	
MW-8	1,1-Dichloroethane	10/01/1994	10	ug/l	5	70	
MW-8	1,1-Dichloroethane	01/31/1995	8	ug/l	5	70	
MW-8	1,1-Dichloroethane	02/15/1995	11	ug/l	5	70	
MW-8	1,1-Dichloroethane	03/07/1995	11	ug/l	5	70	
SW-3	1,1-Dichloroethane	10/01/1994	9	ug/l	5	70	
MW-2	**1,1,2-Trichloroethene**	**10/01/1994**	**5**	**ug/l**	**5**	**2.8**	**2.2**
MW-2	**1,1,2-Trichloroethene**	**01/31/1995**	**6**	**ug/l**	**5**	**2.8**	**3.2**
MW-2	**1,1,2-Trichloroethene**	**02/15/1995**	**6**	**ug/l**	**5**	**2.8**	**3.2**
MW-2	**1,1,2-Trichloroethene**	**03/07/1995**	**6**	**ug/l**	**5**	**2.8**	**3.2**
MW-3	**1,1,2-Trichloroethene**	**02/15/1995**	**5**	**ug/l**	**5**	**2.8**	**2.2**
MW-3	**1,2-Dichloropropane**	**10/01/1994**	**11**	**ug/l**	**5**	**0.51**	**10.49**
MW-3	**1,2-Dichloropropane**	**01/31/1995**	**6**	**ug/l**	**5**	**0.51**	**5.49**
MW-3	**1,2-Dichloropropane**	**02/15/1995**	**9**	**ug/l**	**5**	**0.51**	**8.49**
MW-3	**1,2-Dichloropropane**	**03/07/1995**	**7**	**ug/l**	**5**	**0.51**	**6.49**
MW-1A	Barium	10/01/1994	0.72	mg/l	0.1	2	
MW-1A	Barium	01/31/1995	0.807	mg/l	0.5	2	
MW-1A	Barium	02/15/1995	0.678	mg/l	0.5	2	
MW-2	Barium	10/01/1994	0.38	mg/l	0.1	2	
MW-3	Barium	10/01/1994	0.11	mg/l	0.1	2	
MW-4	Barium	10/01/1994	0.1	mg/l	0.1	2	
MW-4R	Barium	10/01/1994	1.5	mg/l	0.1	2	
MW-5	**Barium**	**10/01/1994**	**3.49**	**mg/l**	**0.1**	**2**	**1.49**
MW-5	Barium	01/31/1995	1.98	mg/l	0.5	2	
MW-5	Barium	02/15/1995	1.45	mg/l	0.5	2	
MW-5	Barium	03/07/1995	1.82	mg/l	0.5	2	
MW-6	Barium	10/01/1994	0.42	mg/l	0.1	2	
MW-6	Barium	03/07/1995	0.554	mg/l	0.5	2	

Background Sampling

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-7	Barium	10/01/1994	0.1	mg/l	0.1	2	
SW-3	Barium	10/01/1994	0.54	mg/l	0.1	2	
MW-2	**Benzene**	**02/15/1995**	**5**	**ug/l**	**5**	**1**	**4**
MW-2	**Benzene**	**03/07/1995**	**5**	**ug/l**	**5**	**1**	**4**
MW-3	**Benzene**	**10/01/1994**	**9**	**ug/l**	**5**	**1**	**8**
MW-3	**Benzene**	**01/31/1995**	**8**	**ug/l**	**5**	**1**	**7**
MW-3	**Benzene**	**02/15/1995**	**9**	**ug/l**	**5**	**1**	**8**
MW-3	**Benzene**	**03/07/1995**	**6**	**ug/l**	**5**	**1**	**5**
MW-1A	Beryllium, total	01/31/1995	0.003	mg/l	0.002		
MW-4R	Beryllium, total	01/31/1995	0.004	mg/l	0.002		
MW-4R	Beryllium, total	03/07/1995	0.002	mg/l	0.002		
MW-5	Beryllium, total	10/01/1994	0.08	mg/l	0.025		
MW-5	Beryllium, total	01/31/1995	0.019	mg/l	0.002		
MW-5	Beryllium, total	02/15/1995	0.016	mg/l	0.002		
MW-5	Beryllium, total	03/07/1995	0.016	mg/l	0.002		
MW-7	Beryllium, total	03/07/1995	0.002	mg/l	0.002		
MW-2	**Cadmium, total**	**10/01/1994**	**0.004**	**mg/l**	**0.001**	**0.0018**	**0.0023**
MW-4R	**Cadmium, total**	**10/01/1994**	**0.002**	**mg/l**	**0.001**	**0.0018**	**0.0003**
MW-4R	**Cadmium, total**	**02/15/1995**	**0.005**	**mg/l**	**0.001**	**0.0018**	**0.0033**
MW-5	Cadmium, total	10/01/1994	0.001	mg/l	0.001	0.0018	
MW-2	Chloroethane	10/01/1994	22	ug/l	10		
MW-2	Chloroethane	01/31/1995	20	ug/l	10		
MW-2	Chloroethane	02/15/1995	20	ug/l	10		
MW-2	Chloroethane	03/07/1995	22	ug/l	10		
MW-3	Chloroethane	10/01/1994	12	ug/l	10		
MW-3	Chloroethane	01/31/1995	10	ug/l	10		
MW-3	Chloroethane	02/15/1995	12	ug/l	10		
MW-7	Chloroethane	01/31/1995	11	ug/l	10		
MW-7	Chloroethane	02/15/1995	11	ug/l	10		
MW-1	Chromium, total	10/01/1994	0.009	mg/l	0.005	0.05	
MW-1	Chromium, total	01/31/1995	0.014	mg/l	0.01	0.05	
MW-1	Chromium, total	03/07/1995	0.014	mg/l	0.01	0.05	
MW-1A	**Chromium, total**	**10/01/1994**	**0.12**	**mg/l**	**0.005**	**0.05**	**0.07**
MW-1A	**Chromium, total**	**01/31/1995**	**0.182**	**mg/l**	**0.01**	**0.05**	**0.132**
MW-1A	**Chromium, total**	**02/15/1995**	**0.082**	**mg/l**	**0.01**	**0.05**	**0.032**
MW-1A	Chromium, total	03/07/1995	0.025	mg/l	0.01	0.05	
MW-2	**Chromium, total**	**10/01/1994**	**0.064**	**mg/l**	**0.005**	**0.05**	**0.014**
MW-2	Chromium, total	01/31/1995	0.02	mg/l	0.01	0.05	
MW-2	Chromium, total	02/15/1995	0.011	mg/l	0.01	0.05	
MW-3	Chromium, total	01/31/1995	0.038	mg/l	0.01	0.05	
MW-3	Chromium, total	02/15/1995	0.013	mg/l	0.01	0.05	
MW-3	Chromium, total	03/07/1995	0.017	mg/l	0.01	0.05	
MW-4	Chromium, total	10/01/1994	0.015	mg/l	0.005	0.05	
MW-4R	**Chromium, total**	**10/01/1994**	**0.28**	**mg/l**	**0.005**	**0.05**	**0.23**
MW-4R	**Chromium, total**	**01/31/1995**	**0.09**	**mg/l**	**0.01**	**0.05**	**0.04**
MW-4R	Chromium, total	02/15/1995	0.017	mg/l	0.01	0.05	
MW-4R	Chromium, total	03/07/1995	0.019	mg/l	0.01	0.05	
MW-5	**Chromium, total**	**10/01/1994**	**0.69**	**mg/l**	**0.1**	**0.05**	**0.64**
MW-5	**Chromium, total**	**01/31/1995**	**0.512**	**mg/l**	**0.01**	**0.05**	**0.462**
MW-5	**Chromium, total**	**02/15/1995**	**0.522**	**mg/l**	**0.01**	**0.05**	**0.472**
MW-5	**Chromium, total**	**03/07/1995**	**0.392**	**mg/l**	**0.01**	**0.05**	**0.342**
MW-6	**Chromium, total**	**10/01/1994**	**0.115**	**mg/l**	**0.005**	**0.05**	**0.065**

Background Sampling

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-6	Chromium, total	01/31/1995	0.043	mg/l	0.01	0.05	
MW-6	Chromium, total	02/15/1995	0.028	mg/l	0.01	0.05	
MW-6	**Chromium, total**	**03/07/1995**	**0.088**	**mg/l**	**0.01**	**0.05**	**0.038**
MW-7	Chromium, total	10/01/1994	0.015	mg/l	0.005	0.05	
MW-7	Chromium, total	01/31/1995	0.037	mg/l	0.01	0.05	
MW-7	Chromium, total	02/15/1995	0.022	mg/l	0.01	0.05	
MW-7	Chromium, total	03/07/1995	0.023	mg/l	0.01	0.05	
MW-8	Chromium, total	10/01/1994	0.026	mg/l	0.005	0.05	
MW-8	Chromium, total	01/31/1995	0.027	mg/l	0.01	0.05	
MW-8	Chromium, total	02/15/1995	0.012	mg/l	0.01	0.05	
MW-8	Chromium, total	03/07/1995	0.014	mg/l	0.01	0.05	
MW-2	cis-1,2-Dichloroethylene	01/31/1995	5	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	02/15/1995	6	ug/l	5	70	
MW-2	cis-1,2-Dichloroethylene	03/07/1995	6	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	10/01/1994	12	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	01/31/1995	7	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	02/15/1995	13	ug/l	5	70	
MW-3	cis-1,2-Dichloroethylene	03/07/1995	10	ug/l	5	70	
MW-4	cis-1,2-Dichloroethylene	10/01/1994	8	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	10/01/1994	10	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	01/31/1995	12	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	02/15/1995	12	ug/l	5	70	
MW-4R	cis-1,2-Dichloroethylene	03/07/1995	10	ug/l	5	70	
MW-1A	Cobalt	10/01/1994	0.22	mg/l	0.1		
MW-1A	Cobalt	01/31/1995	0.146	mg/l	0.01		
MW-1A	Cobalt	02/15/1995	0.128	mg/l	0.01		
MW-1A	Cobalt	03/07/1995	0.024	mg/l	0.01		
MW-2	Cobalt	10/01/1994	0.25	mg/l	0.1		
MW-2	Cobalt	01/31/1995	0.154	mg/l	0.01		
MW-2	Cobalt	02/15/1995	0.149	mg/l	0.01		
MW-2	Cobalt	03/07/1995	0.223	mg/l	0.01		
MW-3	Cobalt	01/31/1995	0.017	mg/l	0.01		
MW-3	Cobalt	02/15/1995	0.032	mg/l	0.01		
MW-3	Cobalt	03/07/1995	0.026	mg/l	0.01		
MW-4	Cobalt	10/01/1994	0.32	mg/l	0.1		
MW-4R	Cobalt	10/01/1994	0.7	mg/l	0.1		
MW-4R	Cobalt	01/31/1995	0.262	mg/l	0.01		
MW-4R	Cobalt	02/15/1995	0.291	mg/l	0.01		
MW-4R	Cobalt	03/07/1995	0.225	mg/l	0.01		
MW-5	Cobalt	10/01/1994	0.9	mg/l	0.1		
MW-5	Cobalt	01/31/1995	0.496	mg/l	0.01		
MW-5	Cobalt	02/15/1995	0.454	mg/l	0.01		
MW-5	Cobalt	03/07/1995	0.32	mg/l	0.01		
MW-6	Cobalt	01/31/1995	0.025	mg/l	0.01		
MW-6	Cobalt	02/15/1995	0.027	mg/l	0.01		
MW-6	Cobalt	03/07/1995	0.037	mg/l	0.01		
MW-7	Cobalt	01/31/1995	0.015	mg/l	0.01		
MW-7	Cobalt	02/15/1995	0.014	mg/l	0.01		
MW-7	Cobalt	03/07/1995	0.015	mg/l	0.01		
MW-8	Cobalt	01/31/1995	0.019	mg/l	0.01		
MW-8	Cobalt	02/15/1995	0.016	mg/l	0.01		
MW-8	Cobalt	03/07/1995	0.014	mg/l	0.01		

Background Sampling

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
SW-3	Cobalt	10/01/1994	0.16	mg/l	0.1		
SW-3	Cobalt	03/07/1995	0.011	mg/l	0.01		
MW-1A	Copper	10/01/1994	0.26	mg/l	0.1	1	
MW-2	Copper	10/01/1994	0.22	mg/l	0.1	1	
MW-4R	Copper	10/01/1994	0.24	mg/l	0.1	1	
MW-5	**Copper**	**10/01/1994**	**1.07**	**mg/l**	**0.1**	**1**	**0.07**
MW-5	Copper	01/31/1995	0.757	mg/l	0.2	1	
MW-5	Copper	02/15/1995	0.464	mg/l	0.2	1	
MW-5	Copper	03/07/1995	0.676	mg/l	0.2	1	
MW-1A	**Lead, total**	**10/01/1994**	**0.058**	**mg/l**	**0.01**	**0.015**	**0.043**
MW-1A	**Lead, total**	**01/31/1995**	**0.053**	**mg/l**	**0.01**	**0.015**	**0.038**
MW-1A	**Lead, total**	**02/15/1995**	**0.037**	**mg/l**	**0.01**	**0.015**	**0.022**
MW-2	**Lead, total**	**10/01/1994**	**0.024**	**mg/l**	**0.01**	**0.015**	**0.009**
MW-3	**Lead, total**	**01/31/1995**	**0.016**	**mg/l**	**0.01**	**0.015**	**0.001**
MW-4R	**Lead, total**	**10/01/1994**	**0.1**	**mg/l**	**0.01**	**0.015**	**0.085**
MW-4R	**Lead, total**	**01/31/1995**	**0.034**	**mg/l**	**0.01**	**0.015**	**0.019**
MW-5	**Lead, total**	**10/01/1994**	**0.082**	**mg/l**	**0.01**	**0.015**	**0.067**
MW-5	**Lead, total**	**01/31/1995**	**0.118**	**mg/l**	**0.01**	**0.015**	**0.103**
MW-5	**Lead, total**	**02/15/1995**	**0.1**	**mg/l**	**0.01**	**0.015**	**0.085**
MW-5	**Lead, total**	**03/07/1995**	**0.085**	**mg/l**	**0.01**	**0.015**	**0.07**
MW-6	Lead, total	10/01/1994	0.014	mg/l	0.01	0.015	
MW-6	Lead, total	01/31/1995	0.011	mg/l	0.01	0.015	
MW-6	Lead, total	03/07/1995	0.013	mg/l	0.01	0.015	
MW-3	**Methylene chloride**	**10/01/1994**	**24**	**ug/l**	**10**	**4.6**	**19.4**
MW-3	**Methylene chloride**	**02/15/1995**	**14**	**ug/l**	**10**	**4.6**	**9.4**
MW-7	**Methylene chloride**	**10/01/1994**	**24**	**ug/l**	**10**	**4.6**	**19.4**
MW-7	**Methylene chloride**	**01/31/1995**	**29**	**ug/l**	**10**	**4.6**	**24.4**
MW-7	**Methylene chloride**	**02/15/1995**	**26**	**ug/l**	**10**	**4.6**	**21.4**
MW-7	**Methylene chloride**	**03/07/1995**	**11**	**ug/l**	**10**	**4.6**	**6.4**
MW-1A	**Nickel**	**10/01/1994**	**0.19**	**mg/l**	**0.1**	**0.1**	**0.09**
MW-1A	**Nickel**	**01/31/1995**	**0.103**	**mg/l**	**0.05**	**0.1**	**0.003**
MW-1A	Nickel	02/15/1995	0.091	mg/l	0.05	0.1	
MW-3	**Nickel**	**10/01/1994**	**0.18**	**mg/l**	**0.1**	**0.1**	**0.08**
MW-3	**Nickel**	**01/31/1995**	**0.474**	**mg/l**	**0.05**	**0.1**	**0.374**
MW-3	**Nickel**	**02/15/1995**	**0.243**	**mg/l**	**0.05**	**0.1**	**0.143**
MW-3	**Nickel**	**03/07/1995**	**0.24**	**mg/l**	**0.05**	**0.1**	**0.14**
MW-4R	**Nickel**	**10/01/1994**	**0.56**	**mg/l**	**0.1**	**0.1**	**0.46**
MW-4R	**Nickel**	**01/31/1995**	**0.105**	**mg/l**	**0.05**	**0.1**	**0.005**
MW-4R	Nickel	02/15/1995	0.067	mg/l	0.05	0.1	
MW-5	**Nickel**	**10/01/1994**	**1.51**	**mg/l**	**0.1**	**0.1**	**1.41**
MW-5	**Nickel**	**01/31/1995**	**0.826**	**mg/l**	**0.05**	**0.1**	**0.726**
MW-5	**Nickel**	**02/15/1995**	**0.508**	**mg/l**	**0.05**	**0.1**	**0.408**
MW-5	**Nickel**	**03/07/1995**	**0.82**	**mg/l**	**0.05**	**0.1**	**0.72**
MW-5	Silver	10/01/1994	0.01	mg/l	0.01	0.018	
MW-1A	Vanadium	10/01/1994	0.33	mg/l	0.05		
MW-1A	Vanadium	01/31/1995	0.165	mg/l	0.04		
MW-1A	Vanadium	02/15/1995	0.11	mg/l	0.04		
MW-2	Vanadium	10/01/1994	0.14	mg/l	0.05		
MW-4R	Vanadium	10/01/1994	0.59	mg/l	0.05		
MW-4R	Vanadium	01/31/1995	0.099	mg/l	0.04		
MW-4R	Vanadium	02/15/1995	0.057	mg/l	0.04		
MW-4R	Vanadium	03/07/1995	0.061	mg/l	0.04		

Background Sampling

Well ID	Parameter Name [1]	Sample Date	Result	Unit	PQL [2]	NCGW2L [3]	Exceedance
MW-5	Vanadium	10/01/1994	1.77	mg/l	0.05		
MW-5	Vanadium	01/31/1995	0.489	mg/l	0.04		
MW-5	Vanadium	02/15/1995	0.392	mg/l	0.04		
MW-5	Vanadium	03/07/1995	0.533	mg/l	0.04		
MW-6	Vanadium	03/07/1995	0.1	mg/l	0.04		
MW-7	Vanadium	03/07/1995	0.058	mg/l	0.04		
MW-3	Xylene	10/01/1994	34	ug/l	5	530	
MW-3	Xylene	01/31/1995	20	ug/l	5	530	
MW-3	Xylene	02/15/1995	24	ug/l	5	530	
MW-3	Xylene	03/07/1995	22	ug/l	5	530	
MW-1	Zinc, total	10/01/1994	0.08	mg/l	0.05	1.05	
MW-1	Zinc, total	03/07/1995	0.051	mg/l	0.05	1.05	
MW-1A	Zinc, total	10/01/1994	0.29	mg/l	0.05	1.05	
MW-1A	Zinc, total	01/31/1995	0.265	mg/l	0.05	1.05	
MW-1A	Zinc, total	02/15/1995	0.287	mg/l	0.05	1.05	
MW-1A	Zinc, total	03/07/1995	0.056	mg/l	0.05	1.05	
MW-2	Zinc, total	10/01/1994	0.21	mg/l	0.05	1.05	
MW-2	Zinc, total	02/15/1995	0.06	mg/l	0.05	1.05	
MW-3	Zinc, total	01/31/1995	0.116	mg/l	0.05	1.05	
MW-4R	Zinc, total	10/01/1994	0.77	mg/l	0.05	1.05	
MW-4R	Zinc, total	01/31/1995	0.155	mg/l	0.05	1.05	
MW-4R	Zinc, total	02/15/1995	0.128	mg/l	0.05	1.05	
MW-4R	Zinc, total	03/07/1995	0.112	mg/l	0.05	1.05	
MW-5	**Zinc, total**	**10/01/1994**	**3.91**	**mg/l**	**0.05**	**1.05**	**2.86**
MW-5	**Zinc, total**	**01/31/1995**	**2.48**	**mg/l**	**0.05**	**1.05**	**1.43**
MW-5	**Zinc, total**	**02/15/1995**	**1.65**	**mg/l**	**0.05**	**1.05**	**0.6**
MW-5	**Zinc, total**	**03/07/1995**	**2.19**	**mg/l**	**0.05**	**1.05**	**1.14**
MW-6	Zinc, total	10/01/1994	0.13	mg/l	0.05	1.05	
MW-6	Zinc, total	03/07/1995	0.121	mg/l	0.05	1.05	
MW-7	Zinc, total	10/01/1994	0.06	mg/l	0.05	1.05	
MW-7	Zinc, total	01/31/1995	0.077	mg/l	0.05	1.05	
MW-7	Zinc, total	02/15/1995	0.189	mg/l	0.05	1.05	
MW-7	Zinc, total	03/07/1995	0.076	mg/l	0.05	1.05	
MW-8	Zinc, total	10/01/1994	0.07	mg/l	0.05	1.05	
MW-8	Zinc, total	01/31/1995	0.093	mg/l	0.05	1.05	
MW-8	Zinc, total	02/15/1995	0.105	mg/l	0.05	1.05	
SW-3	Zinc, total	10/01/1994	0.06	mg/l	0.05	1.05	

[1] Table only contains detected constituents.

[2] PQL = Practical Quantitation Limit

[3] NCGW2L = North Carolina Ground Water 2L Standard

NURE Sediment Samples

REC_NO	PRIME_ID	LATITUDE	LONGITUDE	SRLID	SMPMEDIA	SAMPSRC	SEDCOND	SAMPDAT	SEDTYPE	SEDCOLR
5281705	NCAE002S1	35.9845	-81.1815	NCAE002S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281706	NCAE002S1	35.9845	-81.1815	NCAE002S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281729	NCAE019S1	35.9346	-81.1349	NCAE019S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281730	NCAE019S1	35.9346	-81.1349	NCAE019S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281731	NCAE020S1	35.9566	-81.1261	NCAE020S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281732	NCAE020S1	35.9566	-81.1261	NCAE020S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281733	NCAE021S1	35.9663	-81.162	NCAE021S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281734	NCAE021S1	35.9663	-81.162	NCAE021S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281735	NCAE022S1	35.9469	-81.1895	NCAE022S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281736	NCAE022S1	35.9469	-81.1895	NCAE022S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281737	NCAE023S1	35.9291	-81.213	NCAE023S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281738	NCAE023S1	35.9291	-81.213	NCAE023S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281739	NCAE024S1	35.9533	-81.2262	NCAE024S1	SEDIMENT	STREAM	WET	7/15/1976	OTHER	BROWN
5281740	NCAE024S1	35.9533	-81.2262	NCAE024S1	SEDIMENT	STREAM	WET	7/15/1976	OTHER	BROWN
5281741	NCAE025S1	35.9864	-81.2445	NCAE025S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281742	NCAE025S1	35.9864	-81.2445	NCAE025S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281743	NCAE026S1	35.9977	-81.2329	NCAE026S1	SEDIMENT	STREAM	WET	7/15/1976	OTHER	BROWN
5281744	NCAE026S1	35.9977	-81.2329	NCAE026S1	SEDIMENT	STREAM	WET	7/15/1976	OTHER	BROWN
5281781	NCAE046S1	35.8903	-81.2332	NCAE046S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281782	NCAE046S1	35.8903	-81.2332	NCAE046S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281783	NCAE047S1	35.9106	-81.2304	NCAE047S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281784	NCAE047S1	35.9106	-81.2304	NCAE047S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281785	NCAE048S1	35.8957	-81.184	NCAE048S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281786	NCAE048S1	35.8957	-81.184	NCAE048S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281787	NCAE049S1	35.895	-81.1625	NCAE049S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281788	NCAE049S1	35.895	-81.1625	NCAE049S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281789	NCAE050S1	35.9032	-81.1396	NCAE050S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN
5281790	NCAE050S1	35.9032	-81.1396	NCAE050S1	SEDIMENT	STREAM	WET	7/15/1976	SAND	BROWN

NURE Sediment Samples

REC_NO	U_DN_PPM	AG_PPM	AL_PCT	AU_PPM	BA_PPM	BE_PPM	CE_PPM	CO_PPM	CR_PPM	CU_PPM
5281705	14.1	-0.5	3.97	-0.01	25	0.6	170	9	10	6
5281706	13.4		3.25				194			
5281729	6	-0.5	6.95	-0.01	130	1.2	140	7	13	5
5281730	5.7		5.7				152			
5281731	2.6	0.5	7.68	-0.01	210	1	30	14	6	7
5281732	2.5		6.3				35			
5281733	29.6	0.5	8.44	0.55	165	1	900	14	5	12
5281734	28.1		6.92				1007			
5281735	32	-0.5	7.67	-0.01	125	1.5	450	10	20	8
5281736	30.4		6.29				498			
5281737	6.1	0.5	9.05	-0.01	255	1.5	90	14	-5	11
5281738	5.8		7.42				105			
5281739	14.5	-0.5	3.02	-0.01	75	0.5	210	7	7	5
5281740	13.8		2.47				230			
5281741	19.5	-0.5	4.15	0.482	35	1.2	700	8	13	8
5281742	18.5		3.4				778			
5281743	9.1	0.5	4.22	-0.01	250	1	210	10	8	7
5281744	8.7		3.46				238			
5281781	26.3	-0.5	6	-0.01	20	1.1	510	7	35	5
5281782	25		4.92				567			
5281783	32.1	0.5	5.12	-0.01	45	1.2	550	10	13	5
5281784	30.5		4.2				612			
5281785	39.3	-0.5	4.48	-0.01	15	1.1	1150	9	12	7
5281786	37.4		3.68				1286			
5281787	10.7	-0.5	2.86	-0.01	25	0.8	160	8	8	5
5281788	10.1		2.34				180			
5281789	6.4	-0.5	4.35	-0.01	15	1.2	140	9	7	6
5281790	6		3.57				152			

NURE Sediment Samples

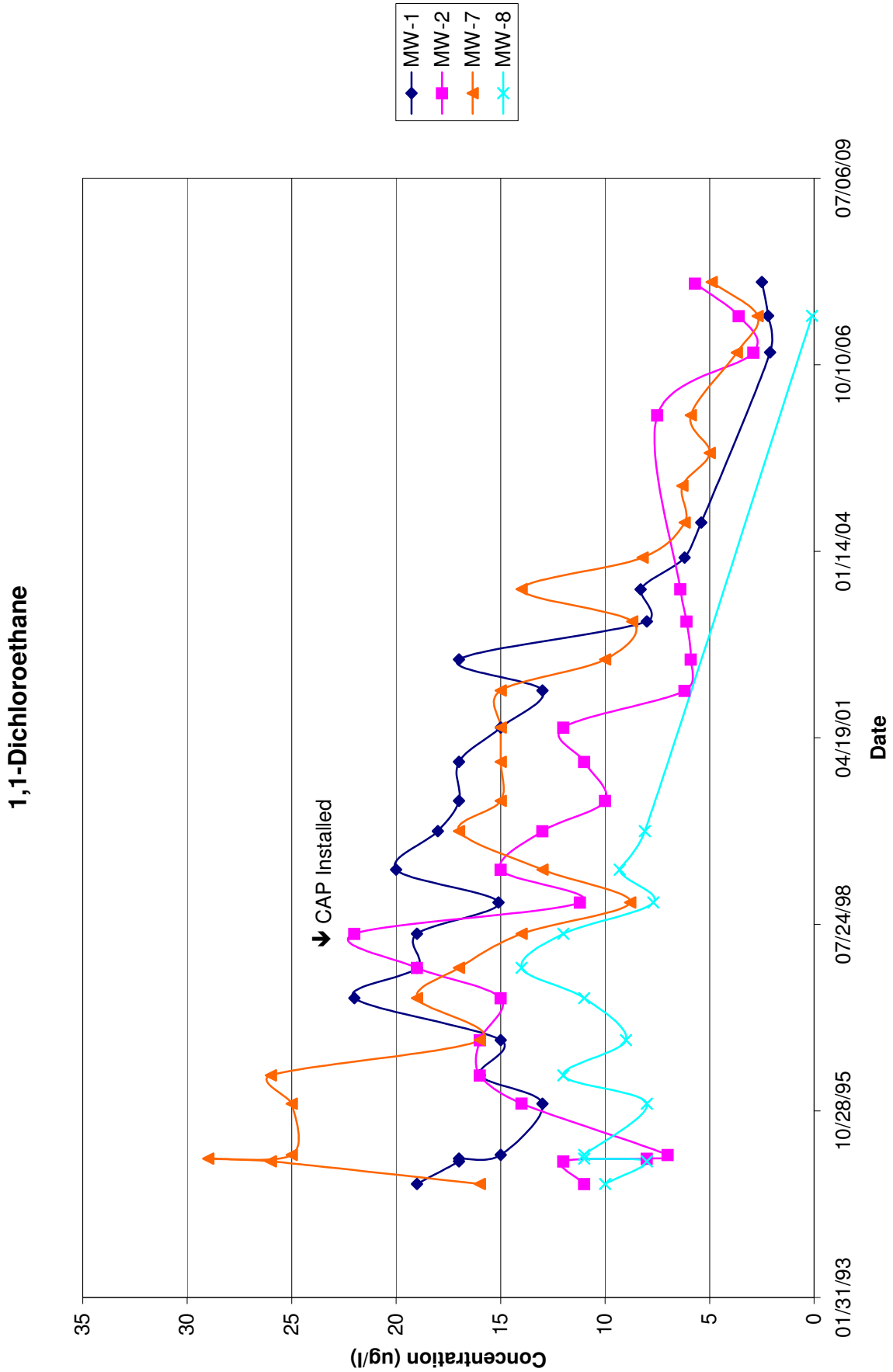
REC_NO	DY_PPM	EU_PPM	FE_PCT	HF_PPM	K_PCT	LA_PPM	LI_PPM	LU_PPM	MG_PCT	MN_PPM
5281705	6.8	0.3	1.19	47	1.38		12		0.32	700
5281706	5.9	0.6	1.69	35						520
5281729	6.6	1.7	1.67	26	1.1	71	5	6.9	0.13	160
5281730	5.7	3.1	2.37	20		68		1.1		120
5281731	3.7	1.8	1.2	10	1.46	-10	7	4.1	0.085	370
5281732	3.2	3.4	1.7	8				0.7		280
5281733	32.8	5.1	3.82	52	1.14	348	14	21.7	0.145	310
5281734	28.6	9.4	5.42	39		334		3.5		240
5281735	23.2	1.9	2.35	62	1.18	146	12	9	0.2	530
5281736	20.2	3.6	3.34	47		140		1.4		400
5281737	2.2	2.1	2.34	12	1.38	75	15	6.2	0.14	
5281738	1.9	4	3.33	9		72		1		
5281739	6.1	-0.3	0.67	66	1.48	96	10	-1.8	0.145	240
5281740	5.3	-1	0.96	50		92		-0.2		180
5281741	13.2	1.9	1.73	101	1.24	293	12	11.5	0.215	610
5281742	11.5	3.5	2.45	76		281		1.8		460
5281743	5.6	-0.3	0.61	43	1.26	81	11	3.4	0.255	90
5281744	4.8	-1	0.86	32		78		0.5		60
5281781	6.2	2.3	1.69	56	1.82		15		0.21	160
5281782	5.4	4.2	2.4	42						120
5281783	3	0.7	1.61	97	1.8		16		0.22	1360
5281784	2.6	1.3	2.29	73						1020
5281785	23.3	0.5	1.38	72	1.42		18		0.29	520
5281786	20.2	1	1.96	54						390
5281787	7.1	0.5	0.46	70	1.28		13		0.175	190
5281788	6.2	0.9	0.65	53						140
5281789	8	1	0.83	81	1.14		19		0.225	300
5281790	7	1.9	1.18	61						220

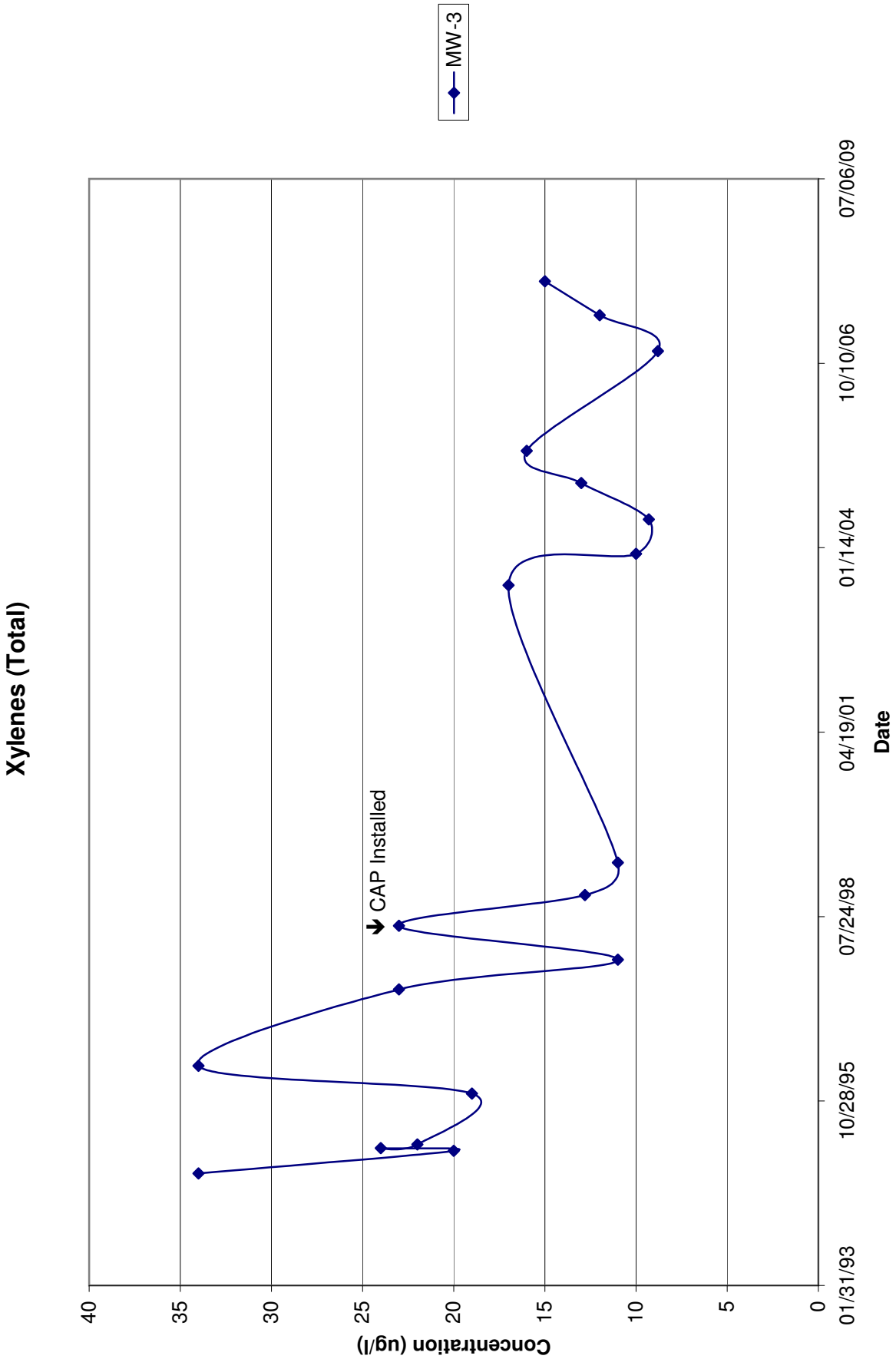
NURE Sediment Samples

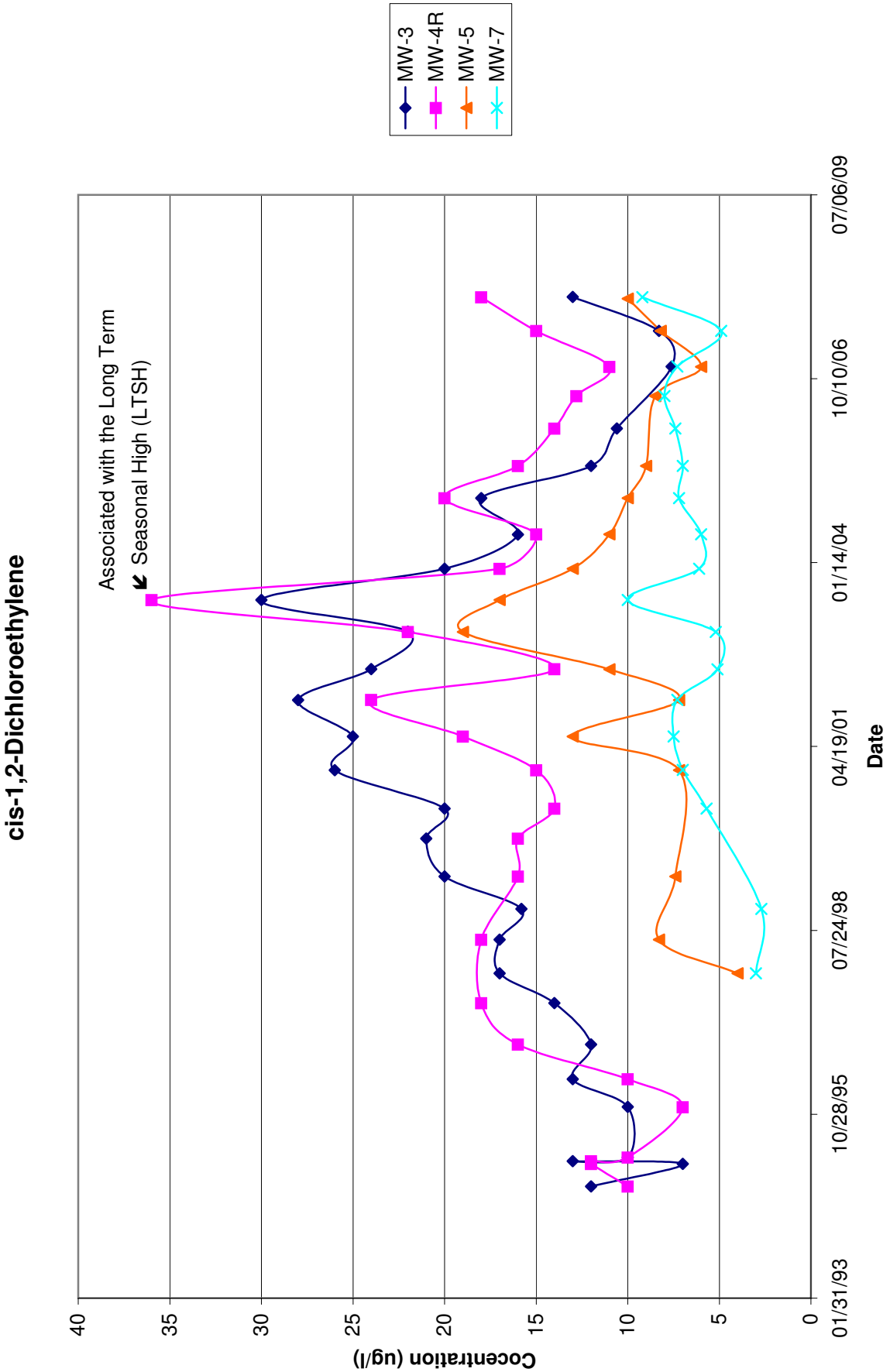
REC_NO	MO_PPM	NA_PCT	NB_PPM	NI_PPM	P_PPM	PB_PPM	SC_PPM	SM_PPM	SN_PPM
5281705	-5		-5	15	1540	-10	4.8		20
5281706		0.42					4.8		
5281729	-5		-5	6	452	10	11.7	17	15
5281730							11.7	25	
5281731	-5			9	634	-10	8.5		-5
5281732		1.03					8.5		
5281733	-5		30	14	977	10	7.7	154	-5
5281734							7.7	228	
5281735	-5		35	11	898	10	6.4	69	5
5281736							6.5	102	
5281737	-5		15	13	433	20	5.9	19	15
5281738							6	28	
5281739	5		5	6	738	-10	2	26	-5
5281740							2.1	38	
5281741	-5		10	14	718	-10	3.2	114	-5
5281742							3.2	168	
5281743	-5		-5	12	502	15	4.9	23	20
5281744							4.9	34	
5281781	-5		35	11	1980	15	5.6		25
5281782		0.21					5.6		
5281783	-5		35	6	1730	10	3.8		10
5281784		0.25					3.8		
5281785	-5		10	12	2200	20	3.9		5
5281786		0.26					4		
5281787	5		15	11	966	10	2.6		50
5281788		0.18					2.7		
5281789	-5		-5	10	1920	-10	3.9		-5
5281790		0.29					3.9		

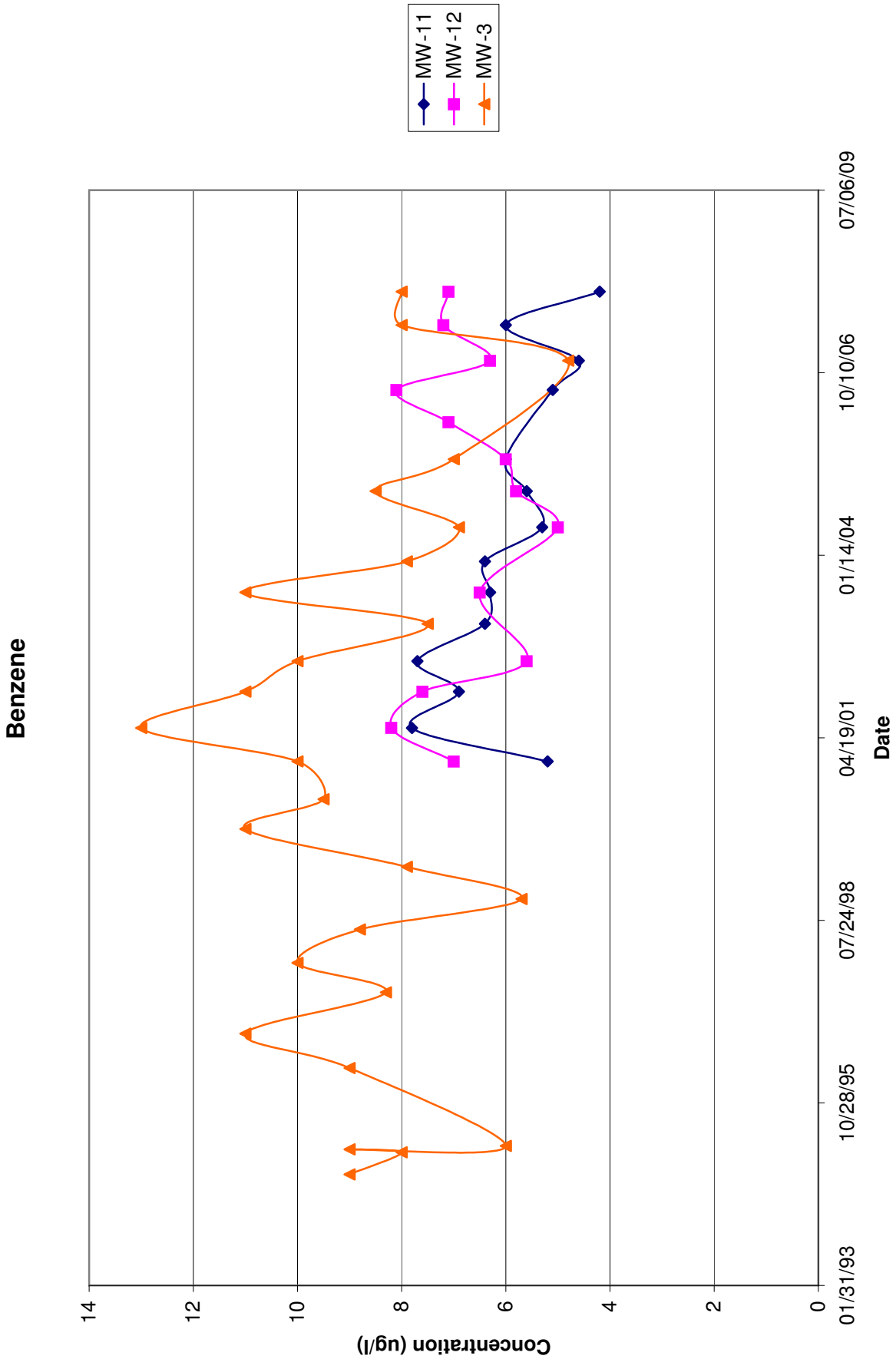
NURE Sediment Samples

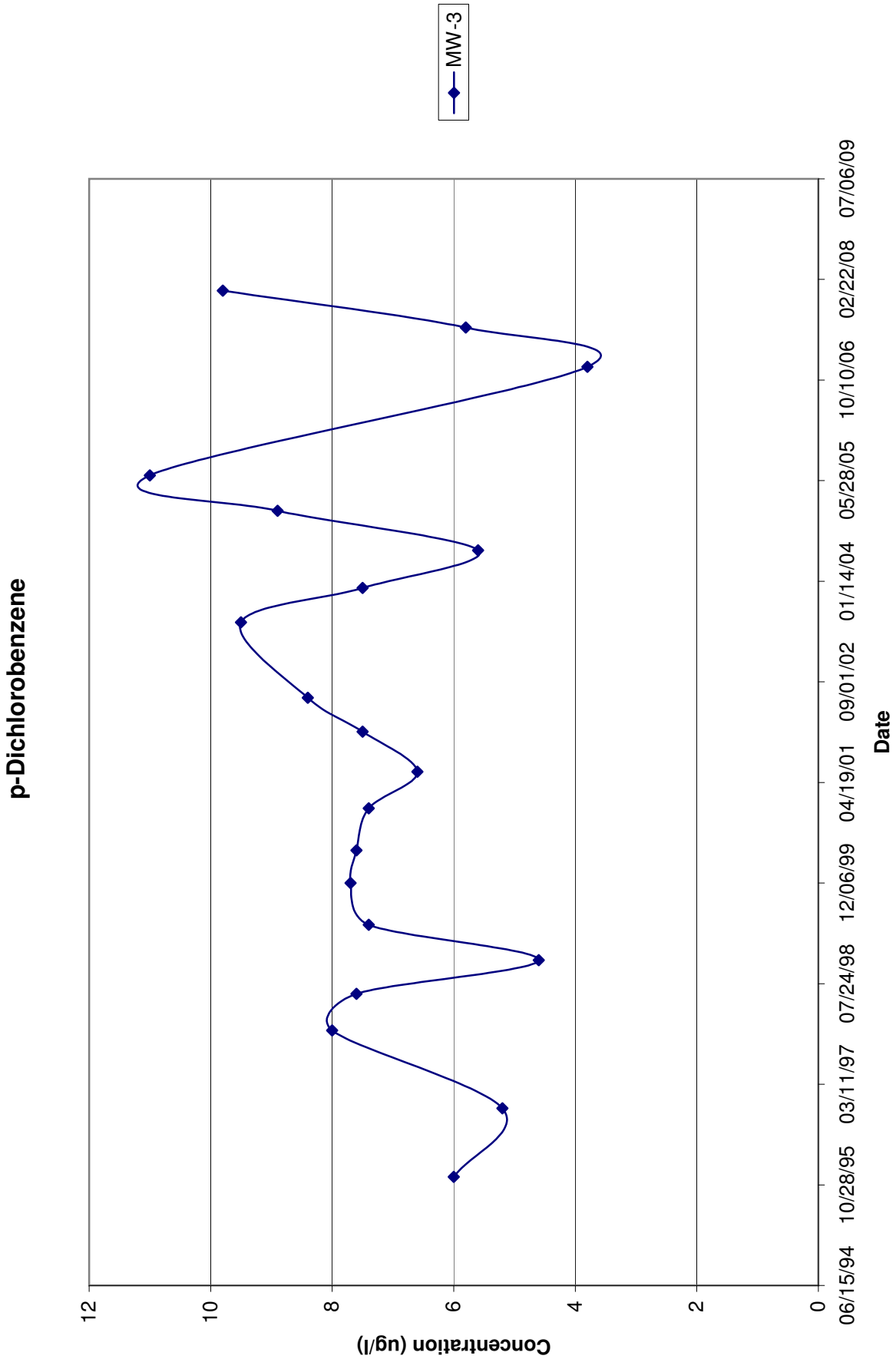
REC_NO	SR_PPM	TH_PPM	TI_PPM	V_PPM	W_PPM	Y_PPM	YB_PPM	ZN_PPM
5281705	53	52	9200	50	2	-5		24
5281706		63	6700	40				
5281729	64	20	3700	120	2	145	10.8	13
5281730		24	2700	90			3.6	
5281731	-50	4		110	3	210	23.5	23
5281732		4		90			7.8	
5281733	-50	179	5500	140	3	255	66.2	28
5281734		216	4000	120			21.8	
5281735	-50	116	4500	100	3	510	38.6	20
5281736		141	3300	90			12.7	
5281737	-50	16		90	-2	175	17.1	38
5281738		20		70			5.6	
5281739	-50	57	5100	10	-2	285	13.5	13
5281740		69	3700	10			4.5	
5281741	-50	141	6200	40	5	115	38.4	22
5281742		171	4500	30			12.7	
5281743	-50	39	4000	20	3	-5	10.1	23
5281744		47	2900	10			3.3	
5281781	66	100		80	4	155		20
5281782		121		70				
5281783	51	109	24000		4	190		20
5281784		132	17500					
5281785	-50	250	7700	50	-2	245		34
5281786		302	5600	40				
5281787	-50	23	4500	40	-2	200		17
5281788		28	3300	30				
5281789	-50	28	3400	40	-2	30		21
5281790		33	2500	30				


1,1-Dichloroethane
MW-1
MW-2
MW-7
MW-8
CAP Installed
Concentration (ug/l)
35
30
25
20
15
10
5
0
01/31/93
10/28/95
07/24/98
04/19/01
01/14/04
10/10/06
07/06/09
Date

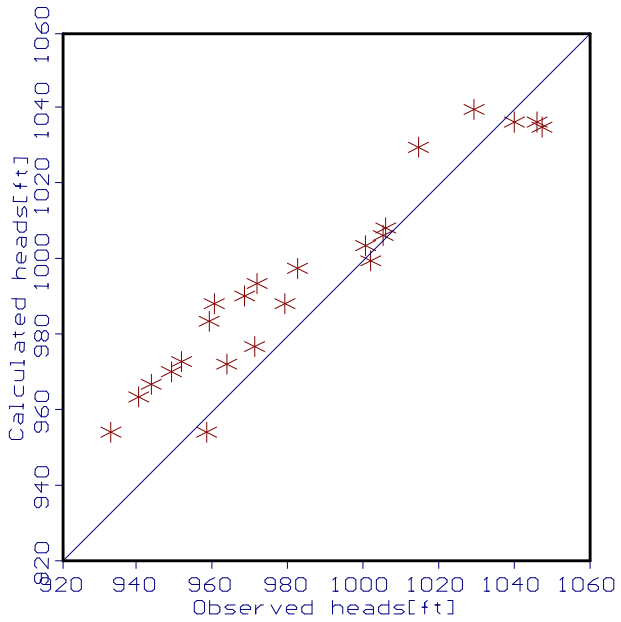

Xylenes (Total)
MW-3
CAP Installed
Concentration (ug/l)
40
35
30
25
20
15
10
5
0
01/31/93
10/28/95
07/24/98
04/19/01
01/14/04
10/10/06
07/06/09
Date


cis-1,2-Dichloroethylene
Associated with the Long Term
Seasonal High (LTSH)
MW-3
MW-4R
MW-5
MW-7
Cocentration (ug/l)
40
35
30
25
20
15
10
5
0
01/31/93
10/28/95
07/24/98
04/19/01
01/14/04
10/10/06
07/06/09
Date


Benzene
MW-11
MW-12
MW-3
Concentration (ug/l)
14
12
10
8
6
4
2
0
01/31/93
10/28/95
07/24/98
04/19/01
01/14/04
10/10/06
07/06/09
Date


p-Dichlorobenzene
MW-3
Concentration (ug/l)
12
10
8
6
4
2
0
06/15/94
10/28/95
03/11/97
07/24/98
12/06/99
04/19/01
09/01/02
01/14/04
05/28/05
10/10/06
02/22/08
07/06/09
Date

APPENDIX C



Period: 1

Step: 1

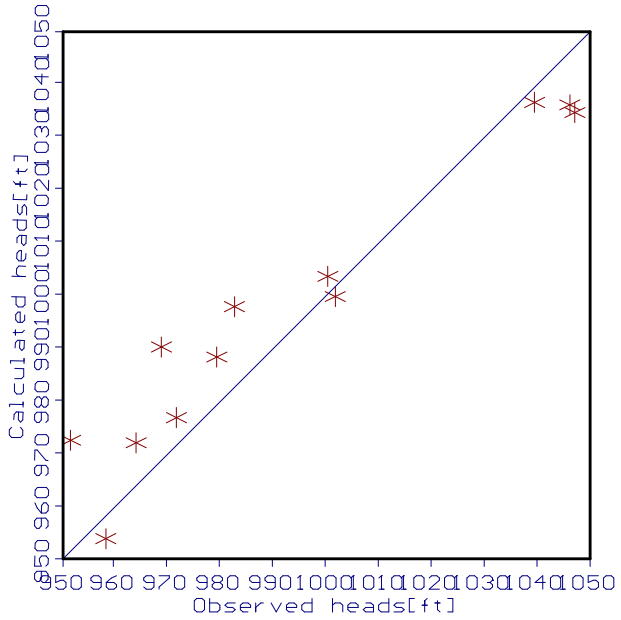
Mean error: 10.2289

Mean abs. err: 13.1461

RMS error: 15.5838

Scaled RMS: 13.5913

MESCO 25 Mar 08	Visual MODFLOW v.2.7.1, (C) 1995–1997 Waterloo Hydrogeologic, Inc. NC: 109 NR: 85 NL: 3 Current Layer: 3



Period: 1

Step: 1

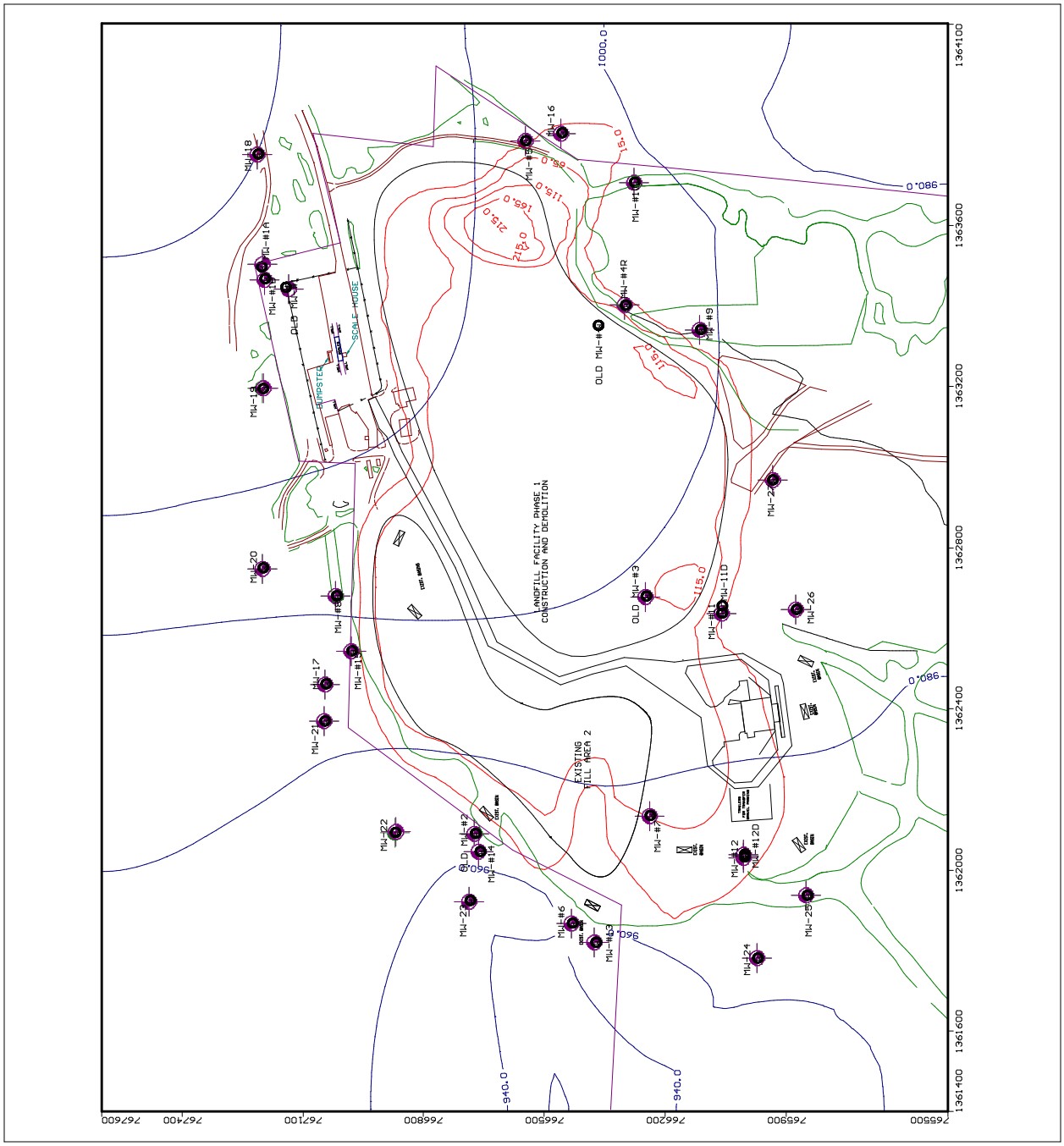
Mean error: 3.92854

Mean abs. err: 9.51982

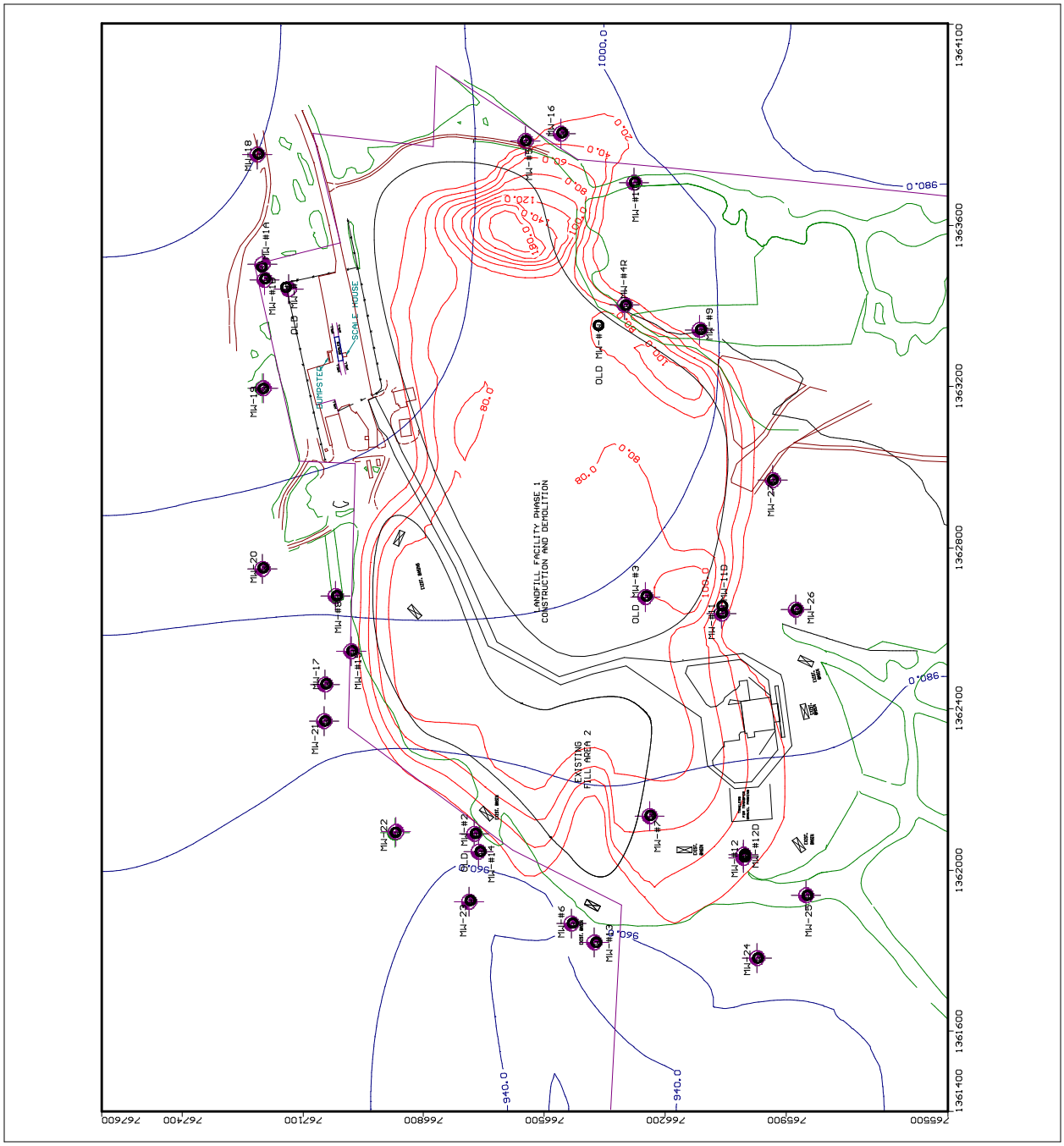
RMS error: 11.4226

Scaled RMS: 11.9346

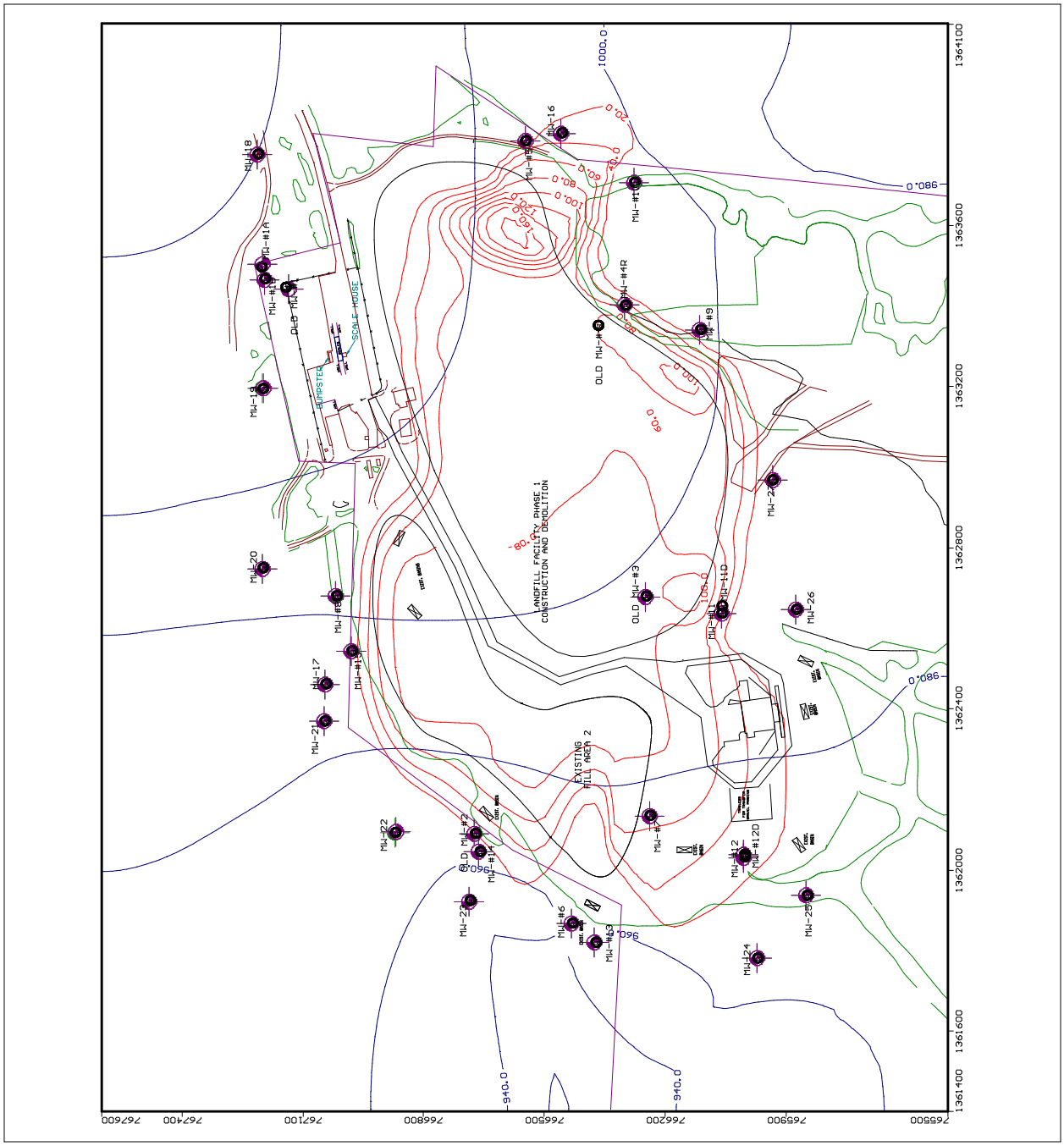
MESCO 25 Mar 08	Visual MODFLOW v.2.7.1, (C) 1995–1997 Waterloo Hydrogeologic, Inc. NC: 109 NR: 85 NL: 3 Current Layer: 3



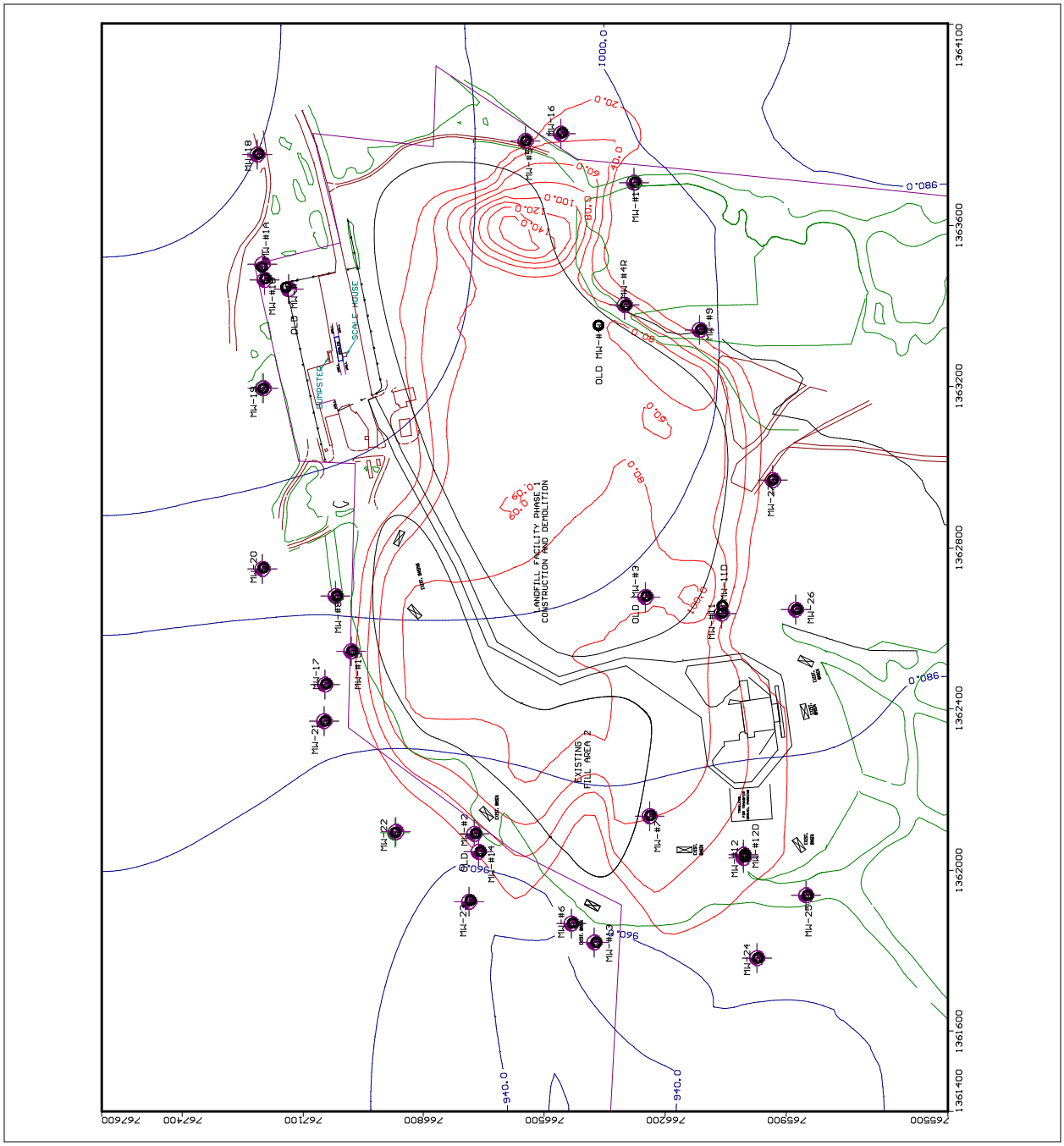
MODFLOW 7 Year Simulation
1997 VOC Contamination



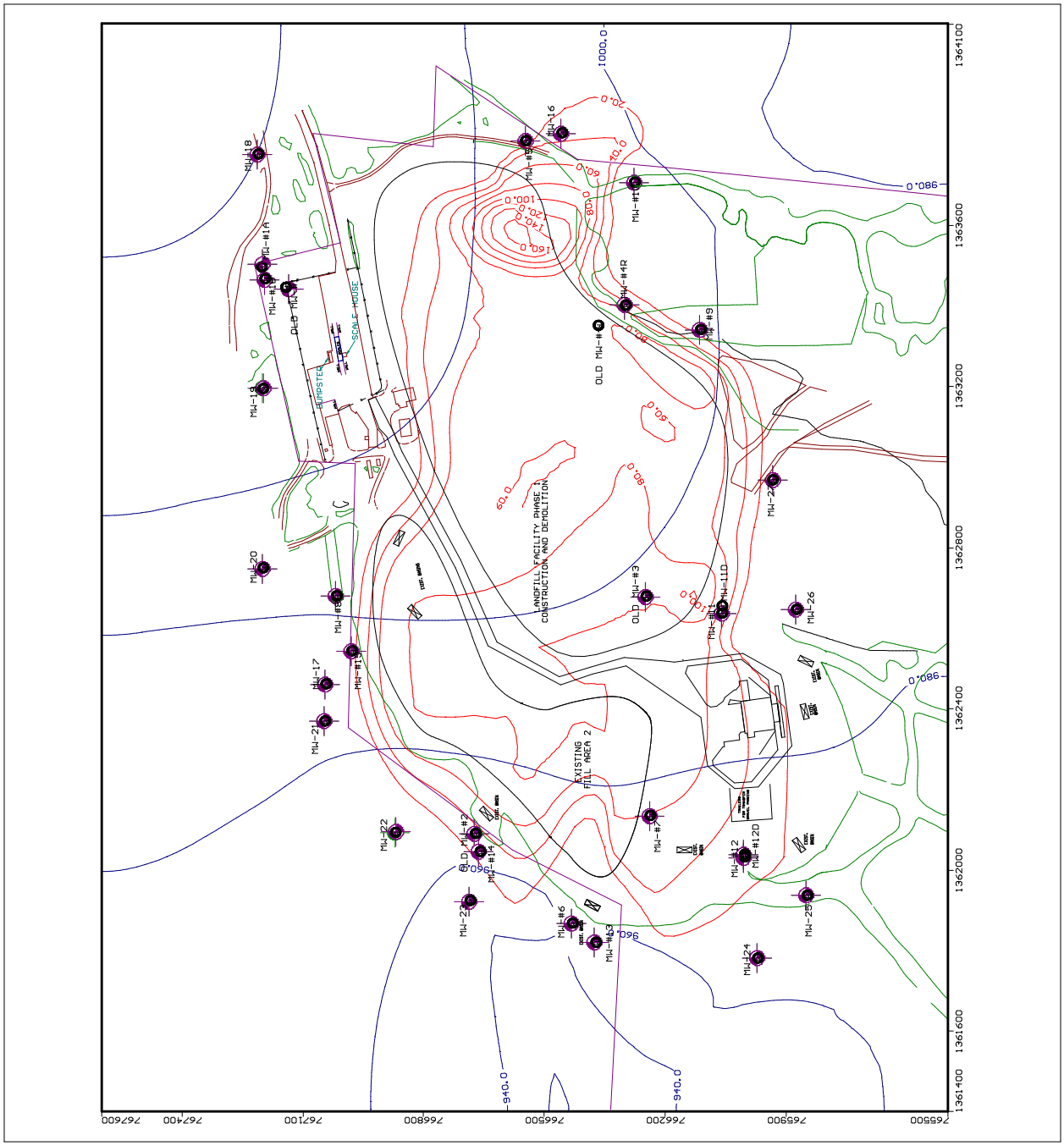
MODFLOW 11 Year Simulation
2001 VOC Contamination



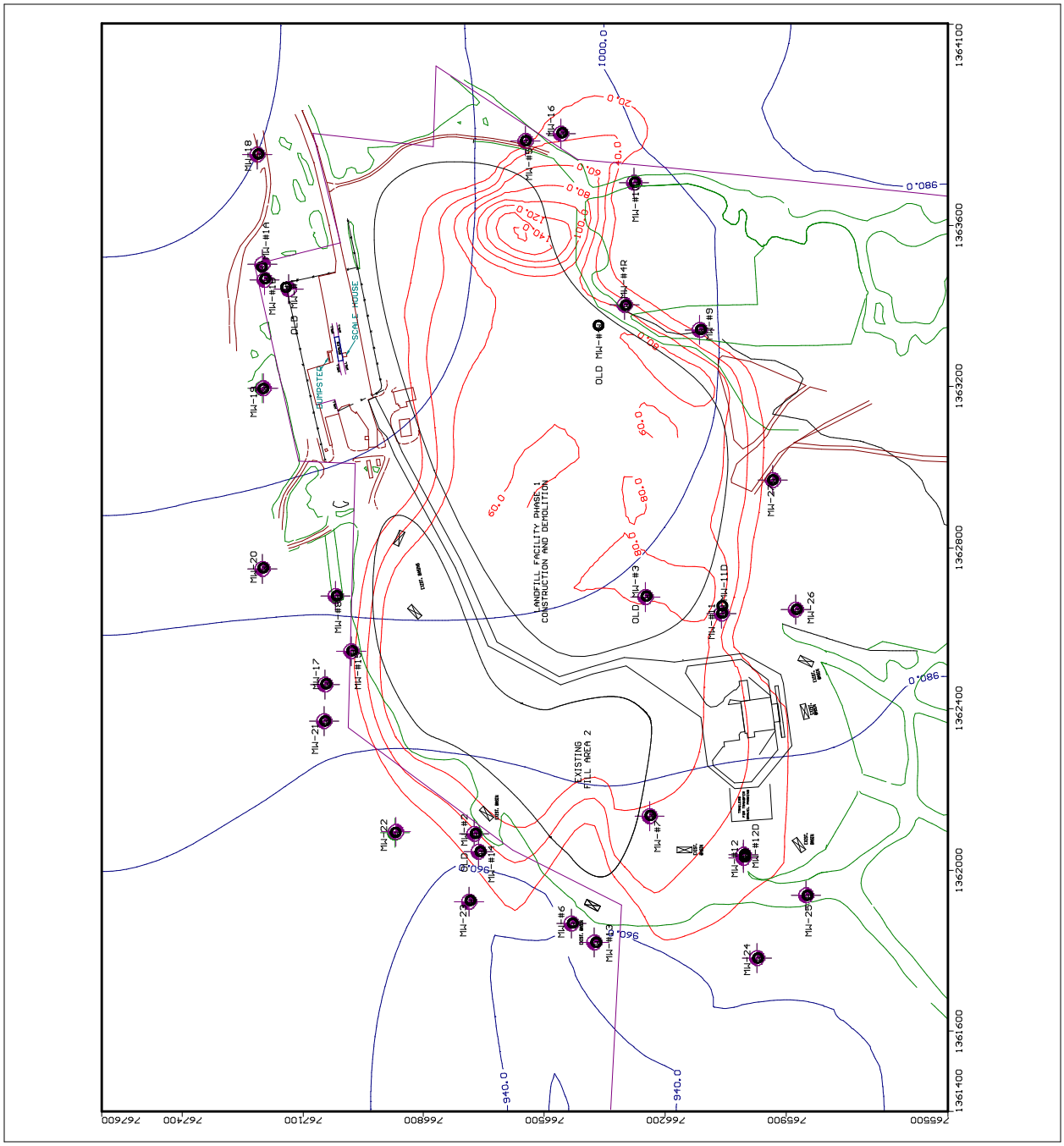
MODFLOW 13 Year Simulation
2003 VOC Contamination



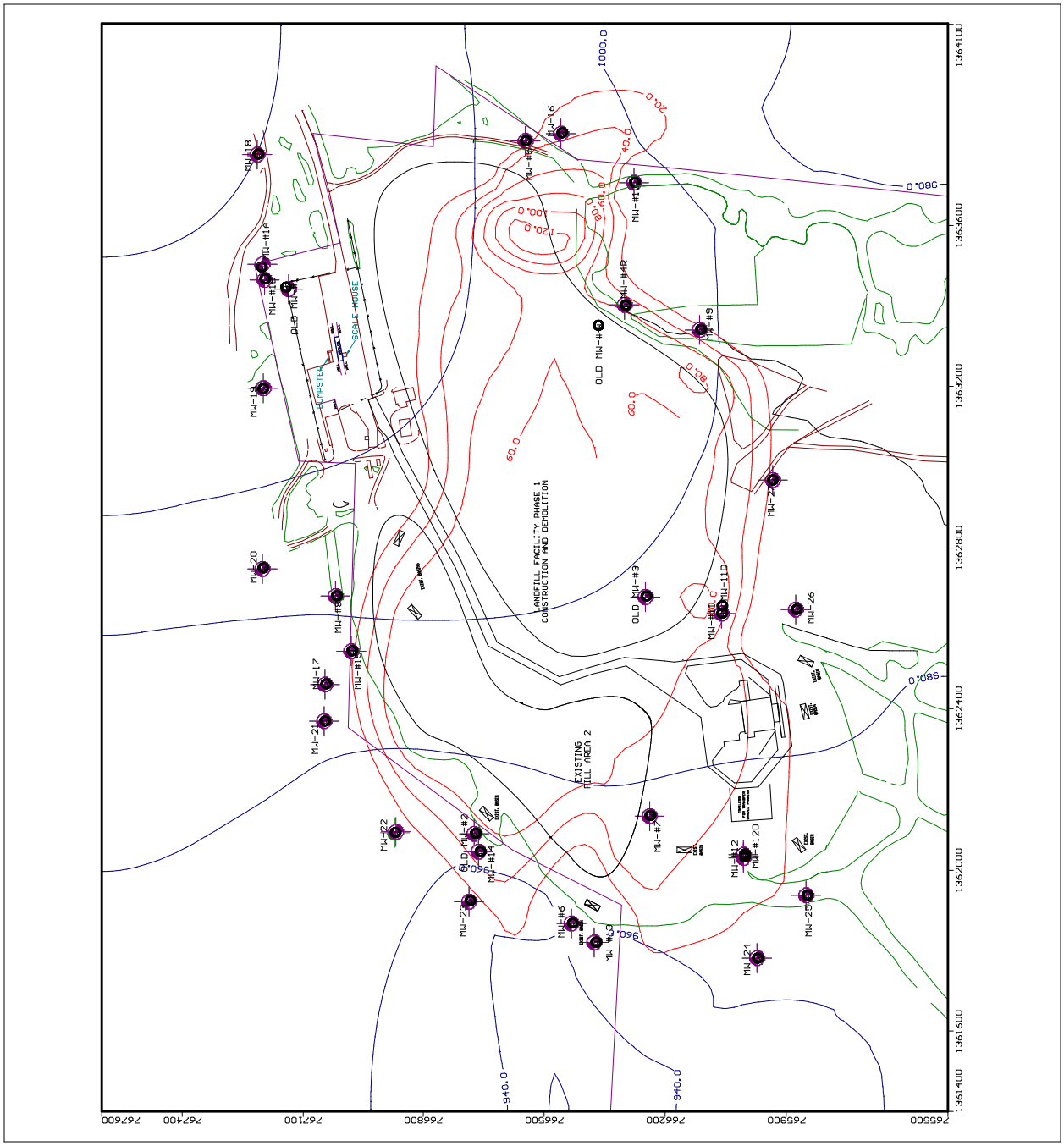
MODFLOW 16 Year Simulation
2006 VOC Contamination



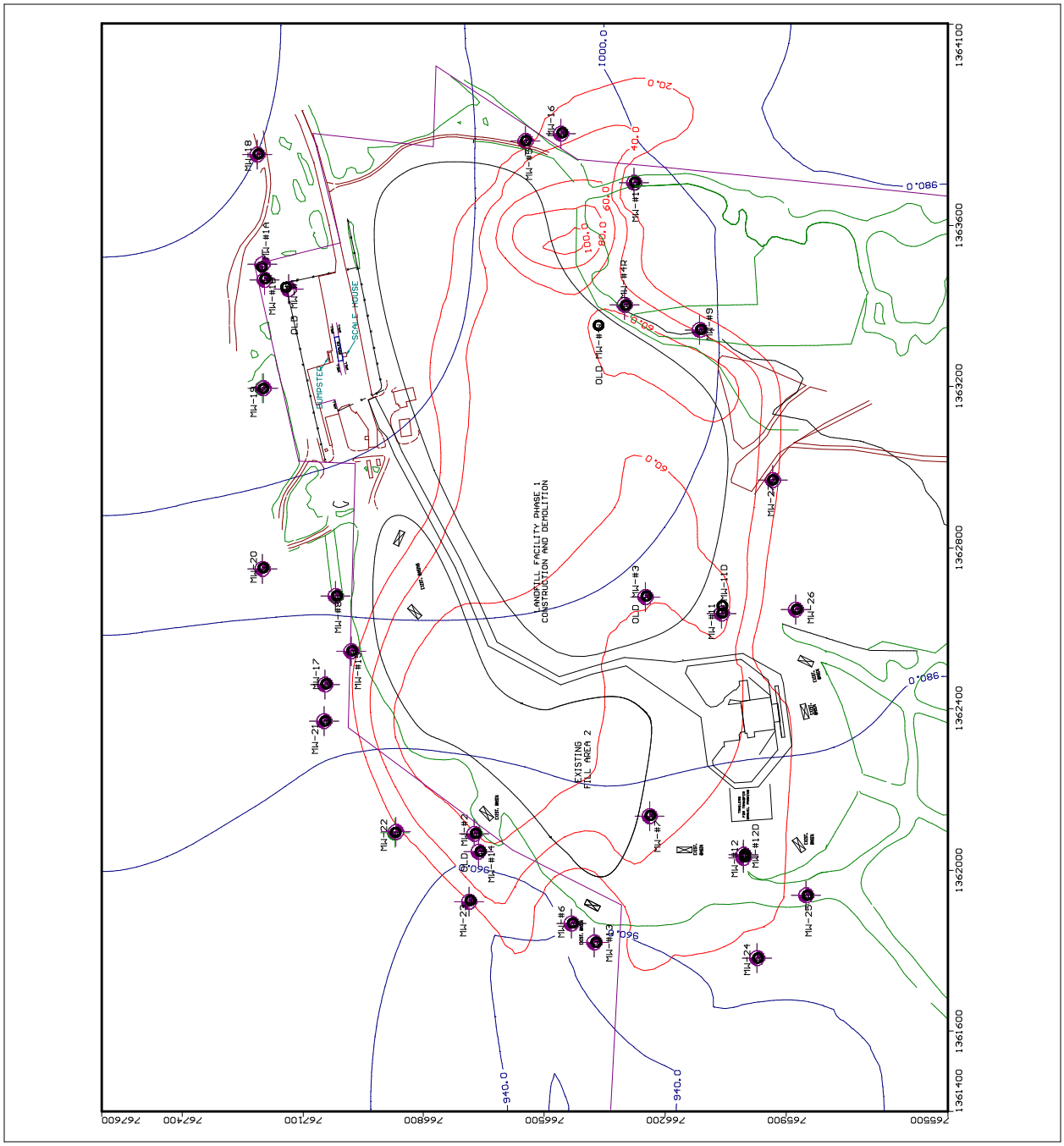
MODFLOW 17 Year Simulation
2007 VOC Contamination



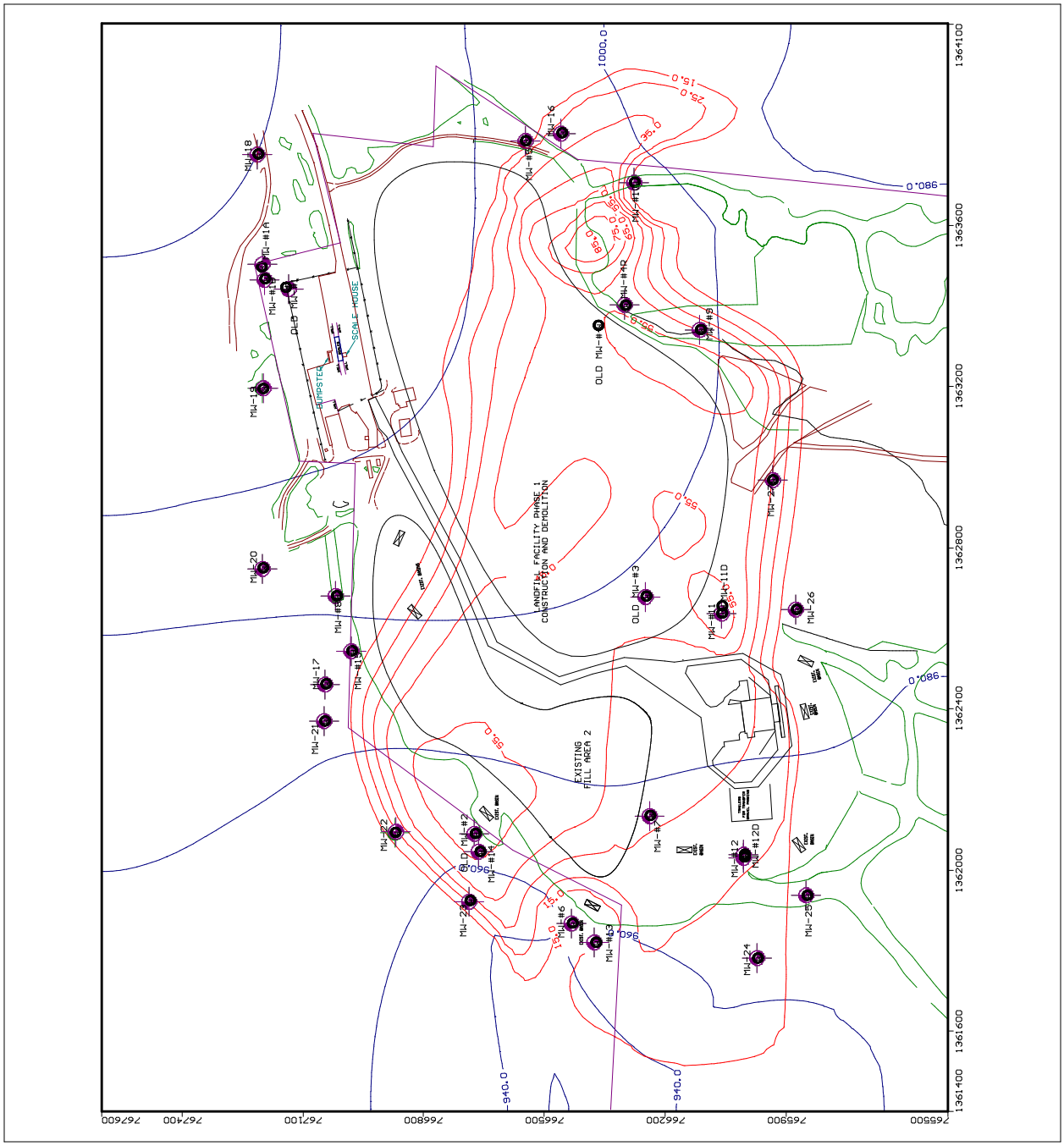
MODFLOW 18 Year Simulation
2008 VOC Contamination



MODFLOW 25 Year Simulation
2015 VOC Contamination



MODFLOW 35 Year Simulation
2025 VOC Contamination



MODFLOW 50 Year Simulation
2040 VOC Contamination

APPENDIX D

Table D-1: Summary of Laboratory Analysis of Soil Samples

Sample No.	Depth (ft)	Laboratory	USCS Grain Size Distribution (%)			USCS Classification	USCS Symbol	Specific Gravity	Atterberg Limit		
			Gravel	Sand	Silt & Clay				LL	PL	PI
MW-16	35 - 36	Geotechnics	6.71	66.26	27.03	Silty Sand	ML	2.88	28	26	2
MW-22	17 - 18	Geotechnics	14.99	67.92	17.09	Silty Sand	ML	2.72	28	26	2

Sample No.	Depth (ft)	Total Porosity	Effective Porosity
MW-16	35 - 36	49.9%	25.7%
MW-22	17 - 18	47.0%	30.5%

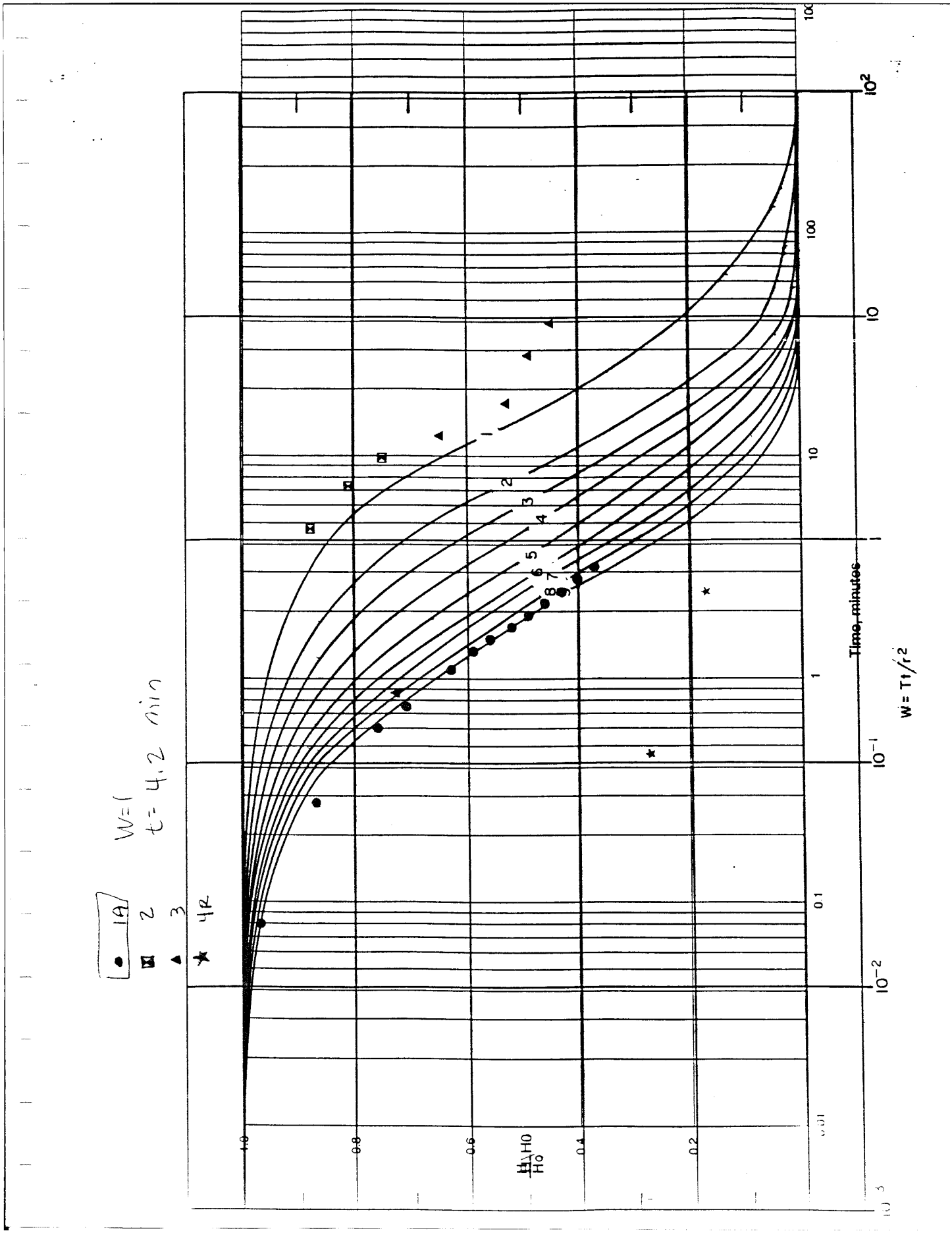
NOTE:

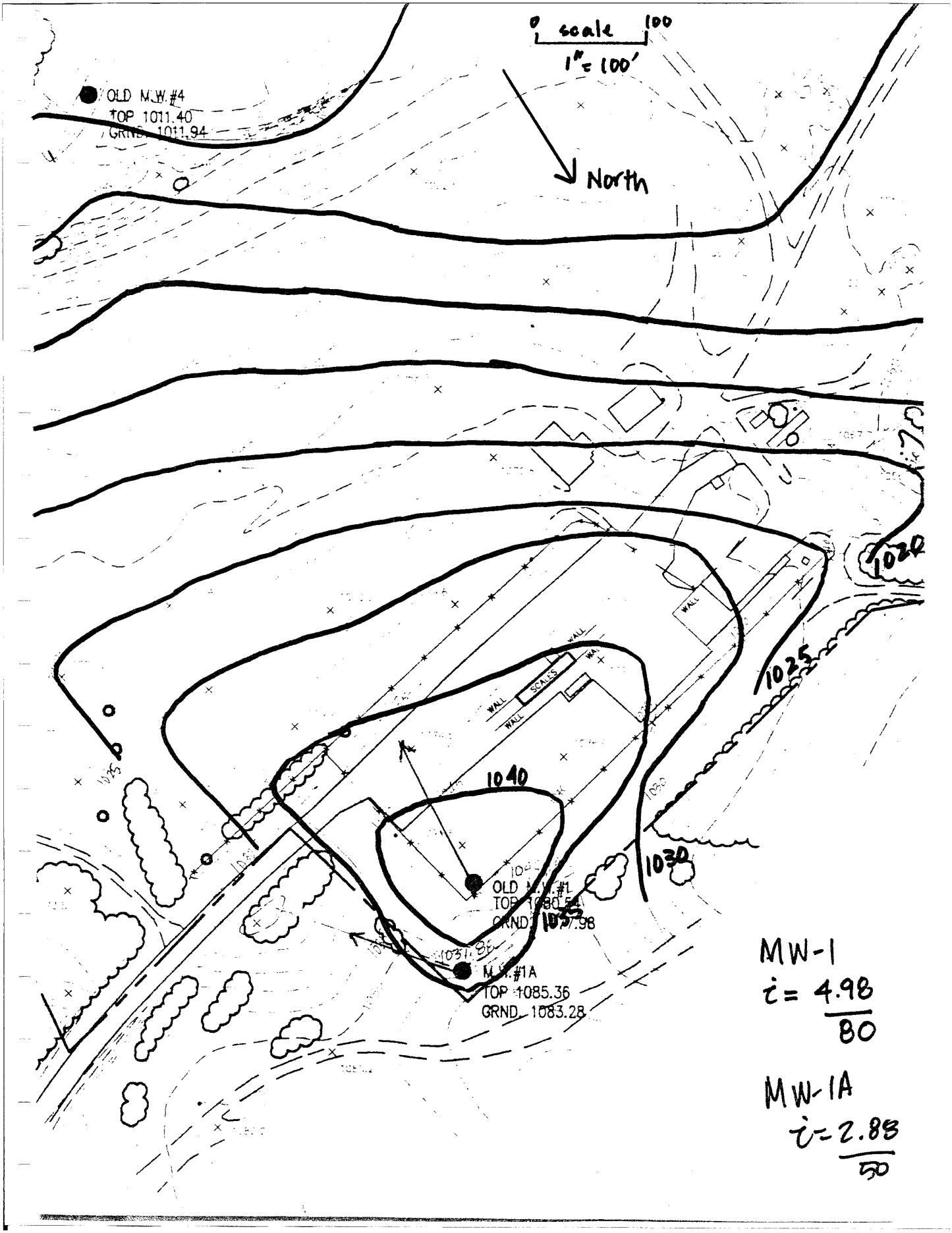
1. Atterburg Limit LL is liquid limit, PL is plastic limit, and PI is plasticity index.
2. Total Porosity was calculated based on the equation expressed in the report.
3. Effective Porosity was acquired from Johnson Trigraphs based on Laboratory Analysis.

SLUG TEST MW1A ALEXANDER CO

DEPTH TO GW	44.4	RADIUS, in.	1
HT OF STICKUP	2.1	WET SCREEN, ft	15
INITIAL GW READING	15	t, min	4.2
INITIAL TIME	0.55	k, cm/sec	5.6E-05
INITIAL GW BELOW TOC	46.5		
H0	31.5		

GW READING	DH	H	H/H0	HOUR	MIN	SEC	TIME
16	1	30.5	0.97	0	0	38	0.08
19	4	27.5	0.87	0	0	50	0.28
22.5	7.5	24	0.76	0	1	9	0.60
24	9	22.5	0.71	0	1	18	0.75
26.5	11.5	20	0.63	0	1	39	1.10
28	13	18.5	0.59	0	1	53	1.33
29	14	17.5	0.56	0	2	3	1.50
30	15	16.5	0.52	0	2	15	1.70
31	16	15.5	0.49	0	2	28	1.92
32	17	14.5	0.46	0	2	44	2.18
33	18	13.5	0.43	0	3	0	2.45
34	19	12.5	0.40	0	3	21	2.80
35	20	11.5	0.37	0	3	43	3.17

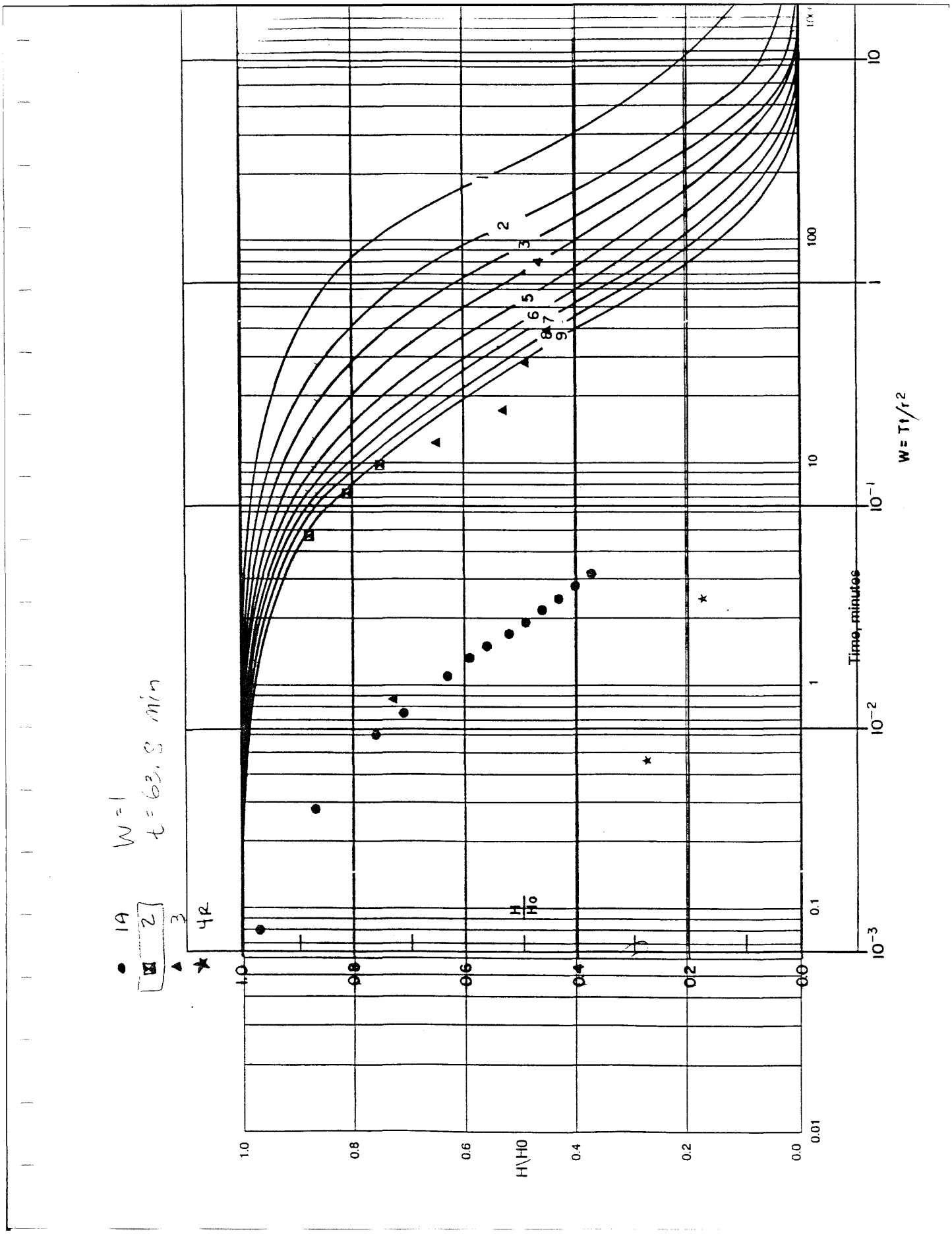

1A
2
3
4R
W=1
t= 4.2 min
1
2
3
4
5
6
7
8
9
1.0
0.8
0.6
0.4
0.2
H-H0 / H0
0.01
0.1
1
10
100
10^-2
10^-1
10^2
Time, minutes
W= Tt/r^2

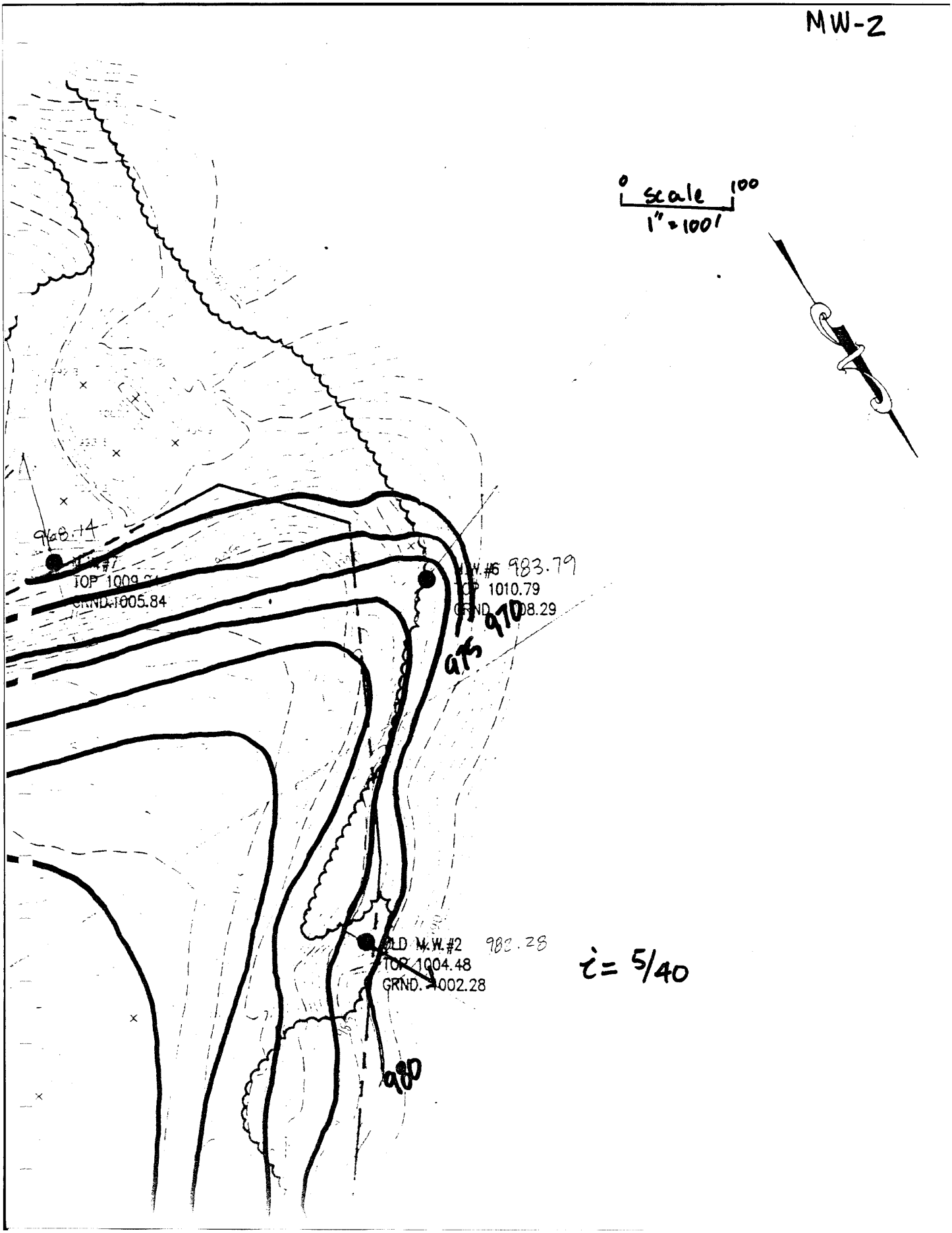

0 scale 100
1" = 100'
North
OLD M.W.#4
TOP 1011.40
GRND 1011.94
1020
1025
1030
1035
1040
WALL
SCALES
OLD M.W.#1
TOP 1080.54
GRND 1077.98
M.W.#1A
TOP 1085.36
GRND 1083.28
MW-1
i = 4.98 / 80
MW-1A
i = 2.88 / 50

SLUG TEST MW2 ALEXANDER CO

DEPTH TO GW	20.4	RADIUS, in.	1
HT OF STICKUP	2.4	WET SCREEN, ft	15
INITIAL GW READING	19.6	t, min	63.8
INITIAL TIME	38.88	k, cm/sec	3.7E-06
INITIAL GW BELOW TOC	22.8		
H0	3.2		

GW READING	DH	H	H/H0	HOUR	MIN	SEC	TIME
20	0.4	2.8	0.88	0	43	35	4.70
20.2	0.6	2.6	0.81	0	46	8	7.25
20.4	0.8	2.4	0.75	0	48	37	9.74

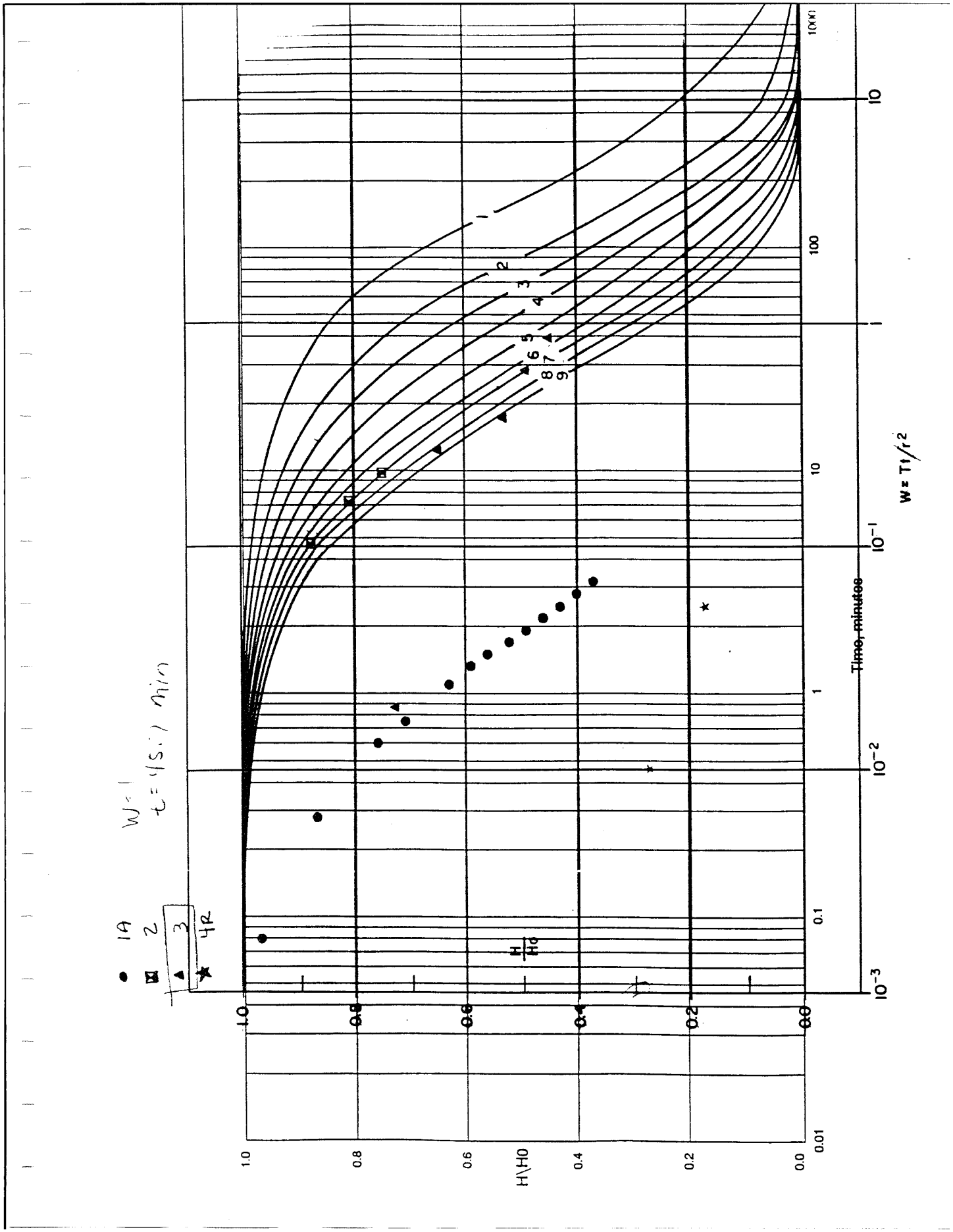

W = 1
t = 63.5 min
19
2
3
4R
1
2
3
4
5
6
7
8
9
H/Ho
1.0
0.8
0.6
0.4
0.2
0.0
0.01
0.1
1
10
100
10
1
10^{-1}
10^{-2}
10^{-3}
Time, minutes
W = Tt/r²

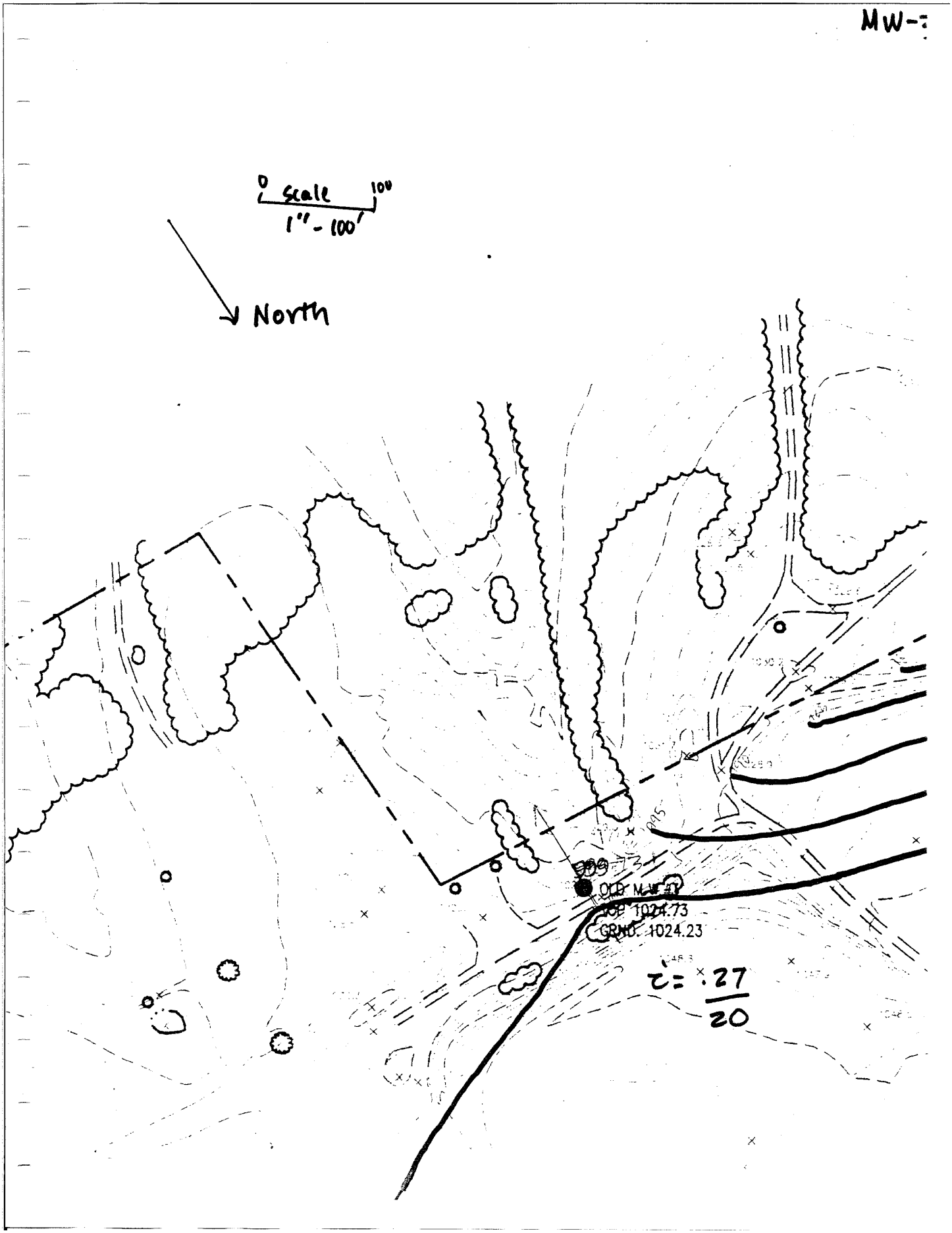

MW-2
0 scale 100
1" = 100'
968.14
TOP 1009.34
GRND. 1005.84
M.W.#6 983.79
TOP 1010.79
GRND. 1008.29
970
975
OLD M.W.#2 982.28
TOP 1004.48
GRND. 1002.28
980
i = 5/40

SLUG TEST MW3 ALEXANDER CO

DEPTH TO GW	24.4	RADIUS, in.	1
HT OF STICKUP	1.1	WET SCREEN, ft	20
INITIAL GW READING	0	t, min	45.7
INITIAL TIME	0.78	k, cm/sec	3.9E-06
INITIAL GW BELOW TOC	25.5		
HO	25.5		

GW READING	DH	H	H/HO	HOUR	MIN	SEC	TIME
4	4	21.5	0.84	0	0	47	0.00
7	7	18.5	0.73	0	1	39	0.87
9	9	16.5	0.65	0	13	1	12.24
12	12	13.5	0.53	0	18	1	17.24
13	13	12.5	0.49	0	29	2	28.25
14	14	11.5	0.45	0	40	2	39.25

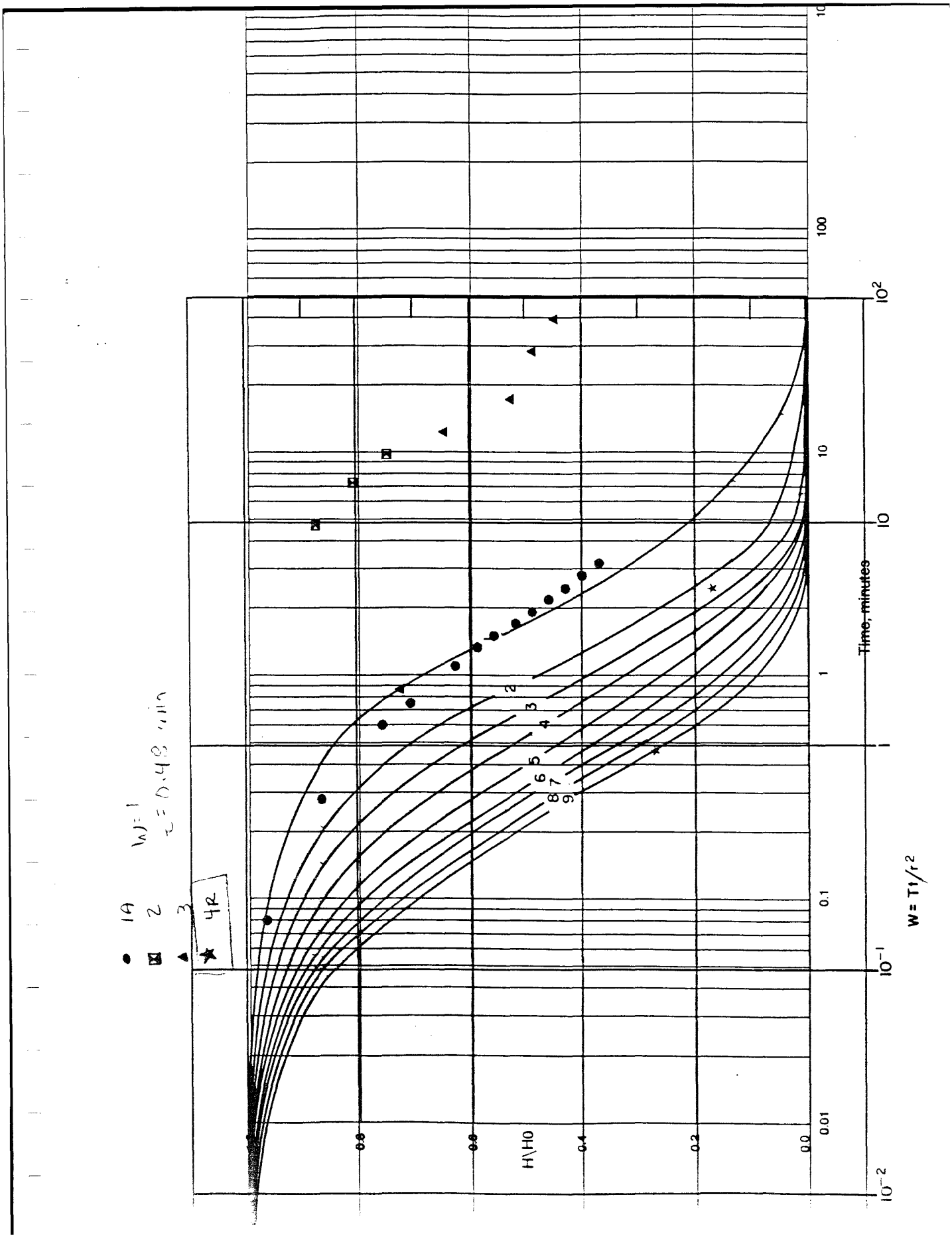

1A
2
3
4R
Well
t = 45.1 min
H/Ho
1.0
0.8
0.6
0.4
0.2
0.0
0.01
0.1
1
10
100
1000
10^{-3}
10^{-2}
10^{-1}
1
10
Time, minutes
W = Tt/r²
1
2
3
4
5
6
7
8
9

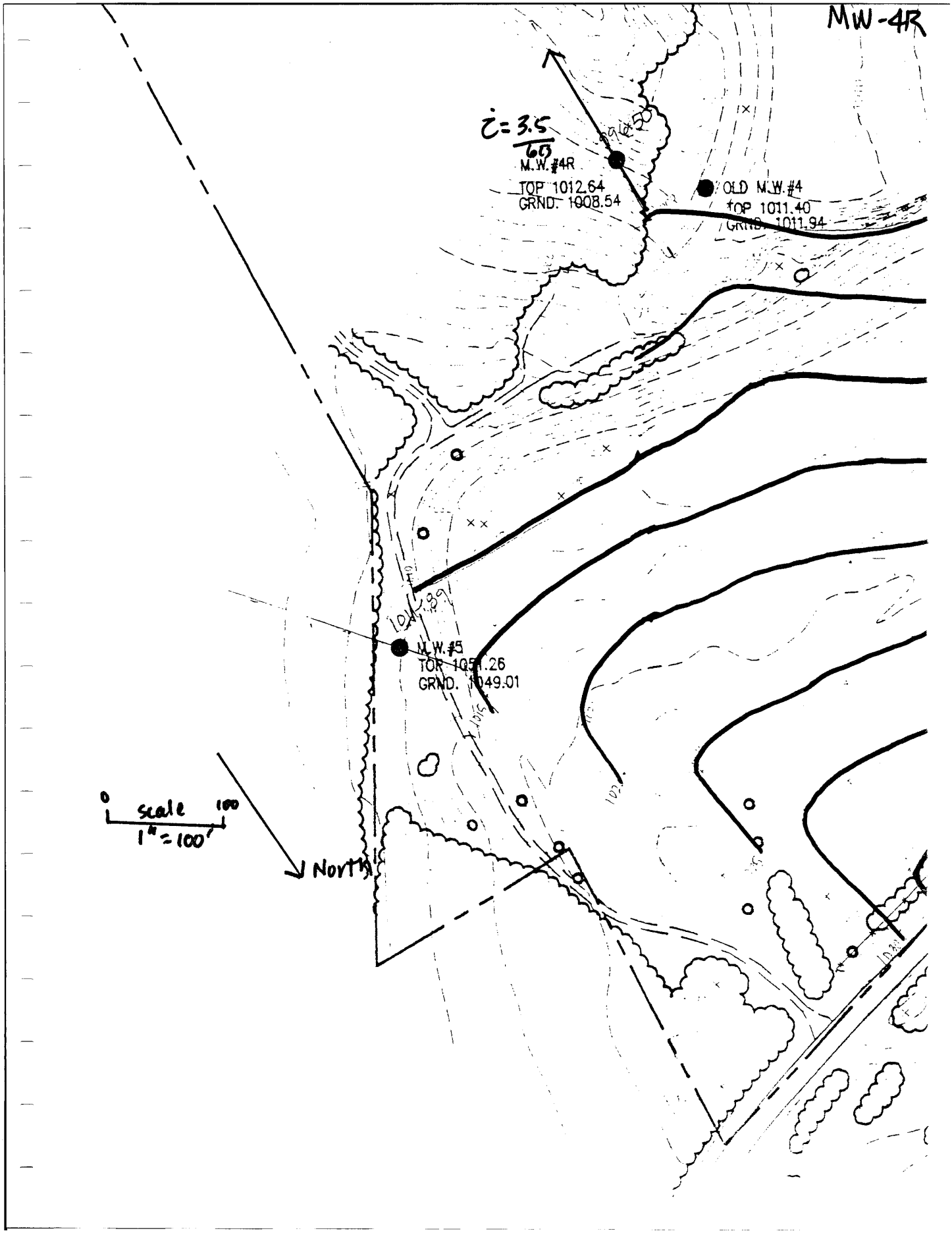

MW-
0 scale 100
1" - 100'
North
OLD MW-17
TOP 1024.73
GRND. 1024.23
τ = .27
20

SLUG TEST MW4R ALEXANDER CO

DEPTH TO GW	10.8	RADIUS, in.	1
HT OF STICKUP	4	WET SCREEN, ft	15
INITIAL GW READING	10	t, min	0.48
INITIAL TIME	0.17	k, cm/sec	4.9E-04
INITIAL GW BELOW TOC	14.8		
H0	4.8		

GW READING	DH	H	H/H0	HOUR	MIN	SEC	TIME
13.5	3.5	1.3	0.27	0	0	38	0.46
14	4	0.8	0.17	0	2	37	2.45

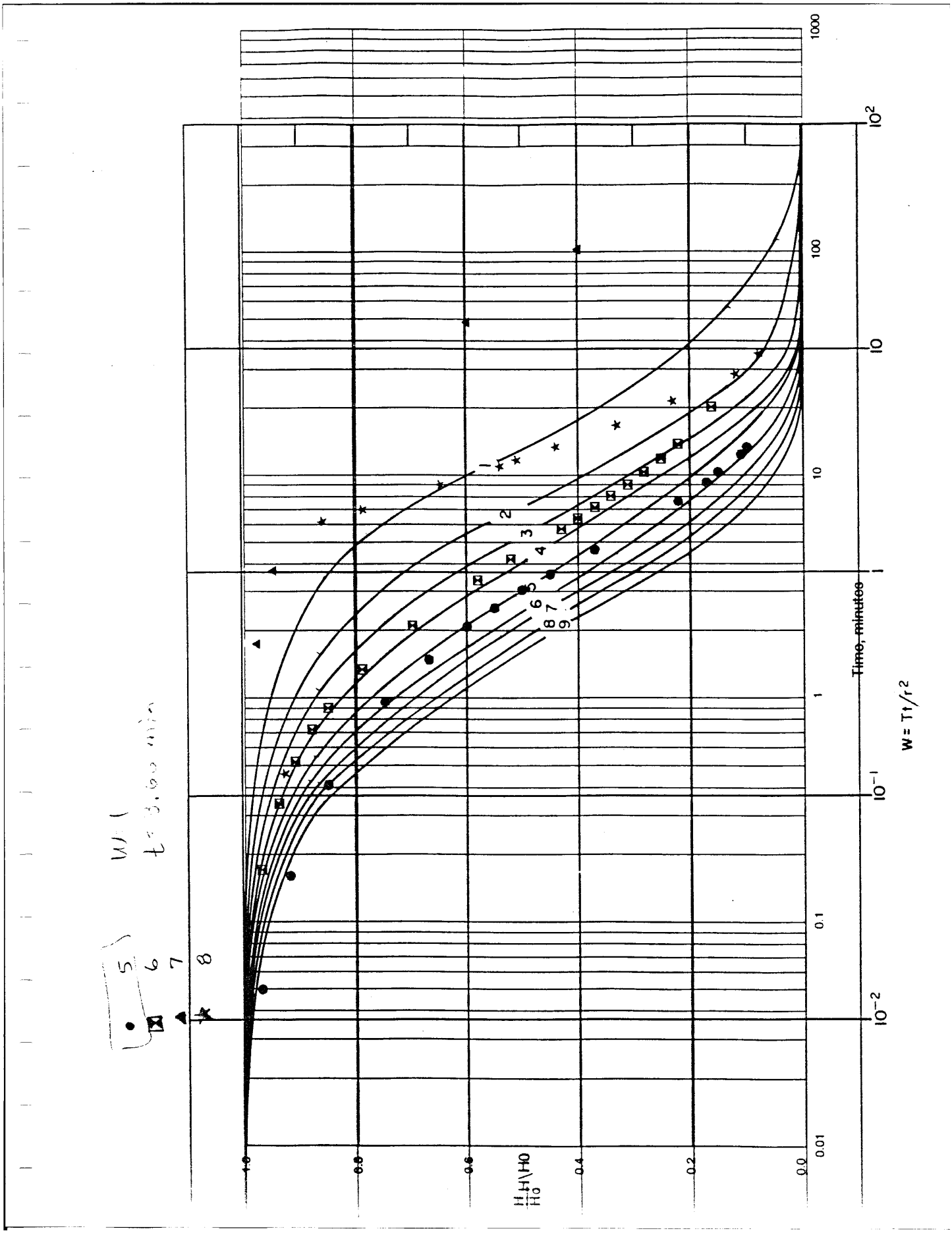

1A
2
3
4R
W = Tt/r²
Time, minutes
H/H0
0.0
0.2
0.4
0.6
0.8
1.0
0.01
0.1
1
10
100
10⁻²
10⁻¹
10²
1
2
3
4
5
6
7
8
9

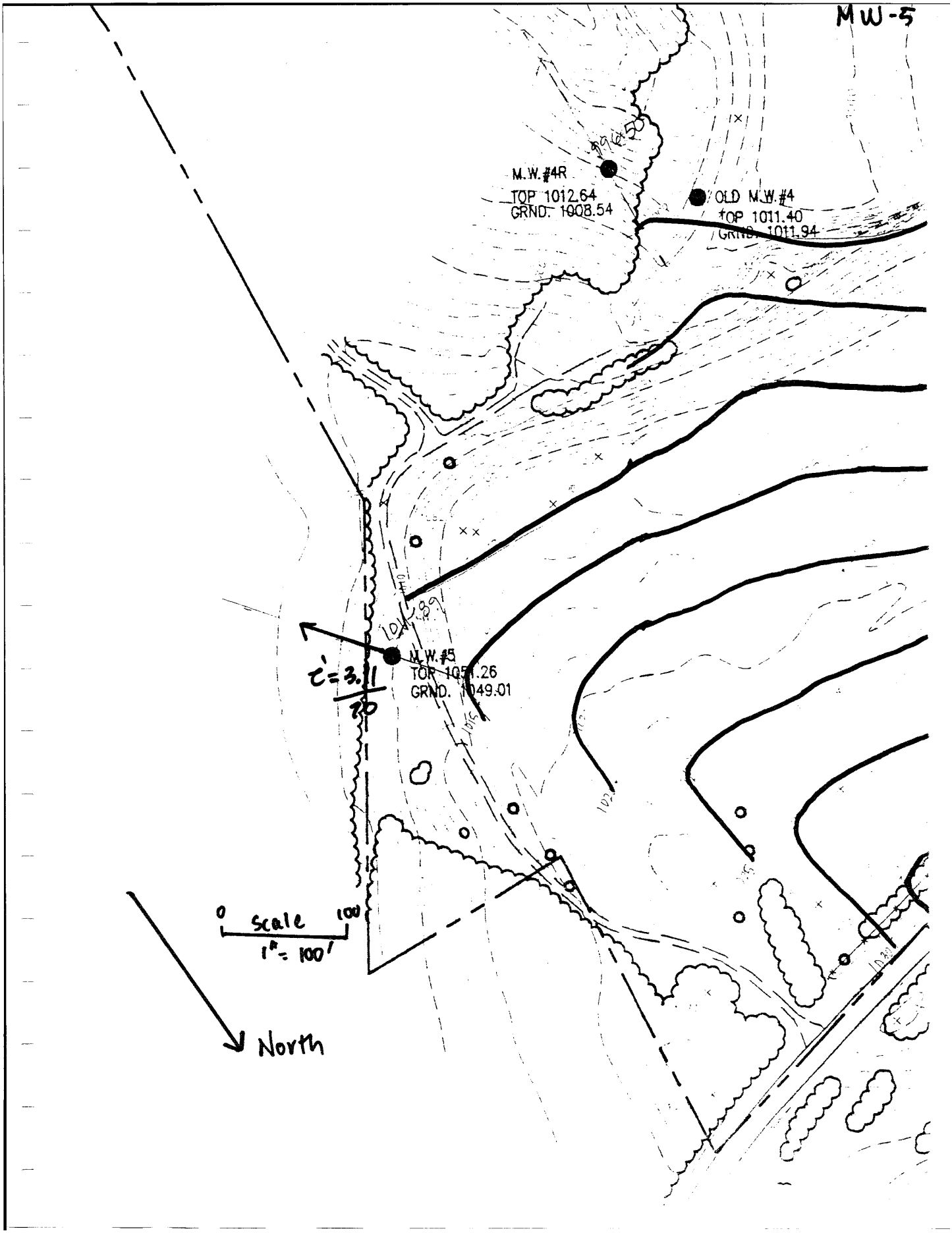

MW-4R
i = 3.5/60
M.W.#4R
TOP 1012.64
GRND. 1008.54
OLD M.W.#4
TOP 1011.40
GRND. 1011.94
M.W.#5
TOP 1051.26
GRND. 1049.01
0 scale 100
1" = 100'
North

SLUG TEST MW5 ALEXANDER CO

DEPTH TO GW	37.7	RADIUS, in.	1
HT OF STICKUP	2.2	WET SCREEN, ft	15
INITIAL GW READING	0	t, min	3.66
INITIAL TIME	44.17	k, cm/sec	6.4E-05
INITIAL GW BELOW TOC	39.9		
H0	39.9		

GW READING	DH	H	H/H0	HOUR	MIN	SEC	TIME
1	1	38.9	0.97	0	44	13	0.05
3	3	36.9	0.92	0	44	20	0.16
6	6	33.9	0.85	0	44	35	0.41
10	10	29.9	0.75	0	45	8	0.96
13	13	26.9	0.67	0	45	39	1.48
16	16	23.9	0.60	0	46	15	2.08
18	18	21.9	0.55	0	46	42	2.53
20	20	19.9	0.50	0	47	13	3.05
22	22	17.9	0.45	0	47	46	3.60
25	25	14.9	0.37	0	48	47	4.61
31	31	8.9	0.22	0	51	48	7.63
33	33	6.9	0.17	0	53	26	9.26
34	34	5.9	0.15	0	54	27	10.28
35.5	35.5	4.4	0.11	0	56	33	12.38
36	36	3.9	0.10	0	57	29	13.31

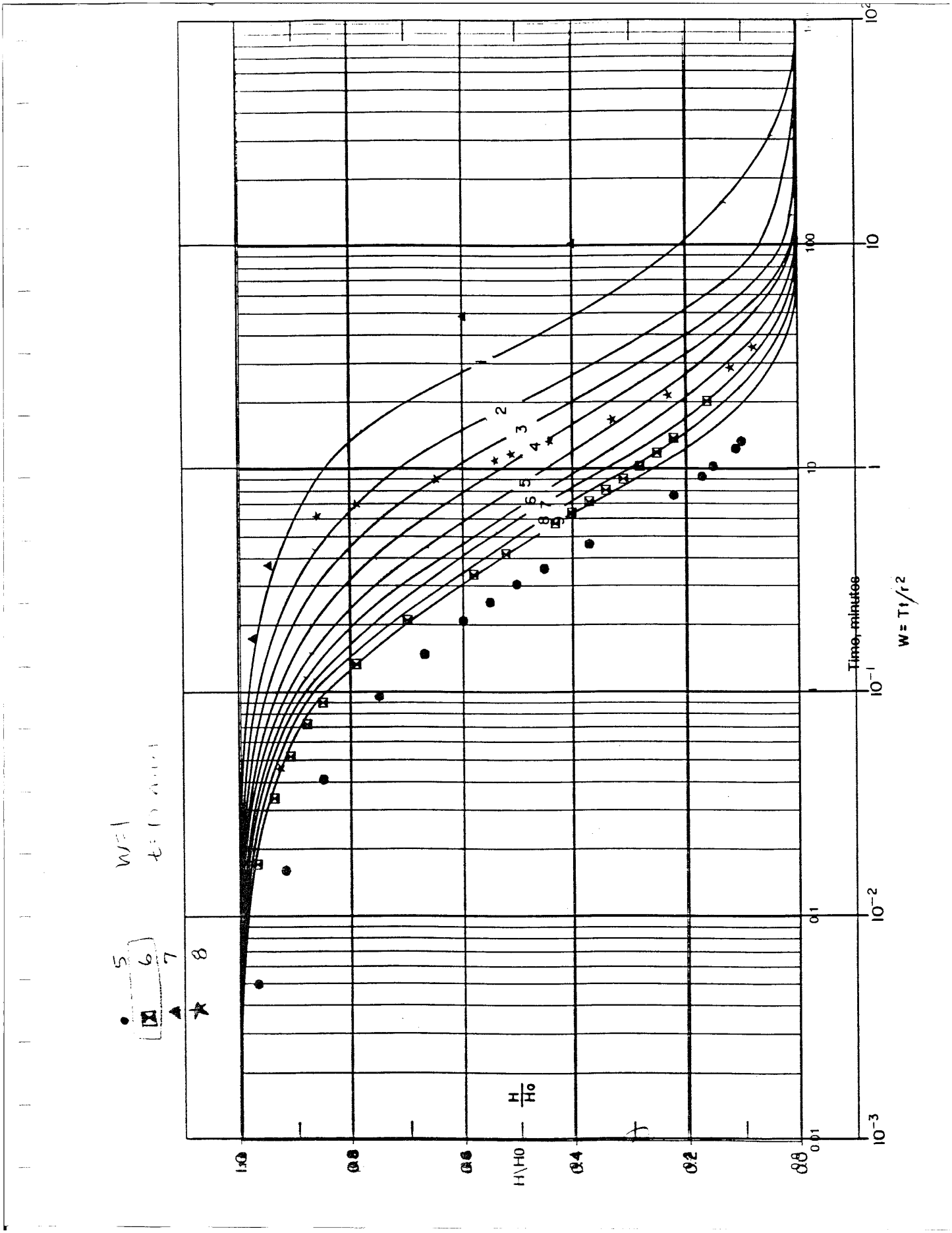

1000
100
10
1
0.1
0.01
10^2
10
1
10^{-1}
10^{-2}
1.0
0.8
0.6
0.4
0.2
0.0
$\frac{H-H_0}{H_0}$
W = Tt/r²
Time, minutes
1
2
3
4
5
6
7
8
9

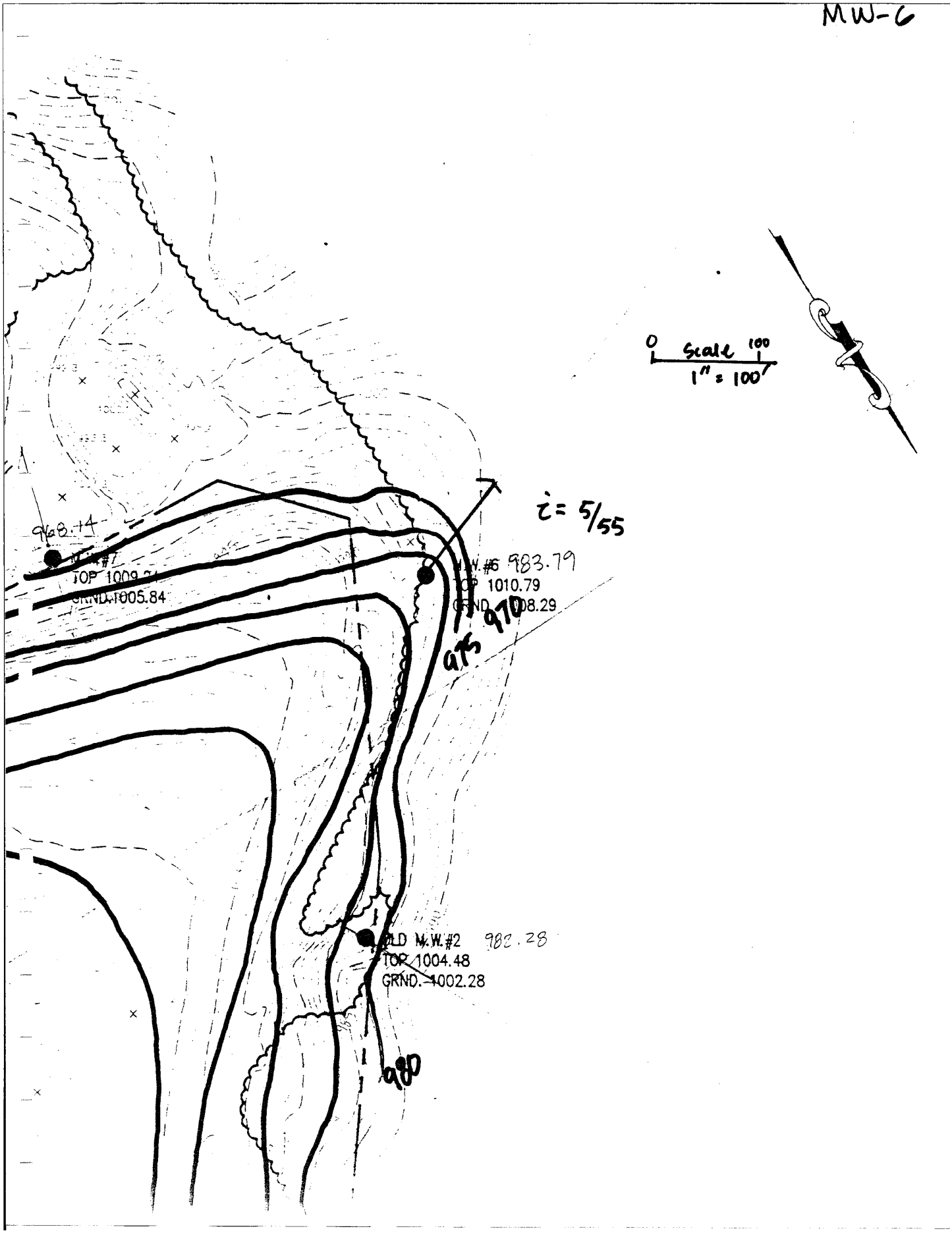

MW-5
M.W.#4R
TOP 1012.64
GRND. 1008.54
OLD M.W.#4
TOP 1011.40
GRND. 1011.94
M.W.#5
TOP 1051.26
GRND. 1049.01
0 scale 100
1" = 100'
North

SLUG TEST MW6 ALEXANDER CO

DEPTH TO GW	30.5	RADIUS, in.	1
HT OF STICKUP	2.7	WET SCREEN, ft	15
INITIAL GW READING	0	t, min	10
INITIAL TIME	37.08	k, cm/sec	2.4E-05
INITIAL GW BELOW TOC	33.2		
H0	33.2		

GW READING	DH	H	H/H0	HOUR	MIN	SEC	TIME
1	1	32.2	0.97	0	37	15	0.17
2	2	31.2	0.94	0	37	25	0.34
3	3	30.2	0.91	0	37	36	0.52
4	4	29.2	0.88	0	37	48	0.72
5	5	28.2	0.85	0	37	59	0.90
7	7	26.2	0.79	0	38	25	1.34
10	10	23.2	0.70	0	39	10	2.09
14	14	19.2	0.58	0	40	27	3.37
16	16	17.2	0.52	0	41	15	4.17
19	19	14.2	0.43	0	42	50	5.75
20	20	13.2	0.40	0	43	28	6.39
21	21	12.2	0.37	0	44	14	7.15
22	22	11.2	0.34	0	45	6	8.02
23	23	10.2	0.31	0	46	7	9.04
24	24	9.2	0.28	0	47	20	10.25
25	25	8.2	0.25	0	48	51	11.77
26	26	7.2	0.22	0	50	47	13.70
28	28	5.2	0.16	0	57	19	20.24

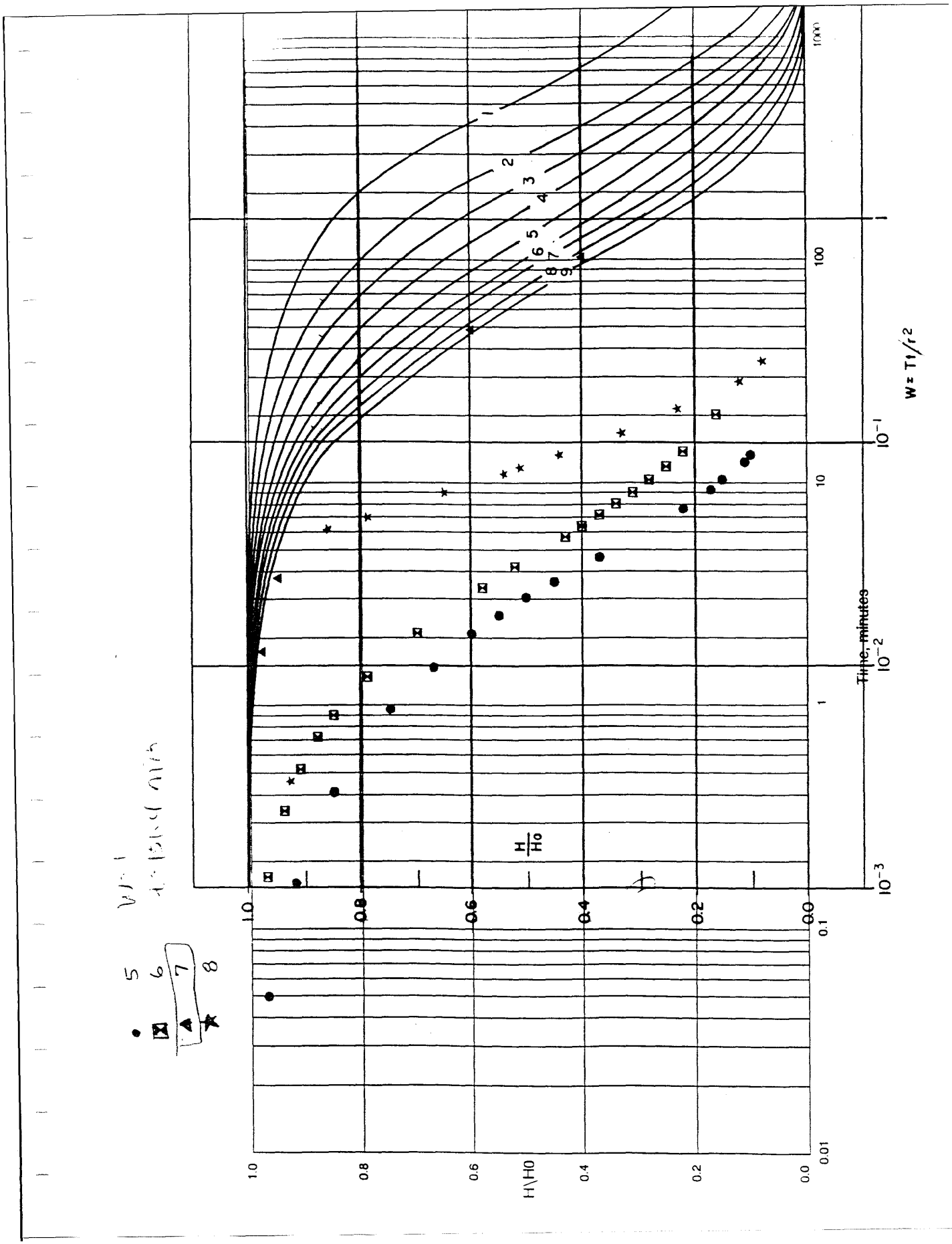

H/Ho
Time, minutes
W = Tt/r²
1.0
0.8
0.6
0.4
0.2
0.0
0.01
0.1
1.0
10
100
10⁻³
10⁻²
10⁻¹
1
10
10²
1
2
3
4
5
6
7
8

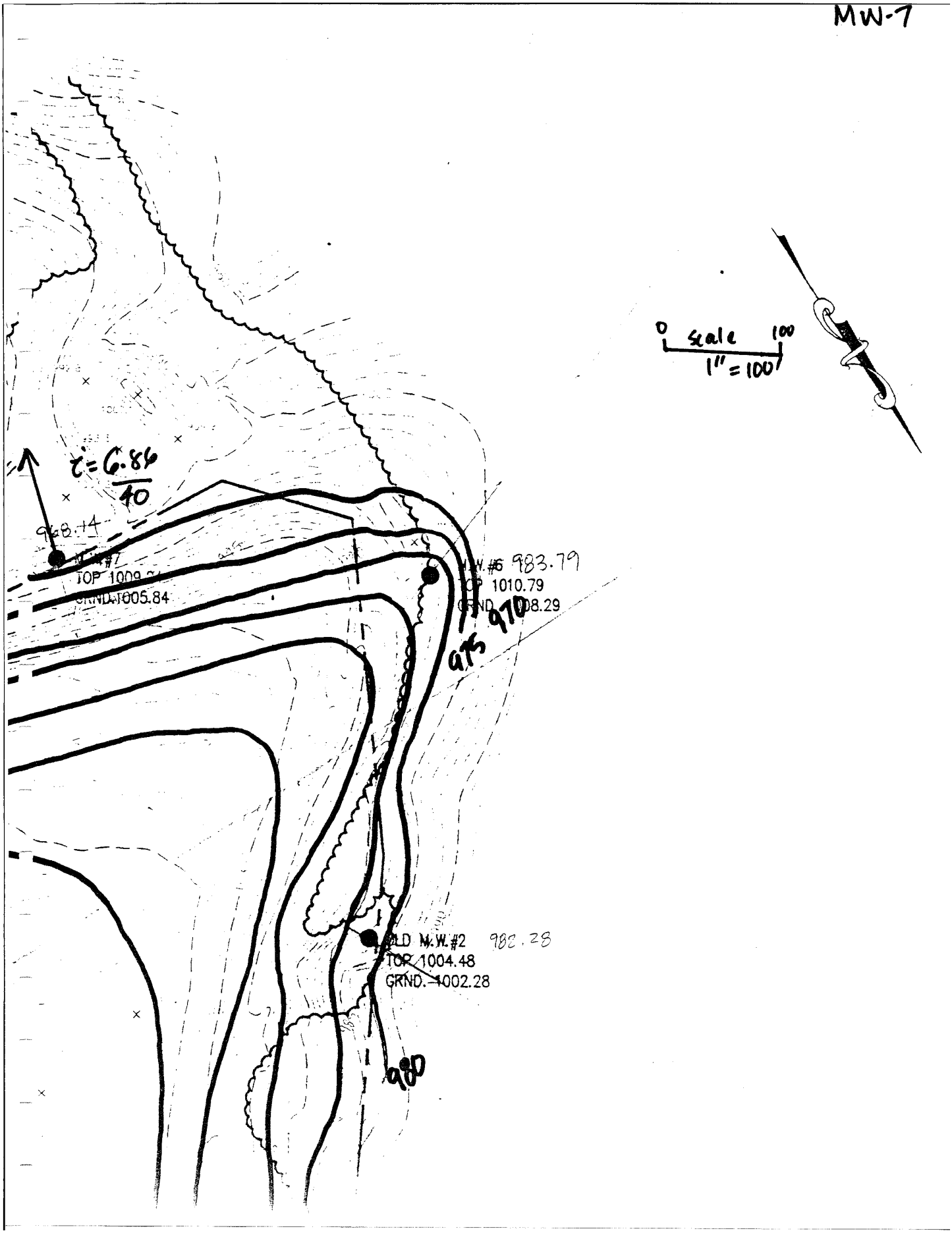

MW-6
0 Scale 100
1" = 100'
i = 5/55
968.14
TOP 1009.74
GRND. 1005.84
M.W.#6 983.79
TOP 1010.79
GRND. 1008.29
975
970
OLD M.W.#2 982.28
TOP 1004.48
GRND. 1002.28
980

SLUG TEST MW7 ALEXANDER CO

DEPTH TO GW	37	RADIUS, in.	1
HT OF STICKUP	3.6	WET SCREEN, ft	15
INITIAL GW READING	0	t, min	151.4
INITIAL TIME	76.75	k, cm/sec	1.6E-06
INITIAL GW BELOW TOC	40.6		
HO	40.6		

GW READING	DH	H	H/HO	HOUR	MIN	SEC	TIME
1	1	39.6	0.98	1	18	30	1.75
2	2	38.6	0.95	1	20	28	3.72
16.2	16.2	24.4	0.60	2	5	0	48.25
24.2	24.2	16.4	0.40	2	59	0	102.25

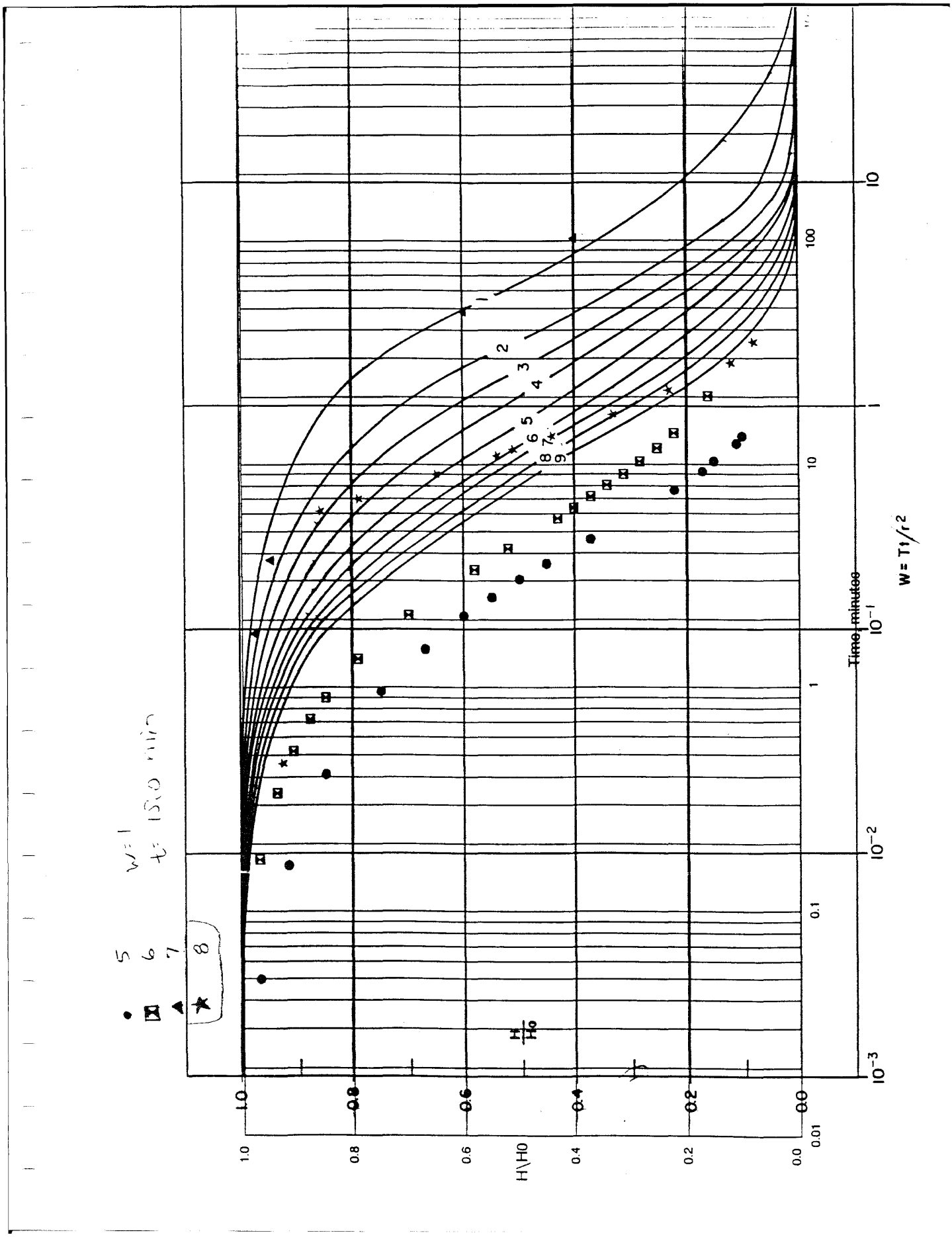

1
2
3
4
5
6
7
8
9
10
H/Ho
1.0
0.8
0.6
0.4
0.2
0.0
0.01
0.1
1
10
100
1000
10^{-3}
10^{-2}
10^{-1}
Time, minutes
W = T1/r2
5
6
7
8

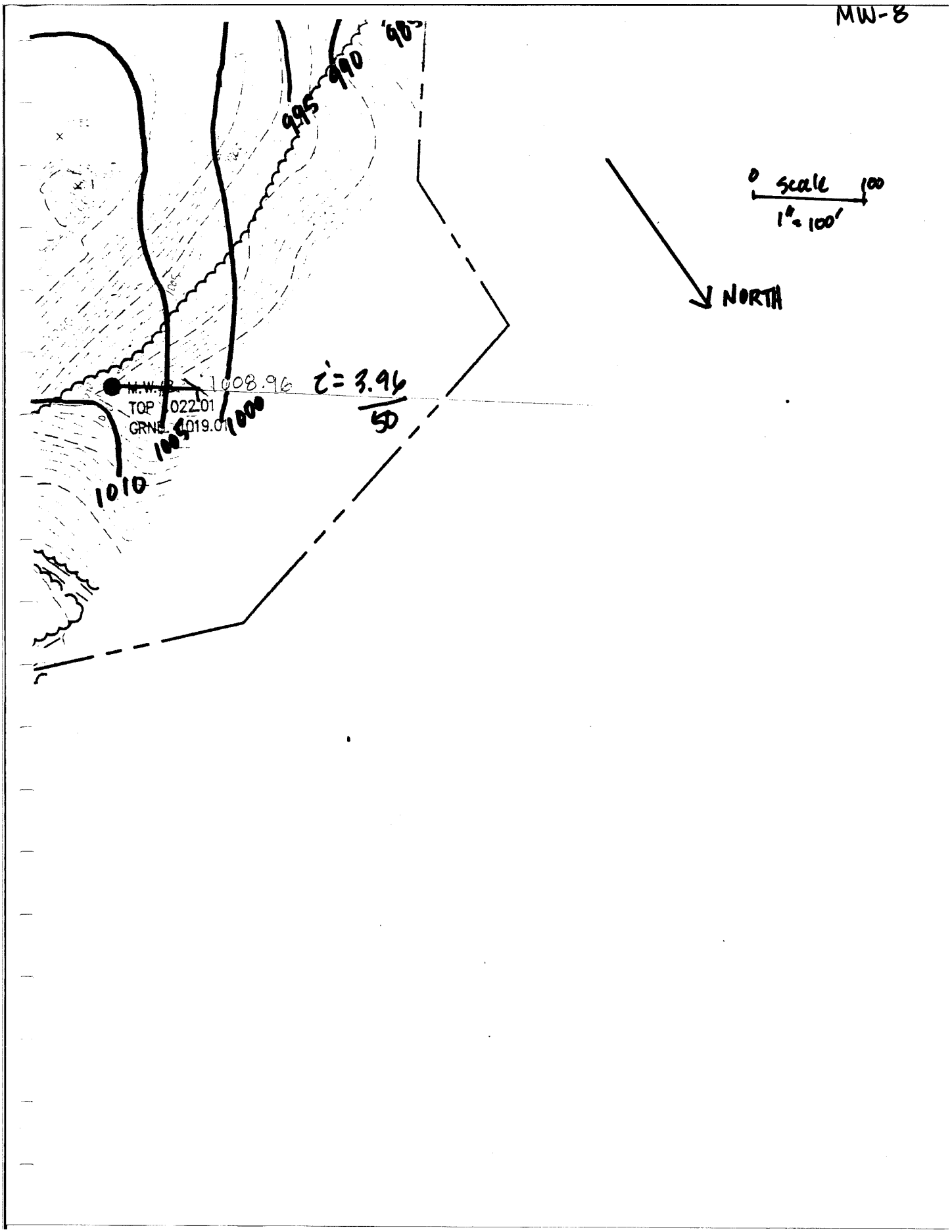

MW-7
0 Scale 100
1" = 100'
i = 6.86 / 40
968.14
TOP 1009
GRND. 1005.84
M.W.#6 983.79
TOP 1010.79
GRND. 1008.29
970
975
OLD M.W.#2 982.28
TOP 1004.48
GRND. 1002.28
980

SLUG TEST MW8 ALEXANDER CO

DEPTH TO GW	11	RADIUS, in.	1
HT OF STICKUP	3.2	WET SCREEN, ft	15
INITIAL GW READING	0	t, min	18
INITIAL TIME	49.92	k, cm/sec	1.3E-05
INITIAL GW BELOW TOC	14.2		
HO	14.2		

GW READING	DH	H	H/HO	HOUR	MIN	SEC	TIME
1	1	13.2	0.93	0	50	23	0.46
2	2	12.2	0.86	0	56	5	6.16
3	3	11.2	0.79	0	56	54	6.98
5	5	9.2	0.65	0	58	56	9.01
6.5	6.5	7.7	0.54	1	0	51	10.93
7	7	7.2	0.51	1	1	35	11.66
8	8	6.2	0.44	1	3	17	13.36
9.5	9.5	4.7	0.33	1	6	35	16.66
11	11	3.2	0.23	1	11	23	21.46
12.5	12.5	1.7	0.12	1	18	26	28.51
13	13	1.2	0.08	1	25	10	35.25


H/Ho
1.0
0.8
0.6
0.4
0.2
0.0
0.01
0.1
1
10
100
10^{-3}
10^{-2}
10^{-1}
1
10
Time, minutes
W = Tt/r²
1
2
3
4
5
6
7
8
9
5
6
7
8
W=1
t = 1500 min


MW-8
990
995
1000
1005
1010
1008.96
i = 3.96/50
TOP 1022.01
GRND. 1019.01
0 scale 100
1" = 100'
NORTH

Slug Test MW-16

Initial offset in logger reading (feet):	0.120	Date:	01/09/2008
Offset increment in logger reading (feet/sec):	0.000057		
Initial depth to water table (feet):	31.97		
Depth of probe below water table (feet):	11.373		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 14:22:27	51747.5	0.0	7.71	7.555	3.818	0.58182
1/9/2008 14:22:28	51748.0	0.5	8.37	8.217	3.156	0.49913
1/9/2008 14:22:29	51749.0	1.5	8.69	8.536	2.837	0.45286
1/9/2008 14:22:29	51749.5	2.0	8.89	8.737	2.636	0.42095
1/9/2008 14:22:30	51750.0	2.5	9.03	8.881	2.492	0.39656
1/9/2008 14:22:30	51750.5	3.0	9.19	9.041	2.332	0.36774
1/9/2008 14:22:31	51751.0	3.5	9.35	9.192	2.181	0.33868
1/9/2008 14:22:31	51751.5	4.0	9.49	9.336	2.037	0.30902
1/9/2008 14:22:32	51752.0	4.5	9.63	9.480	1.892	0.27696
1/9/2008 14:22:32	51752.5	5.0	9.76	9.607	1.765	0.24679
1/9/2008 14:22:33	51753.0	5.5	9.89	9.733	1.639	0.21464
1/9/2008 14:22:33	51753.5	6.0	10.01	9.854	1.518	0.18134
1/9/2008 14:22:34	51754.0	6.5	10.12	9.968	1.404	0.14745
1/9/2008 14:22:34	51754.5	7.0	10.23	10.078	1.294	0.11204
1/9/2008 14:22:35	51755.0	7.5	10.34	10.184	1.188	0.07494
1/9/2008 14:22:35	51755.5	8.0	10.43	10.279	1.093	0.03876
1/9/2008 14:22:36	51756.0	8.5	10.52	10.367	1.005	0.00233
1/9/2008 14:22:36	51756.5	9.0	10.6	10.446	0.926	-0.03319
1/9/2008 14:22:37	51757.0	9.5	10.67	10.516	0.856	-0.06730
1/9/2008 14:22:37	51757.5	10.0	10.73	10.578	0.794	-0.09992
1/9/2008 14:22:38	51758.0	10.5	10.78	10.628	0.745	-0.12813
1/9/2008 14:22:38	51758.5	11.0	10.83	10.674	0.699	-0.15582
1/9/2008 14:22:39	51759.0	11.5	10.87	10.711	0.662	-0.17943
1/9/2008 14:22:39	51759.5	12.0	10.9	10.747	0.626	-0.20371
1/9/2008 14:22:40	51760.0	12.5	10.93	10.774	0.599	-0.22285
1/9/2008 14:22:40	51760.5	13.0	10.95	10.796	0.577	-0.23909
1/9/2008 14:22:41	51761.0	13.5	10.97	10.817	0.556	-0.25518
1/9/2008 14:22:41	51761.5	14.0	10.99	10.835	0.538	-0.26946
1/9/2008 14:22:42	51762.0	14.5	11.01	10.852	0.521	-0.28339
1/9/2008 14:22:42	51762.5	15.0	11.02	10.866	0.507	-0.29520
1/9/2008 14:22:43	51763.0	15.5	11.03	10.879	0.494	-0.30646
1/9/2008 14:22:43	51763.5	16.0	11.05	10.893	0.480	-0.31893
1/9/2008 14:22:44	51764.0	16.5	11.06	10.904	0.469	-0.32897
1/9/2008 14:22:45	51765.0	17.5	11.08	10.924	0.449	-0.34785
1/9/2008 14:22:45	51765.5	18.0	11.09	10.937	0.436	-0.36058
1/9/2008 14:22:46	51766.5	19.0	11.11	10.953	0.420	-0.37676
1/9/2008 14:22:47	51767.5	20.0	11.13	10.972	0.401	-0.39681
1/9/2008 14:22:48	51768.5	21.0	11.14	10.989	0.384	-0.41555
1/9/2008 14:22:49	51769.5	22.0	11.16	11.002	0.370	-0.43161
1/9/2008 14:22:50	51770.5	23.0	11.17	11.019	0.353	-0.45196
1/9/2008 14:22:51	51771.5	24.0	11.19	11.031	0.341	-0.46690
1/9/2008 14:22:52	51772.5	25.0	11.2	11.046	0.326	-0.48634
1/9/2008 14:22:53	51773.5	26.0	11.21	11.058	0.314	-0.50254
1/9/2008 14:22:54	51774.5	27.0	11.23	11.071	0.301	-0.52079

Slug Test MW-16

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 14:22:55	51775.5	28.0	11.24	11.082	0.291	-0.53685
1/9/2008 14:22:56	51776.0	28.5	11.24	11.089	0.284	-0.54740
1/9/2008 14:22:57	51777.0	29.5	11.25	11.099	0.274	-0.56290
1/9/2008 14:22:58	51778.0	30.5	11.26	11.109	0.264	-0.57898
1/9/2008 14:22:59	51779.0	31.5	11.28	11.120	0.253	-0.59739
1/9/2008 14:23:00	51780.0	32.5	11.29	11.130	0.243	-0.61483
1/9/2008 14:23:01	51781.0	33.5	11.3	11.140	0.233	-0.63299
1/9/2008 14:23:02	51782.0	34.5	11.31	11.151	0.222	-0.65390
1/9/2008 14:23:03	51783.0	35.5	11.31	11.159	0.214	-0.66973
1/9/2008 14:23:03	51783.5	36.0	11.32	11.165	0.208	-0.68202
1/9/2008 14:23:04	51784.5	37.0	11.33	11.174	0.199	-0.70111
1/9/2008 14:23:05	51785.0	37.5	11.34	11.180	0.193	-0.71434
1/9/2008 14:23:05	51785.5	38.0	11.34	11.186	0.187	-0.72799
1/9/2008 14:23:06	51786.5	39.0	11.35	11.199	0.174	-0.75913
1/9/2008 14:23:07	51787.0	39.5	11.36	11.204	0.168	-0.77428
1/9/2008 14:23:07	51787.5	40.0	11.37	11.212	0.160	-0.79537
1/9/2008 14:23:08	51788.0	40.5	11.38	11.220	0.152	-0.81754
1/9/2008 14:23:08	51788.5	41.0	11.38	11.227	0.145	-0.83790
1/9/2008 14:23:09	51789.0	41.5	11.39	11.233	0.139	-0.85613
1/9/2008 14:23:09	51789.5	42.0	11.4	11.241	0.131	-0.88173
1/9/2008 14:23:10	51790.0	42.5	11.4	11.245	0.127	-0.89507
1/9/2008 14:23:10	51790.5	43.0	11.41	11.252	0.120	-0.91952
1/9/2008 14:23:11	51791.0	43.5	11.41	11.258	0.114	-0.94162
1/9/2008 14:23:11	51791.5	44.0	11.42	11.262	0.110	-0.95697
1/9/2008 14:23:12	51792.0	44.5	11.42	11.268	0.104	-0.98112
1/9/2008 14:23:12	51792.5	45.0	11.43	11.272	0.100	-0.99795
1/9/2008 14:23:13	51793.5	46.0	11.44	11.279	0.094	-1.02905
1/9/2008 14:23:14	51794.5	47.0	11.44	11.283	0.090	-1.04775
1/9/2008 14:23:15	51795.5	48.0	11.44	11.287	0.086	-1.06730
1/9/2008 14:23:16	51796.0	48.5	11.45	11.290	0.083	-1.08264
1/9/2008 14:23:17	51797.5	50.0	11.45	11.294	0.079	-1.10370
1/9/2008 14:23:19	51799.0	51.5	11.45	11.296	0.077	-1.11439
1/9/2008 14:23:20	51800.5	53.0	11.45	11.298	0.075	-1.12535
1/9/2008 14:23:22	51802.5	55.0	11.46	11.300	0.073	-1.13641
1/9/2008 14:23:23	51803.0	55.5	11.46	11.302	0.071	-1.14830
1/9/2008 14:23:24	51804.0	56.5	11.46	11.304	0.069	-1.16033
1/9/2008 14:23:24	51804.5	57.0	11.46	11.305	0.067	-1.17290
1/9/2008 14:23:25	51805.0	57.5	11.46	11.303	0.069	-1.15998
1/9/2008 14:23:25	51805.5	58.0	11.46	11.305	0.067	-1.17253
1/9/2008 14:23:26	51806.0	58.5	11.46	11.307	0.065	-1.18546
1/9/2008 14:23:27	51807.5	60.0	11.47	11.310	0.062	-1.20530
1/9/2008 14:23:29	51809.0	61.5	11.47	11.312	0.060	-1.21885
1/9/2008 14:23:30	51810.0	62.5	11.47	11.314	0.058	-1.23305
1/9/2008 14:23:31	51811.5	64.0	11.47	11.316	0.057	-1.24750
1/9/2008 14:23:33	51813.0	65.5	11.48	11.318	0.055	-1.26246
1/9/2008 14:23:35	51815.0	67.5	11.48	11.320	0.053	-1.27771
1/9/2008 14:23:36	51816.5	69.0	11.48	11.322	0.051	-1.29376
1/9/2008 14:23:38	51818.0	70.5	11.48	11.324	0.049	-1.31043
1/9/2008 14:23:39	51819.0	71.5	11.48	11.326	0.047	-1.32802

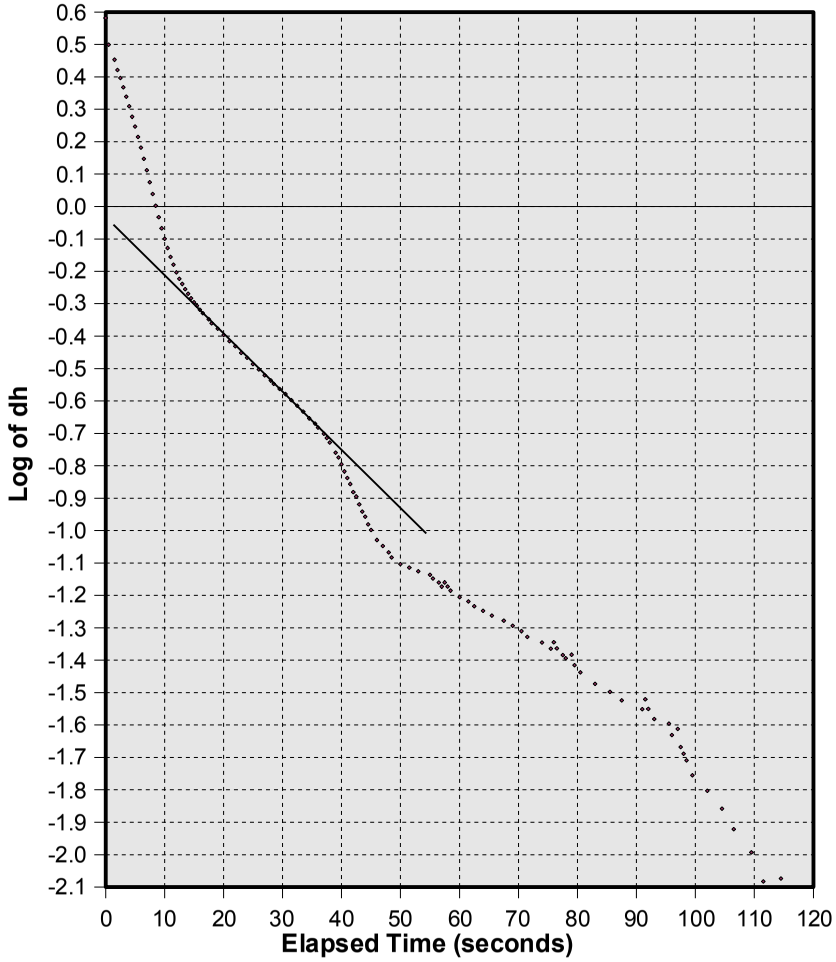
Slug Test MW-16

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 14:23:41	51821.5	74.0	11.49	11.328	0.045	-1.34554
1/9/2008 14:23:43	51823.0	75.5	11.49	11.329	0.043	-1.36436
1/9/2008 14:23:43	51823.5	76.0	11.49	11.327	0.045	-1.34444
1/9/2008 14:23:44	51824.0	76.5	11.49	11.329	0.043	-1.36379
1/9/2008 14:23:45	51825.0	77.5	11.49	11.331	0.041	-1.38374
1/9/2008 14:23:45	51825.5	78.0	11.49	11.332	0.040	-1.39407
1/9/2008 14:23:46	51826.5	79.0	11.49	11.331	0.041	-1.38284
1/9/2008 14:23:47	51827.0	79.5	11.49	11.334	0.038	-1.41517
1/9/2008 14:23:48	51828.0	80.5	11.49	11.336	0.037	-1.43769
1/9/2008 14:23:50	51830.5	83.0	11.5	11.339	0.034	-1.47309
1/9/2008 14:23:53	51833.0	85.5	11.5	11.341	0.032	-1.49775
1/9/2008 14:23:55	51835.0	87.5	11.5	11.343	0.030	-1.52431
1/9/2008 14:23:58	51838.5	91.0	11.5	11.345	0.028	-1.55127
1/9/2008 14:23:59	51839.0	91.5	11.5	11.343	0.030	-1.52100
1/9/2008 14:23:59	51839.5	92.0	11.5	11.344	0.028	-1.55039
1/9/2008 14:24:00	51840.5	93.0	11.51	11.346	0.026	-1.58144
1/9/2008 14:24:03	51843.0	95.5	11.51	11.347	0.025	-1.59588
1/9/2008 14:24:03	51843.5	96.0	11.51	11.349	0.023	-1.63103
1/9/2008 14:24:04	51844.5	97.0	11.51	11.348	0.024	-1.61182
1/9/2008 14:24:05	51845.0	97.5	11.51	11.351	0.021	-1.66811
1/9/2008 14:24:05	51845.5	98.0	11.51	11.352	0.021	-1.68822
1/9/2008 14:24:06	51846.0	98.5	11.51	11.353	0.020	-1.70930
1/9/2008 14:24:07	51847.0	99.5	11.51	11.355	0.018	-1.75481
1/9/2008 14:24:09	51849.5	102.0	11.52	11.357	0.016	-1.80327
1/9/2008 14:24:12	51852.0	104.5	11.52	11.359	0.014	-1.85784
1/9/2008 14:24:14	51854.0	106.5	11.52	11.361	0.012	-1.92129
1/9/2008 14:24:17	51857.0	109.5	11.52	11.362	0.010	-1.99317
1/9/2008 14:24:19	51859.0	111.5	11.52	11.364	0.008	-2.08235
1/9/2008 14:24:22	51862.0	114.5	11.52	11.364	0.008	-2.07344

Slug Test MW-16

Slug Test by Bouwer and Rice

Displacement Method:	Slug	
Well depth:	40.25	ft
Stick up height:	2.62	ft
Depth to sand pack (BGS):	24.10	ft
Depth to screened interval (BGS):	25.25	ft
Well diameter:	2.00	in
Diameter of annular space:	7.75	in
Initial depth to water table from top of pipe:	31.97	ft
Initial Head Change:	3.82	ft
Total well length:	42.87	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1901	ft
r_c:	0.0833	ft
Radius of gravel pack (r_w):	0.3229	ft
Screened interval:	15.00	ft
Length of open section (L_e):	10.90	ft
L_e / r_w:	33.7548	
A (dimensionless):	2.680	
B (dimensionless):	0.447	
Drawdown at time = 0 (y_0):	0.52	ft
Drawdown at time = t (y_t):	0.21	ft
Elapsed Time between y_0 and y_t (t):	21	sec
Initial water column in well (L_w):	10.90	ft
$\ln(R_e/r_w)$ =	2.12	
K =	2.86E-05	ft/sec
	8.72E-04	**cm/sec**
	902.70	ft/yr



Water above sand pack:	No
%Duration below sand pack:	100.00%
Water above screen:	No
%Duration below screen:	100.00%

Slug Test MW-18

Initial offset in logger reading (feet):	0.110	Date:	01/09/2008
Offset increment in logger reading (feet/sec):	0.000008		
Initial depth to water table (feet):	55		
Depth of probe below water table (feet):	4.827		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 16:59:20	61160.0	0.0	2.48	2.352	2.475	0.39359
1/9/2008 16:59:20	61160.5	0.5	3.09	2.968	1.859	0.26930
1/9/2008 16:59:21	61161.0	1.0	3.47	3.349	1.478	0.16970
1/9/2008 16:59:21	61161.5	1.5	3.5	3.376	1.451	0.16169
1/9/2008 16:59:22	61162.0	2.0	3.55	3.424	1.403	0.14709
1/9/2008 16:59:22	61162.5	2.5	3.6	3.478	1.349	0.13004
1/9/2008 16:59:23	61163.0	3.0	3.63	3.503	1.324	0.12192
1/9/2008 16:59:23	61163.5	3.5	3.69	3.560	1.267	0.10281
1/9/2008 16:59:24	61164.0	4.0	3.73	3.605	1.222	0.08711
1/9/2008 16:59:24	61164.5	4.5	3.76	3.632	1.195	0.07741
1/9/2008 16:59:25	61165.0	5.0	3.81	3.680	1.147	0.05961
1/9/2008 16:59:25	61165.5	5.5	3.83	3.702	1.125	0.05120
1/9/2008 16:59:26	61166.0	6.0	3.88	3.753	1.074	0.03105
1/9/2008 16:59:26	61166.5	6.5	3.91	3.784	1.043	0.01834
1/9/2008 16:59:27	61167.0	7.0	3.95	3.820	1.007	0.00309
1/9/2008 16:59:27	61167.5	7.5	3.97	3.845	0.982	-0.00783
1/9/2008 16:59:28	61168.0	8.0	4	3.873	0.954	-0.02039
1/9/2008 16:59:28	61168.5	8.5	4.02	3.897	0.930	-0.03145
1/9/2008 16:59:29	61169.0	9.0	4.05	3.923	0.904	-0.04376
1/9/2008 16:59:29	61169.5	9.5	4.07	3.948	0.879	-0.05594
1/9/2008 16:59:30	61170.0	10.0	4.09	3.964	0.863	-0.06391
1/9/2008 16:59:30	61170.5	10.5	4.11	3.984	0.843	-0.07409
1/9/2008 16:59:31	61171.0	11.0	4.12	3.998	0.829	-0.08136
1/9/2008 16:59:31	61171.5	11.5	4.13	4.009	0.818	-0.08716
1/9/2008 16:59:32	61172.0	12.0	4.15	4.025	0.802	-0.09573
1/9/2008 16:59:32	61172.5	12.5	4.16	4.034	0.793	-0.10063
1/9/2008 16:59:33	61173.5	13.5	4.18	4.052	0.775	-0.11060
1/9/2008 16:59:34	61174.0	14.0	4.18	4.059	0.768	-0.11453
1/9/2008 16:59:34	61174.5	14.5	4.19	4.067	0.760	-0.11908
1/9/2008 16:59:35	61175.5	15.5	4.21	4.080	0.747	-0.12656
1/9/2008 16:59:36	61176.5	16.5	4.22	4.090	0.737	-0.13241
1/9/2008 16:59:37	61177.5	17.5	4.22	4.098	0.729	-0.13714
1/9/2008 16:59:38	61178.5	18.5	4.23	4.107	0.720	-0.14253
1/9/2008 16:59:39	61179.5	19.5	4.24	4.113	0.714	-0.14616
1/9/2008 16:59:40	61180.5	20.5	4.24	4.118	0.709	-0.14921
1/9/2008 16:59:41	61181.0	21.0	4.25	4.123	0.704	-0.15228
1/9/2008 16:59:42	61182.5	22.5	4.25	4.129	0.698	-0.15599
1/9/2008 16:59:43	61183.0	23.0	4.26	4.134	0.693	-0.15910
1/9/2008 16:59:44	61184.5	24.5	4.27	4.140	0.687	-0.16287
1/9/2008 16:59:46	61186.0	26.0	4.27	4.148	0.679	-0.16795
1/9/2008 16:59:48	61188.0	28.0	4.28	4.153	0.674	-0.17115
1/9/2008 16:59:49	61189.0	29.0	4.28	4.158	0.669	-0.17437
1/9/2008 16:59:50	61190.0	30.0	4.29	4.163	0.664	-0.17763
1/9/2008 16:59:52	61192.5	32.5	4.29	4.168	0.659	-0.18089

Slug Test MW-18

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 16:59:54	61194.5	34.5	4.3	4.173	0.654	-0.18419
1/9/2008 16:59:57	61197.0	37.0	4.3	4.178	0.649	-0.18751
1/9/2008 16:59:59	61199.0	39.0	4.31	4.183	0.644	-0.19085
1/9/2008 17:00:01	61201.0	41.0	4.31	4.188	0.639	-0.19423
1/9/2008 17:00:03	61203.5	43.5	4.32	4.192	0.634	-0.19762
1/9/2008 17:00:05	61205.5	45.5	4.32	4.197	0.629	-0.20105
1/9/2008 17:00:09	61209.5	49.5	4.33	4.202	0.624	-0.20449
1/9/2008 17:00:12	61212.5	52.5	4.33	4.207	0.619	-0.20796
1/9/2008 17:00:16	61216.5	56.5	4.34	4.213	0.614	-0.21217
1/9/2008 17:00:21	61221.5	61.5	4.35	4.219	0.608	-0.21641
1/9/2008 17:00:26	61226.0	66.0	4.35	4.225	0.602	-0.22069
1/9/2008 17:00:31	61231.5	71.5	4.36	4.232	0.595	-0.22574
1/9/2008 17:00:36	61236.5	76.5	4.36	4.238	0.589	-0.23012
1/9/2008 17:00:43	61243.0	83.0	4.37	4.243	0.584	-0.23378
1/9/2008 17:00:50	61250.0	90.0	4.38	4.249	0.578	-0.23823
1/9/2008 17:00:57	61257.0	97.0	4.38	4.256	0.571	-0.24348
1/9/2008 17:01:02	61262.5	102.5	4.39	4.260	0.567	-0.24650
1/9/2008 17:01:08	61268.5	108.5	4.39	4.264	0.563	-0.24954
1/9/2008 17:01:13	61273.5	113.5	4.39	4.268	0.559	-0.25260
1/9/2008 17:01:19	61279.0	119.0	4.4	4.272	0.555	-0.25569
1/9/2008 17:01:26	61286.0	126.0	4.4	4.276	0.551	-0.25879
1/9/2008 17:01:33	61293.0	133.0	4.41	4.281	0.546	-0.26270
1/9/2008 17:01:42	61302.0	142.0	4.41	4.287	0.540	-0.26744
1/9/2008 17:01:53	61313.0	153.0	4.42	4.292	0.535	-0.27141
1/9/2008 17:02:00	61320.0	160.0	4.42	4.296	0.531	-0.27462
1/9/2008 17:02:09	61329.0	169.0	4.43	4.299	0.527	-0.27784
1/9/2008 17:02:18	61338.0	178.0	4.43	4.304	0.522	-0.28192
1/9/2008 17:02:27	61347.5	187.5	4.44	4.308	0.519	-0.28519
1/9/2008 17:02:36	61356.5	196.5	4.44	4.312	0.515	-0.28850
1/9/2008 17:02:44	61364.0	204.0	4.44	4.316	0.511	-0.29183
1/9/2008 17:02:55	61375.5	215.5	4.45	4.320	0.507	-0.29517
1/9/2008 17:03:05	61385.0	225.0	4.45	4.324	0.503	-0.29855
1/9/2008 17:03:16	61396.5	236.5	4.46	4.329	0.498	-0.30281
1/9/2008 17:03:24	61404.5	244.5	4.46	4.333	0.494	-0.30625
1/9/2008 17:03:37	61417.0	257.0	4.46	4.337	0.490	-0.30969
1/9/2008 17:03:49	61429.5	269.5	4.47	4.341	0.486	-0.31316
1/9/2008 17:03:59	61439.0	279.0	4.47	4.345	0.482	-0.31668
1/9/2008 17:04:03	61443.0	283.0	4.48	4.349	0.478	-0.32027
1/9/2008 17:04:21	61461.5	301.5	4.48	4.352	0.474	-0.32378
1/9/2008 17:04:33	61473.0	313.0	4.49	4.357	0.470	-0.32830
1/9/2008 17:04:45	61485.0	325.0	4.49	4.361	0.466	-0.33193
1/9/2008 17:04:57	61497.5	337.5	4.49	4.366	0.461	-0.33652
1/9/2008 17:05:11	61511.0	351.0	4.5	4.370	0.457	-0.34020
1/9/2008 17:05:23	61523.0	363.0	4.5	4.374	0.453	-0.34393
1/9/2008 17:05:35	61535.5	375.5	4.51	4.378	0.449	-0.34769
1/9/2008 17:05:51	61551.5	391.5	4.51	4.382	0.445	-0.35145
1/9/2008 17:06:05	61565.0	405.0	4.52	4.387	0.440	-0.35625
1/9/2008 17:06:19	61579.5	419.5	4.52	4.391	0.436	-0.36010
1/9/2008 17:06:34	61594.5	434.5	4.52	4.394	0.433	-0.36398

Slug Test MW-18

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 17:06:53	61613.5	453.5	4.53	4.399	0.428	-0.36887
1/9/2008 17:07:05	61625.5	465.5	4.53	4.403	0.424	-0.37285
1/9/2008 17:07:25	61645.5	485.5	4.54	4.407	0.420	-0.37681
1/9/2008 17:07:41	61661.0	501.0	4.54	4.411	0.416	-0.38084
1/9/2008 17:07:48	61668.5	508.5	4.54	4.414	0.413	-0.38392
1/9/2008 17:07:49	61669.0	509.0	4.54	4.411	0.416	-0.38077
1/9/2008 17:07:49	61669.5	509.5	4.54	4.414	0.413	-0.38391
1/9/2008 17:07:50	61670.0	510.0	4.54	4.411	0.416	-0.38076
1/9/2008 17:07:50	61670.5	510.5	4.54	4.414	0.413	-0.38390
1/9/2008 17:07:53	61673.5	513.5	4.54	4.411	0.416	-0.38073
1/9/2008 17:07:54	61674.0	514.0	4.54	4.414	0.413	-0.38387
1/9/2008 17:08:05	61685.0	525.0	4.55	4.418	0.409	-0.38800
1/9/2008 17:08:22	61702.5	542.5	4.55	4.422	0.405	-0.39212
1/9/2008 17:08:39	61719.0	559.0	4.56	4.425	0.402	-0.39628
1/9/2008 17:08:57	61737.5	577.5	4.56	4.429	0.398	-0.40047
1/9/2008 17:09:15	61755.5	595.5	4.56	4.432	0.395	-0.40360
1/9/2008 17:09:27	61767.5	607.5	4.57	4.436	0.391	-0.40792
1/9/2008 17:09:47	61787.0	627.0	4.57	4.440	0.387	-0.41221
1/9/2008 17:09:59	61799.0	639.0	4.57	4.443	0.384	-0.41548
1/9/2008 17:09:59	61799.5	639.5	4.57	4.440	0.387	-0.41210
1/9/2008 17:10:00	61800.0	640.0	4.57	4.443	0.384	-0.41547
1/9/2008 17:10:00	61800.5	640.5	4.57	4.440	0.387	-0.41209
1/9/2008 17:10:01	61801.0	641.0	4.57	4.443	0.384	-0.41546
1/9/2008 17:10:18	61818.0	658.0	4.58	4.447	0.380	-0.41985
1/9/2008 17:10:37	61837.5	677.5	4.58	4.450	0.376	-0.42426
1/9/2008 17:10:56	61856.0	696.0	4.59	4.454	0.373	-0.42873
1/9/2008 17:11:08	61868.5	708.5	4.59	4.457	0.370	-0.43213
1/9/2008 17:11:28	61888.5	728.5	4.59	4.461	0.366	-0.43666
1/9/2008 17:11:51	61911.0	751.0	4.6	4.465	0.362	-0.44122
1/9/2008 17:12:12	61932.0	772.0	4.6	4.469	0.358	-0.44584
1/9/2008 17:12:22	61942.0	782.0	4.6	4.472	0.355	-0.44940
1/9/2008 17:12:22	61942.5	782.5	4.6	4.469	0.358	-0.44574
1/9/2008 17:12:24	61944.0	784.0	4.6	4.472	0.355	-0.44938
1/9/2008 17:12:25	61945.0	785.0	4.6	4.469	0.358	-0.44572
1/9/2008 17:12:27	61947.0	787.0	4.6	4.472	0.355	-0.44935
1/9/2008 17:12:27	61947.5	787.5	4.6	4.469	0.358	-0.44569
1/9/2008 17:12:28	61948.0	788.0	4.6	4.472	0.355	-0.44934
1/9/2008 17:12:29	61949.5	789.5	4.6	4.469	0.358	-0.44567
1/9/2008 17:12:30	61950.5	790.5	4.6	4.472	0.355	-0.44931
1/9/2008 17:12:49	61969.0	809.0	4.61	4.475	0.352	-0.45405
1/9/2008 17:13:14	61994.0	834.0	4.61	4.479	0.348	-0.45877
1/9/2008 17:13:28	62008.0	848.0	4.61	4.482	0.345	-0.46239
1/9/2008 17:13:28	62008.5	848.5	4.61	4.479	0.348	-0.45862
1/9/2008 17:13:31	62011.0	851.0	4.61	4.482	0.345	-0.46236
1/9/2008 17:13:49	62029.5	869.5	4.62	4.486	0.341	-0.46724
1/9/2008 17:14:20	62060.5	900.5	4.62	4.490	0.337	-0.47205
1/9/2008 17:14:45	62085.0	925.0	4.63	4.493	0.333	-0.47697
1/9/2008 17:15:14	62114.0	954.0	4.63	4.497	0.330	-0.48191
1/9/2008 17:15:28	62128.5	968.5	4.63	4.500	0.327	-0.48573

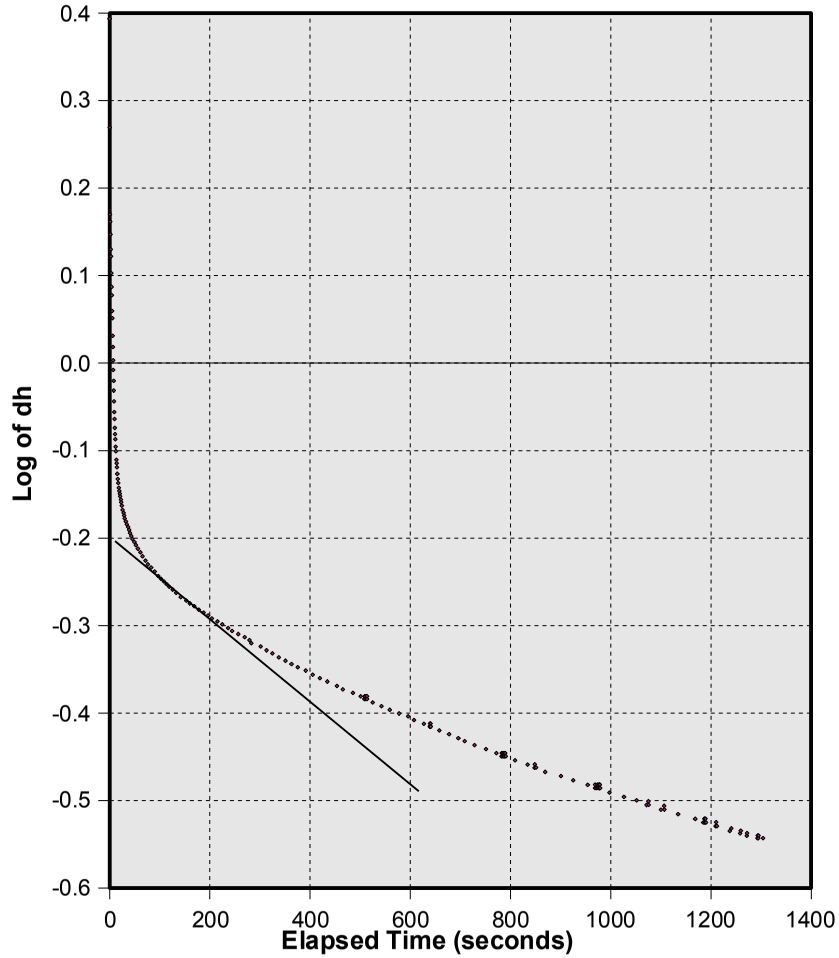
Slug Test MW-18

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 17:15:29	62129.0	969.0	4.63	4.497	0.330	-0.48175
1/9/2008 17:15:31	62131.5	971.5	4.63	4.500	0.327	-0.48570
1/9/2008 17:15:33	62133.5	973.5	4.63	4.497	0.330	-0.48171
1/9/2008 17:15:35	62135.0	975.0	4.63	4.500	0.327	-0.48566
1/9/2008 17:15:36	62136.5	976.5	4.63	4.497	0.330	-0.48167
1/9/2008 17:15:37	62137.0	977.0	4.63	4.500	0.327	-0.48564
1/9/2008 17:15:37	62137.5	977.5	4.63	4.497	0.330	-0.48166
1/9/2008 17:15:38	62138.0	978.0	4.63	4.500	0.327	-0.48563
1/9/2008 17:15:38	62138.5	978.5	4.63	4.497	0.330	-0.48165
1/9/2008 17:15:39	62139.0	979.0	4.63	4.500	0.327	-0.48562
1/9/2008 17:15:57	62157.5	997.5	4.64	4.504	0.323	-0.49077
1/9/2008 17:16:26	62186.5	1026.5	4.64	4.508	0.319	-0.49586
1/9/2008 17:16:51	62211.5	1051.5	4.64	4.510	0.316	-0.49969
1/9/2008 17:17:11	62231.5	1071.5	4.65	4.514	0.313	-0.50499
1/9/2008 17:17:15	62235.0	1075.0	4.65	4.511	0.316	-0.50081
1/9/2008 17:17:15	62235.5	1075.5	4.65	4.514	0.313	-0.50495
1/9/2008 17:17:40	62260.0	1100.0	4.65	4.518	0.309	-0.51027
1/9/2008 17:17:46	62266.5	1106.5	4.65	4.515	0.312	-0.50600
1/9/2008 17:17:47	62267.0	1107.0	4.65	4.518	0.309	-0.51019
1/9/2008 17:18:14	62294.5	1134.5	4.66	4.522	0.305	-0.51554
1/9/2008 17:18:48	62328.5	1168.5	4.66	4.526	0.301	-0.52088
1/9/2008 17:19:04	62344.5	1184.5	4.66	4.528	0.299	-0.52504
1/9/2008 17:19:07	62347.0	1187.0	4.66	4.525	0.302	-0.52066
1/9/2008 17:19:07	62347.5	1187.5	4.66	4.528	0.299	-0.52500
1/9/2008 17:19:08	62348.0	1188.0	4.66	4.525	0.302	-0.52065
1/9/2008 17:19:08	62348.5	1188.5	4.66	4.528	0.299	-0.52499
1/9/2008 17:19:09	62349.0	1189.0	4.66	4.525	0.302	-0.52064
1/9/2008 17:19:10	62350.0	1190.0	4.66	4.528	0.299	-0.52497
1/9/2008 17:19:29	62369.5	1209.5	4.67	4.531	0.296	-0.52913
1/9/2008 17:19:30	62370.5	1210.5	4.66	4.528	0.299	-0.52473
1/9/2008 17:19:32	62372.0	1212.0	4.67	4.531	0.296	-0.52910
1/9/2008 17:19:57	62397.5	1237.5	4.67	4.535	0.292	-0.53471
1/9/2008 17:20:00	62400.5	1240.5	4.67	4.533	0.294	-0.53171
1/9/2008 17:20:18	62418.0	1258.0	4.67	4.537	0.290	-0.53745
1/9/2008 17:20:19	62419.5	1259.5	4.67	4.535	0.292	-0.53445
1/9/2008 17:20:31	62431.5	1271.5	4.67	4.539	0.288	-0.54030
1/9/2008 17:20:32	62432.0	1272.0	4.67	4.537	0.290	-0.53729
1/9/2008 17:20:53	62453.0	1293.0	4.68	4.541	0.286	-0.54306
1/9/2008 17:20:53	62453.5	1293.5	4.67	4.539	0.288	-0.54003
1/9/2008 17:20:54	62454.5	1294.5	4.68	4.541	0.286	-0.54304
1/9/2008 17:20:55	62455.0	1295.0	4.67	4.539	0.288	-0.54001
1/9/2008 17:21:04	62464.0	1304.0	4.68	4.540	0.286	-0.54293

Slug Test MW-18

Slug Test by Bouwer and Rice

Displacement Method:	Slug	
Well depth:	56.70	ft
Stick up height:	2.81	ft
Depth to sand pack (BGS):	40.25	ft
Depth to screened interval (BGS):	41.70	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	55.00	ft
Initial Head Change:	2.48	ft
Total well length:	59.51	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.1537	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	4.51	ft
L_e / r_w:	18.0400	
A (dimensionless):	2.187	
B (dimensionless):	0.357	
Drawdown at time = 0 (y_0):	0.56	ft
Drawdown at time = t (y_t):	0.50	ft
Elapsed Time between y_0 and y_t (t):	122	sec
Initial water column in well (L_w):	4.51	ft
$\ln(R_e/r_w)$ =	1.61	
K =	3.92E-06	ft/sec
	1.19E-04	**cm/sec**
	123.49	ft/yr



Water above sand pack:	No
%Duration below sand pack:	100.00%
Water above screen:	No
%Duration below screen:	100.00%

Slug Test MW-19

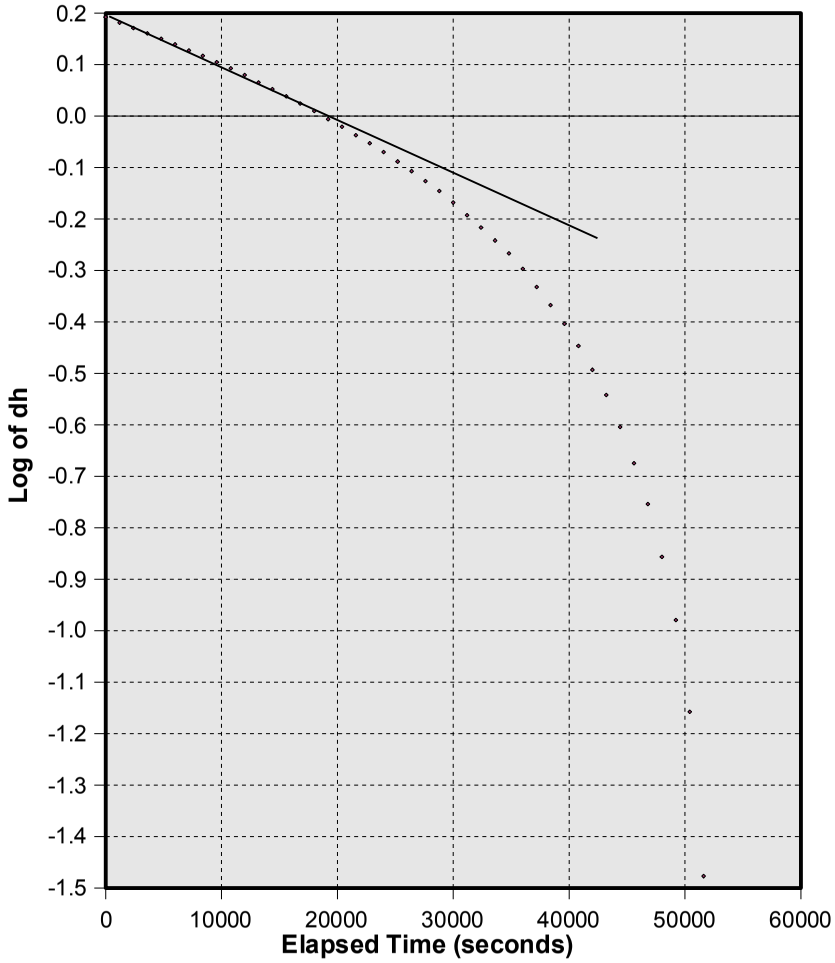
Initial offset in logger reading (feet):	4.480	Date:	01/08/2008
Offset increment in logger reading (feet/sec):	-0.000003		
Initial depth to water table (feet):	56.48		
Depth of probe below water table (feet):	-0.065		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/8/2008 17:39:13	63553.0	0.0	2.78	-1.621	1.56	0.19196
1/8/2008 17:59:13	64753.5	1200.5	2.81	-1.584	1.52	0.18143
1/8/2008 18:19:13	65953.0	2400.0	2.85	-1.547	1.48	0.17065
1/8/2008 18:39:13	67153.5	3600.5	2.88	-1.512	1.45	0.16049
1/8/2008 18:59:13	68353.0	4800.0	2.91	-1.478	1.41	0.15009
1/8/2008 19:19:13	69553.5	6000.5	2.94	-1.443	1.38	0.13912
1/8/2008 19:39:13	70753.0	7200.0	2.97	-1.407	1.34	0.12754
1/8/2008 19:59:13	71953.5	8400.5	3	-1.374	1.31	0.11698
1/8/2008 20:19:13	73153.0	9600.0	3.04	-1.337	1.27	0.10444
1/8/2008 20:39:13	74353.5	10800.5	3.07	-1.303	1.24	0.09259
1/8/2008 20:59:13	75553.0	12000.0	3.1	-1.267	1.2	0.07968
1/8/2008 21:19:13	76753.5	13200.5	3.14	-1.227	1.16	0.06526
1/8/2008 21:39:13	77953.0	14400.0	3.17	-1.193	1.13	0.05227
1/8/2008 21:59:13	79153.5	15600.5	3.2	-1.157	1.09	0.03808
1/8/2008 22:19:13	80353.0	16800.0	3.23	-1.123	1.06	0.02424
1/8/2008 22:39:13	81553.5	18000.5	3.26	-1.088	1.02	0.00994
1/8/2008 22:59:13	82753.0	19200.0	3.3	-1.051	0.99	-0.00616
1/8/2008 23:19:13	83953.5	20400.5	3.33	-1.019	0.95	-0.02060
1/8/2008 23:39:13	85153.0	21600.0	3.36	-0.983	0.92	-0.03743
1/8/2008 23:59:13	86353.5	22800.5	3.39	-0.950	0.89	-0.05296
1/9/2008 0:19:13	87553.0	24000.0	3.42	-0.916	0.85	-0.07010
1/9/2008 0:39:13	88753.5	25200.5	3.45	-0.881	0.82	-0.08847
1/9/2008 0:59:13	89953.0	26400.0	3.48	-0.847	0.78	-0.10709
1/9/2008 1:19:13	91153.5	27600.5	3.51	-0.812	0.75	-0.12655
1/9/2008 1:39:13	92353.0	28800.0	3.54	-0.780	0.71	-0.14571
1/9/2008 1:59:13	93553.5	30000.5	3.57	-0.744	0.68	-0.16830
1/9/2008 2:19:13	94753.0	31200.0	3.61	-0.707	0.64	-0.19281
1/9/2008 2:39:13	95953.5	32400.5	3.64	-0.672	0.61	-0.21664
1/9/2008 2:59:13	97153.0	33600.0	3.67	-0.638	0.57	-0.24184
1/9/2008 3:19:13	98353.5	34800.5	3.7	-0.606	0.54	-0.26700
1/9/2008 3:39:13	99553.0	36000.0	3.73	-0.570	0.5	-0.29713
1/9/2008 3:59:13	100753.5	37200.5	3.77	-0.531	0.47	-0.33229
1/9/2008 4:19:13	101953.0	38400.0	3.8	-0.494	0.43	-0.36751
1/9/2008 4:39:13	103153.5	39600.5	3.83	-0.460	0.39	-0.40364
1/9/2008 4:59:13	104353.0	40800.0	3.87	-0.423	0.36	-0.44667
1/9/2008 5:19:13	105553.5	42000.5	3.9	-0.387	0.32	-0.49309
1/9/2008 5:39:13	106753.0	43200.0	3.93	-0.352	0.29	-0.54203
1/9/2008 5:59:13	107953.5	44400.5	3.97	-0.314	0.25	-0.60413
1/9/2008 6:19:13	109153.0	45600.0	4	-0.277	0.21	-0.67455
1/9/2008 6:39:13	110353.5	46800.5	4.03	-0.242	0.18	-0.75369
1/9/2008 6:59:13	111553.0	48000.0	4.07	-0.204	0.14	-0.85673
1/9/2008 7:19:13	112753.5	49200.5	4.1	-0.170	0.1	-0.97948
1/9/2008 7:39:13	113953.0	50400.0	4.13	-0.135	0.07	-1.15742
1/9/2008 7:59:13	115153.5	51600.5	4.16	-0.099	0.03	-1.47689

Slug Test MW-19

Slug Test by Bouwer and Rice

Displacement Method:	Pump	
Well depth:	63.92	ft
Stick up height:	2.81	ft
Depth to sand pack (BGS):	48.00	ft
Depth to screened interval (BGS):	48.92	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	56.48	ft
Initial Head Change:	1.56	ft
Total well length:	66.73	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.1537	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	10.25	ft
L_e / r_w:	41.0000	
A (dimensionless):	2.908	
B (dimensionless):	0.486	
Drawdown at time = 0 (y_0):	1.52	ft
Drawdown at time = t (y_t):	0.99	ft
Elapsed Time between y_0 and y_t (t):	17999.5	sec
Initial water column in well (L_w):	10.25	ft
$\ln(R_e/r_w)$ =	2.28	
K =	6.31E-08	ft/sec
	1.92E-06	**cm/sec**
	1.99	ft/yr



Water above sand pack:	No
%Duration below sand pack:	100.00%
Water above screen:	No
%Duration below screen:	100.00%

Slug Test MW-20

Initial offset in logger reading (feet):	0.124	Date:	01/09/2008
Offset increment in logger reading (feet/sec):	-0.000005		
Initial depth to water table (feet):	40.8		
Depth of probe below water table (feet):	3.833		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 15:23:11	55391.0	0.0	9.68	9.552	5.719	0.75734
1/9/2008 15:23:20	55400.5	9.5	9.54	9.418	5.585	0.74704
1/9/2008 15:23:29	55409.0	18.0	9.41	9.290	5.456	0.73690
1/9/2008 15:23:37	55417.5	26.5	9.29	9.164	5.330	0.72675
1/9/2008 15:23:46	55426.0	35.0	9.16	9.039	5.205	0.71645
1/9/2008 15:23:55	55435.0	44.0	9.04	8.913	5.079	0.70581
1/9/2008 15:24:03	55443.5	52.5	8.92	8.796	4.962	0.69570
1/9/2008 15:24:12	55452.5	61.5	8.8	8.677	4.844	0.68516
1/9/2008 15:24:21	55461.5	70.5	8.68	8.561	4.728	0.67464
1/9/2008 15:24:30	55470.5	79.5	8.57	8.448	4.615	0.66413
1/9/2008 15:24:39	55479.5	88.5	8.46	8.339	4.506	0.65376
1/9/2008 15:24:48	55488.5	97.5	8.35	8.232	4.399	0.64332
1/9/2008 15:24:57	55497.5	106.5	8.25	8.128	4.295	0.63294
1/9/2008 15:25:06	55506.5	115.5	8.15	8.027	4.194	0.62261
1/9/2008 15:25:15	55515.5	124.5	8.05	7.930	4.097	0.61245
1/9/2008 15:25:24	55524.5	133.5	7.96	7.833	4.000	0.60205
1/9/2008 15:25:33	55533.5	142.5	7.86	7.739	3.906	0.59172
1/9/2008 15:25:42	55542.5	151.5	7.77	7.649	3.816	0.58161
1/9/2008 15:25:51	55551.5	160.5	7.68	7.559	3.726	0.57124
1/9/2008 15:26:00	55560.5	169.5	7.6	7.474	3.641	0.56123
1/9/2008 15:26:09	55569.5	178.5	7.51	7.389	3.556	0.55098
1/9/2008 15:26:18	55578.5	187.5	7.43	7.307	3.474	0.54085
1/9/2008 15:26:27	55587.5	196.5	7.35	7.224	3.391	0.53035
1/9/2008 15:26:36	55596.5	205.5	7.27	7.146	3.313	0.52025
1/9/2008 15:26:45	55605.5	214.5	7.19	7.070	3.236	0.51005
1/9/2008 15:26:54	55614.5	223.5	7.12	6.996	3.162	0.50001
1/9/2008 15:27:03	55623.0	232.0	7.04	6.923	3.089	0.48987
1/9/2008 15:27:12	55632.5	241.5	6.97	6.848	3.014	0.47921
1/9/2008 15:27:21	55641.5	250.5	6.9	6.777	2.943	0.46886
1/9/2008 15:27:30	55650.5	259.5	6.83	6.708	2.875	0.45857
1/9/2008 15:27:39	55659.5	268.5	6.76	6.642	2.809	0.44848
1/9/2008 15:27:48	55668.5	277.5	6.7	6.575	2.742	0.43801
1/9/2008 15:27:57	55677.5	286.5	6.63	6.511	2.678	0.42776
1/9/2008 15:28:06	55686.5	295.5	6.57	6.449	2.616	0.41759
1/9/2008 15:28:15	55695.5	304.5	6.51	6.387	2.554	0.40718
1/9/2008 15:28:24	55704.5	313.5	6.45	6.327	2.494	0.39686
1/9/2008 15:28:33	55713.5	322.5	6.39	6.269	2.436	0.38665
1/9/2008 15:28:42	55722.0	331.0	6.33	6.213	2.380	0.37656
1/9/2008 15:28:51	55731.0	340.0	6.28	6.157	2.324	0.36622
1/9/2008 15:29:00	55740.0	349.0	6.22	6.101	2.268	0.35564
1/9/2008 15:29:09	55749.0	358.0	6.17	6.049	2.216	0.34557
1/9/2008 15:29:18	55758.0	367.0	6.12	5.995	2.162	0.33487
1/9/2008 15:29:27	55767.0	376.0	6.07	5.944	2.111	0.32451
1/9/2008 15:29:36	55776.0	385.0	6.02	5.894	2.061	0.31411

Slug Test MW-20

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 15:29:45	55785.0	394.0	5.97	5.844	2.011	0.30346
1/9/2008 15:29:54	55794.0	403.0	5.92	5.796	1.963	0.29298
1/9/2008 15:30:02	55802.5	411.5	5.87	5.752	1.918	0.28292
1/9/2008 15:30:11	55811.5	420.5	5.83	5.706	1.872	0.27238
1/9/2008 15:30:20	55820.5	429.5	5.78	5.661	1.827	0.26183
1/9/2008 15:30:29	55829.5	438.5	5.74	5.617	1.783	0.25126
1/9/2008 15:30:38	55838.0	447.0	5.7	5.576	1.742	0.24117
1/9/2008 15:30:46	55846.5	455.5	5.66	5.536	1.703	0.23109
1/9/2008 15:30:56	55856.0	465.0	5.61	5.493	1.660	0.21999
1/9/2008 15:31:05	55865.0	474.0	5.57	5.453	1.620	0.20941
1/9/2008 15:31:14	55874.0	483.0	5.53	5.412	1.579	0.19829
1/9/2008 15:31:23	55883.0	492.0	5.5	5.375	1.542	0.18800
1/9/2008 15:31:32	55892.0	501.0	5.46	5.338	1.505	0.17746
1/9/2008 15:31:40	55900.5	509.5	5.42	5.302	1.469	0.16696
1/9/2008 15:31:49	55909.5	518.5	5.39	5.267	1.434	0.15650
1/9/2008 15:31:58	55918.0	527.0	5.35	5.232	1.399	0.14578
1/9/2008 15:32:07	55927.0	536.0	5.32	5.199	1.366	0.13543
1/9/2008 15:32:15	55935.5	544.5	5.29	5.166	1.333	0.12482
1/9/2008 15:32:24	55944.0	553.0	5.26	5.135	1.302	0.11462
1/9/2008 15:32:33	55953.0	562.0	5.22	5.104	1.271	0.10417
1/9/2008 15:32:41	55961.0	570.0	5.19	5.074	1.241	0.09381
1/9/2008 15:32:50	55970.0	579.0	5.16	5.043	1.210	0.08284
1/9/2008 15:32:59	55979.0	588.0	5.13	5.014	1.181	0.07232
1/9/2008 15:33:07	55987.0	596.0	5.11	4.987	1.154	0.06229
1/9/2008 15:33:15	55995.0	604.0	5.08	4.960	1.127	0.05203
1/9/2008 15:33:23	56003.5	612.5	5.05	4.934	1.100	0.04152
1/9/2008 15:33:32	56012.5	621.5	5.03	4.908	1.074	0.03115
1/9/2008 15:33:41	56021.0	630.0	5	4.883	1.049	0.02094
1/9/2008 15:33:49	56029.0	638.0	4.98	4.858	1.024	0.01049
1/9/2008 15:33:58	56038.0	647.0	4.95	4.833	0.999	-0.00022
1/9/2008 15:34:06	56046.0	655.0	4.93	4.810	0.977	-0.01031
1/9/2008 15:34:14	56054.5	663.5	4.91	4.787	0.954	-0.02064
1/9/2008 15:34:23	56063.0	672.0	4.88	4.765	0.932	-0.03076
1/9/2008 15:34:31	56071.0	680.0	4.86	4.742	0.909	-0.04160
1/9/2008 15:34:40	56080.0	689.0	4.84	4.720	0.887	-0.05222
1/9/2008 15:34:48	56088.5	697.5	4.82	4.699	0.866	-0.06261
1/9/2008 15:34:57	56097.0	706.0	4.8	4.678	0.845	-0.07325
1/9/2008 15:35:05	56105.5	714.5	4.78	4.657	0.824	-0.08416
1/9/2008 15:35:14	56114.5	723.5	4.76	4.637	0.804	-0.09481
1/9/2008 15:35:22	56122.5	731.5	4.74	4.618	0.785	-0.10517
1/9/2008 15:35:31	56131.0	740.0	4.72	4.599	0.766	-0.11579
1/9/2008 15:35:39	56139.5	748.5	4.7	4.580	0.747	-0.12667
1/9/2008 15:35:48	56148.5	757.5	4.68	4.562	0.729	-0.13724
1/9/2008 15:35:56	56156.5	765.5	4.66	4.545	0.712	-0.14746
1/9/2008 15:36:05	56165.0	774.0	4.65	4.528	0.695	-0.15793
1/9/2008 15:36:13	56173.0	782.0	4.63	4.512	0.679	-0.16802
1/9/2008 15:36:21	56181.5	790.5	4.62	4.496	0.663	-0.17834
1/9/2008 15:36:30	56190.0	799.0	4.6	4.479	0.646	-0.18959
1/9/2008 15:36:39	56199.0	808.0	4.58	4.464	0.630	-0.20044

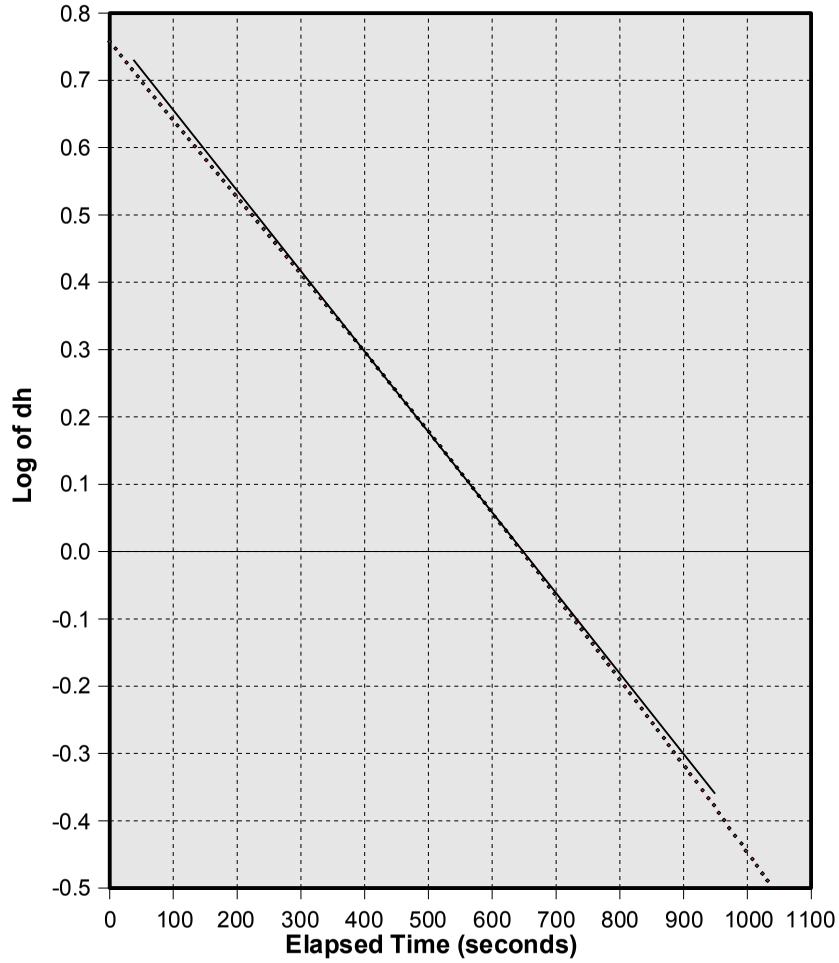
Slug Test MW-20

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 15:36:47	56207.0	816.0	4.57	4.449	0.615	-0.21088
1/9/2008 15:36:56	56216.5	825.5	4.55	4.433	0.599	-0.22228
1/9/2008 15:37:05	56225.5	834.5	4.54	4.418	0.584	-0.23325
1/9/2008 15:37:13	56233.5	842.5	4.52	4.403	0.569	-0.24452
1/9/2008 15:37:22	56242.5	851.5	4.51	4.389	0.556	-0.25529
1/9/2008 15:37:30	56250.5	859.5	4.49	4.376	0.543	-0.26554
1/9/2008 15:37:40	56260.0	869.0	4.48	4.362	0.529	-0.27685
1/9/2008 15:37:47	56267.5	876.5	4.47	4.349	0.516	-0.28764
1/9/2008 15:37:55	56275.5	884.5	4.46	4.337	0.504	-0.29783
1/9/2008 15:38:04	56284.0	893.0	4.44	4.324	0.491	-0.30914
1/9/2008 15:38:14	56294.5	903.5	4.43	4.311	0.478	-0.32076
1/9/2008 15:38:21	56301.5	910.5	4.42	4.300	0.467	-0.33084
1/9/2008 15:38:31	56311.0	920.0	4.41	4.288	0.455	-0.34210
1/9/2008 15:38:40	56320.5	929.5	4.39	4.275	0.442	-0.35465
1/9/2008 15:38:50	56330.0	939.0	4.38	4.263	0.430	-0.36655
1/9/2008 15:38:58	56338.5	947.5	4.37	4.253	0.420	-0.37673
1/9/2008 15:39:06	56346.0	955.0	4.36	4.242	0.409	-0.38821
1/9/2008 15:39:14	56354.5	963.5	4.35	4.232	0.399	-0.39891
1/9/2008 15:39:22	56362.5	971.5	4.34	4.221	0.388	-0.41101
1/9/2008 15:39:31	56371.5	980.5	4.33	4.211	0.378	-0.42229
1/9/2008 15:39:41	56381.5	990.5	4.32	4.201	0.368	-0.43387
1/9/2008 15:39:48	56388.5	997.5	4.31	4.192	0.359	-0.44457
1/9/2008 15:39:59	56399.0	1008.0	4.3	4.183	0.349	-0.45676
1/9/2008 15:40:06	56406.0	1015.0	4.29	4.175	0.341	-0.46678
1/9/2008 15:40:14	56414.5	1023.5	4.28	4.166	0.332	-0.47833
1/9/2008 15:40:22	56422.5	1031.5	4.28	4.158	0.324	-0.48885

Slug Test MW-20

Slug Test by Bouwer and Rice

Displacement Method:	Injection	
Well depth:	63.55	ft
Stick up height:	2.73	ft
Depth to sand pack (BGS):	47.50	ft
Depth to screened interval (BGS):	48.55	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	40.80	ft
Initial Head Change:	5.72	ft
Total well length:	66.28	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.0833	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	15.00	ft
L_e / r_w:	60.0000	
A (dimensionless):	3.472	
B (dimensionless):	0.581	
Drawdown at time = 0 (y_0):	3.21	ft
Drawdown at time = t (y_t):	0.66	ft
Elapsed Time between y_0 and y_t (t):	575	sec
Initial water column in well (L_w):	25.48	ft
$\ln(R_e/r_w)$ =	2.83	
K =	1.80E-06	ft/sec
	5.49E-05	**cm/sec**
	56.81	ft/yr



Water above sand pack:	Yes
%Duration below sand pack:	0.00%
Water above screen:	Yes
%Duration below screen:	0.00%

Slug Test MW-21

Initial offset in logger reading (feet):	0.192	Date:	01/09/2008
Offset increment in logger reading (feet/sec):	-0.000071		
Initial depth to water table (feet):	30.51		
Depth of probe below water table (feet):	13.003		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 15:00:33	54033.0	0.0	9.2	9.022	3.981	0.60002
1/9/2008 15:00:33	54033.5	0.5	9.9	9.722	3.281	0.51604
1/9/2008 15:00:34	54034.0	1.0	9.85	9.677	3.326	0.52195
1/9/2008 15:00:34	54034.5	1.5	10.2	10.026	2.977	0.47381
1/9/2008 15:00:35	54035.0	2.0	10.42	10.248	2.755	0.44015
1/9/2008 15:00:35	54035.5	2.5	10.63	10.457	2.546	0.40588
1/9/2008 15:00:36	54036.0	3.0	10.82	10.642	2.361	0.37311
1/9/2008 15:00:36	54036.5	3.5	11	10.821	2.182	0.33887
1/9/2008 15:00:37	54037.0	4.0	11.15	10.975	2.028	0.30707
1/9/2008 15:00:37	54037.5	4.5	11.3	11.122	1.881	0.27438
1/9/2008 15:00:38	54038.0	5.0	11.44	11.263	1.740	0.24054
1/9/2008 15:00:38	54038.5	5.5	11.57	11.390	1.613	0.20761
1/9/2008 15:00:39	54039.0	6.0	11.68	11.506	1.497	0.17519
1/9/2008 15:00:39	54039.5	6.5	11.79	11.612	1.391	0.14328
1/9/2008 15:00:40	54040.0	7.0	11.88	11.707	1.296	0.11254
1/9/2008 15:00:40	54040.5	7.5	11.97	11.797	1.206	0.08126
1/9/2008 15:00:41	54041.0	8.0	12.06	11.880	1.123	0.05028
1/9/2008 15:00:41	54041.5	8.5	12.13	11.954	1.049	0.02065
1/9/2008 15:00:42	54042.0	9.0	12.2	12.025	0.978	-0.00981
1/9/2008 15:00:42	54042.5	9.5	12.26	12.085	0.918	-0.03733
1/9/2008 15:00:43	54043.0	10.0	12.31	12.137	0.866	-0.06269
1/9/2008 15:00:43	54043.5	10.5	12.37	12.193	0.810	-0.09175
1/9/2008 15:00:44	54044.0	11.0	12.41	12.233	0.770	-0.11378
1/9/2008 15:00:44	54044.5	11.5	12.45	12.269	0.733	-0.13461
1/9/2008 15:00:45	54045.0	12.0	12.48	12.302	0.700	-0.15462
1/9/2008 15:00:45	54045.5	12.5	12.51	12.332	0.671	-0.17301
1/9/2008 15:00:46	54046.0	13.0	12.54	12.361	0.642	-0.19221
1/9/2008 15:00:46	54046.5	13.5	12.56	12.382	0.621	-0.20667
1/9/2008 15:00:47	54047.0	14.0	12.58	12.403	0.600	-0.22163
1/9/2008 15:00:47	54047.5	14.5	12.6	12.421	0.582	-0.23487
1/9/2008 15:00:48	54048.0	15.0	12.62	12.442	0.561	-0.25085
1/9/2008 15:00:48	54048.5	15.5	12.64	12.461	0.542	-0.26584
1/9/2008 15:00:49	54049.0	16.0	12.65	12.473	0.530	-0.27559
1/9/2008 15:00:49	54049.5	16.5	12.67	12.492	0.511	-0.29147
1/9/2008 15:00:50	54050.0	17.0	12.68	12.509	0.494	-0.30619
1/9/2008 15:00:50	54050.5	17.5	12.69	12.515	0.488	-0.31153
1/9/2008 15:00:51	54051.0	18.0	12.71	12.533	0.470	-0.32788
1/9/2008 15:00:51	54051.5	18.5	12.73	12.554	0.449	-0.34776
1/9/2008 15:00:52	54052.0	19.0	12.74	12.565	0.438	-0.35857
1/9/2008 15:00:52	54052.5	19.5	12.75	12.577	0.426	-0.37067
1/9/2008 15:00:53	54053.0	20.0	12.76	12.587	0.416	-0.38103
1/9/2008 15:00:53	54053.5	20.5	12.77	12.598	0.405	-0.39271
1/9/2008 15:00:54	54054.0	21.0	12.79	12.610	0.393	-0.40581
1/9/2008 15:00:54	54054.5	21.5	12.8	12.621	0.382	-0.41819

Slug Test MW-21

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 15:00:55	54055.0	22.0	12.81	12.631	0.372	-0.42976
1/9/2008 15:00:55	54055.5	22.5	12.82	12.641	0.362	-0.44164
1/9/2008 15:00:56	54056.0	23.0	12.83	12.652	0.351	-0.45510
1/9/2008 15:00:56	54056.5	23.5	12.84	12.660	0.343	-0.46517
1/9/2008 15:00:57	54057.0	24.0	12.84	12.668	0.335	-0.47547
1/9/2008 15:00:57	54057.5	24.5	12.85	12.677	0.326	-0.48736
1/9/2008 15:00:58	54058.0	25.0	12.86	12.687	0.316	-0.50096
1/9/2008 15:00:58	54058.5	25.5	12.87	12.697	0.305	-0.51500
1/9/2008 15:00:59	54059.0	26.0	12.88	12.704	0.298	-0.52512
1/9/2008 15:00:59	54059.5	26.5	12.89	12.710	0.292	-0.53399
1/9/2008 15:01:00	54060.0	27.0	12.89	12.717	0.286	-0.54305
1/9/2008 15:01:00	54060.5	27.5	12.9	12.725	0.278	-0.55540
1/9/2008 15:01:01	54061.0	28.0	12.91	12.734	0.269	-0.56974
1/9/2008 15:01:01	54061.5	28.5	12.91	12.739	0.264	-0.57793
1/9/2008 15:01:02	54062.0	29.0	12.92	12.747	0.256	-0.59134
1/9/2008 15:01:02	54062.5	29.5	12.93	12.752	0.251	-0.59996
1/9/2008 15:01:03	54063.0	30.0	12.93	12.759	0.244	-0.61230
1/9/2008 15:01:03	54063.5	30.5	12.94	12.765	0.238	-0.62317
1/9/2008 15:01:04	54064.0	31.0	12.94	12.770	0.233	-0.63245
1/9/2008 15:01:04	54064.5	31.5	12.95	12.776	0.227	-0.64384
1/9/2008 15:01:05	54065.0	32.0	12.96	12.782	0.221	-0.65554
1/9/2008 15:01:05	54065.5	32.5	12.96	12.789	0.214	-0.66959
1/9/2008 15:01:06	54066.0	33.0	12.97	12.793	0.210	-0.67786
1/9/2008 15:01:06	54066.5	33.5	12.97	12.799	0.204	-0.69052
1/9/2008 15:01:07	54067.0	34.0	12.98	12.805	0.198	-0.70357
1/9/2008 15:01:07	54067.5	34.5	12.99	12.811	0.192	-0.71702
1/9/2008 15:01:08	54068.0	35.0	12.99	12.814	0.189	-0.72395
1/9/2008 15:01:08	54068.5	35.5	12.99	12.820	0.183	-0.73806
1/9/2008 15:01:09	54069.0	36.0	13	12.824	0.179	-0.74775
1/9/2008 15:01:09	54069.5	36.5	13	12.826	0.177	-0.75273
1/9/2008 15:01:10	54070.0	37.0	13.01	12.832	0.171	-0.76782
1/9/2008 15:01:10	54070.5	37.5	13.01	12.838	0.165	-0.78345
1/9/2008 15:01:11	54071.0	38.0	13.02	12.841	0.162	-0.79153
1/9/2008 15:01:11	54071.5	38.5	13.02	12.845	0.158	-0.80252
1/9/2008 15:01:12	54072.0	39.0	13.02	12.849	0.154	-0.81378
1/9/2008 15:01:12	54072.5	39.5	13.03	12.853	0.150	-0.82535
1/9/2008 15:01:13	54073.0	40.0	13.03	12.857	0.145	-0.83723
1/9/2008 15:01:13	54073.5	40.5	13.04	12.861	0.141	-0.84945
1/9/2008 15:01:14	54074.0	41.0	13.04	12.866	0.137	-0.86202
1/9/2008 15:01:14	54074.5	41.5	13.04	12.871	0.132	-0.87824
1/9/2008 15:01:15	54075.0	42.0	13.05	12.873	0.130	-0.88497
1/9/2008 15:01:15	54075.5	42.5	13.05	12.877	0.126	-0.89863
1/9/2008 15:01:16	54076.0	43.0	13.05	12.881	0.122	-0.91273
1/9/2008 15:01:16	54076.5	43.5	13.06	12.883	0.120	-0.92003
1/9/2008 15:01:17	54077.0	44.0	13.06	12.885	0.118	-0.92744
1/9/2008 15:01:17	54077.5	44.5	13.06	12.889	0.114	-0.94253
1/9/2008 15:01:18	54078.0	45.0	13.07	12.893	0.110	-0.95816
1/9/2008 15:01:18	54078.5	45.5	13.07	12.895	0.108	-0.96626
1/9/2008 15:01:19	54079.0	46.0	13.07	12.900	0.103	-0.98698

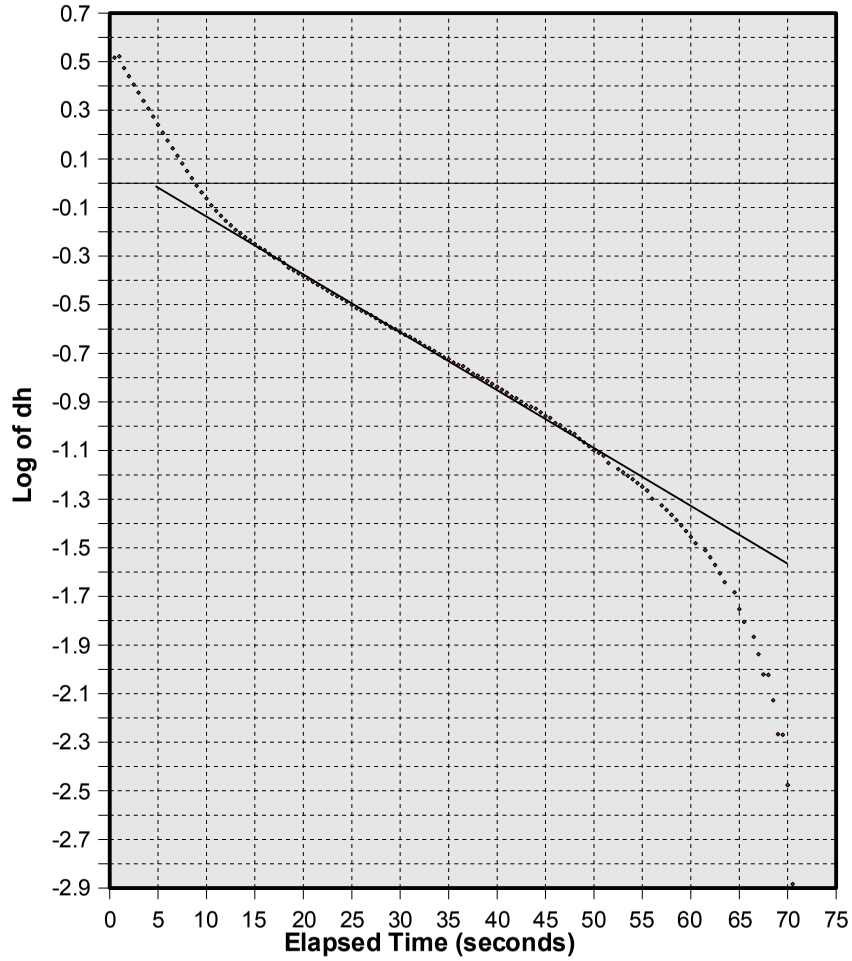
Slug Test MW-21

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 15:01:19	54079.5	46.5	13.08	12.902	0.101	-0.99565
1/9/2008 15:01:20	54080.0	47.0	13.08	12.906	0.097	-1.01336
1/9/2008 15:01:20	54080.5	47.5	13.08	12.908	0.095	-1.02257
1/9/2008 15:01:21	54081.0	48.0	13.08	12.910	0.093	-1.03198
1/9/2008 15:01:21	54081.5	48.5	13.09	12.914	0.089	-1.05127
1/9/2008 15:01:22	54082.0	49.0	13.09	12.917	0.086	-1.06636
1/9/2008 15:01:22	54082.5	49.5	13.09	12.920	0.083	-1.08200
1/9/2008 15:01:23	54083.0	50.0	13.1	12.923	0.080	-1.09822
1/9/2008 15:01:23	54083.5	50.5	13.1	12.925	0.078	-1.10945
1/9/2008 15:01:24	54084.0	51.0	13.1	12.927	0.076	-1.12097
1/9/2008 15:01:24	54084.5	51.5	13.11	12.932	0.071	-1.15087
1/9/2008 15:01:25	54085.5	52.5	13.11	12.936	0.067	-1.17664
1/9/2008 15:01:26	54086.0	53.0	13.11	12.938	0.065	-1.19013
1/9/2008 15:01:26	54086.5	53.5	13.11	12.940	0.063	-1.20404
1/9/2008 15:01:27	54087.0	54.0	13.12	12.942	0.060	-1.21842
1/9/2008 15:01:27	54087.5	54.5	13.12	12.944	0.058	-1.23329
1/9/2008 15:01:28	54088.0	55.0	13.12	12.947	0.056	-1.24868
1/9/2008 15:01:28	54088.5	55.5	13.12	12.949	0.054	-1.26465
1/9/2008 15:01:29	54089.0	56.0	13.13	12.953	0.050	-1.29814
1/9/2008 15:01:30	54090.0	57.0	13.13	12.956	0.047	-1.32548
1/9/2008 15:01:30	54090.5	57.5	13.13	12.958	0.045	-1.34460
1/9/2008 15:01:31	54091.0	58.0	13.13	12.960	0.043	-1.36459
1/9/2008 15:01:31	54091.5	58.5	13.13	12.962	0.041	-1.38556
1/9/2008 15:01:32	54092.0	59.0	13.14	12.964	0.039	-1.40759
1/9/2008 15:01:32	54092.5	59.5	13.14	12.966	0.037	-1.43079
1/9/2008 15:01:33	54093.0	60.0	13.14	12.968	0.035	-1.45530
1/9/2008 15:01:33	54093.5	60.5	13.14	12.970	0.033	-1.48129
1/9/2008 15:01:34	54094.5	61.5	13.14	12.972	0.031	-1.50942
1/9/2008 15:01:35	54095.0	62.0	13.15	12.974	0.029	-1.53897
1/9/2008 15:01:35	54095.5	62.5	13.15	12.976	0.027	-1.57068
1/9/2008 15:01:36	54096.0	63.0	13.15	12.978	0.025	-1.60488
1/9/2008 15:01:36	54096.5	63.5	13.15	12.980	0.023	-1.64201
1/9/2008 15:01:37	54097.5	64.5	13.15	12.982	0.021	-1.68336
1/9/2008 15:01:38	54098.0	65.0	13.16	12.985	0.018	-1.75212
1/9/2008 15:01:38	54098.5	65.5	13.16	12.987	0.016	-1.80518
1/9/2008 15:01:39	54099.5	66.5	13.16	12.989	0.014	-1.86678
1/9/2008 15:01:40	54100.0	67.0	13.16	12.991	0.012	-1.93724
1/9/2008 15:01:40	54100.5	67.5	13.17	12.993	0.010	-2.02139
1/9/2008 15:01:41	54101.0	68.0	13.17	12.993	0.009	-2.02301
1/9/2008 15:01:41	54101.5	68.5	13.17	12.995	0.007	-2.12793
1/9/2008 15:01:42	54102.0	69.0	13.17	12.998	0.005	-2.26656
1/9/2008 15:01:42	54102.5	69.5	13.17	12.998	0.005	-2.26941
1/9/2008 15:01:43	54103.0	70.0	13.17	13.000	0.003	-2.47596
1/9/2008 15:01:43	54103.5	70.5	13.17	13.002	0.001	-2.88378

Slug Test MW-21

Slug Test by Bouwer and Rice

Displacement Method:	Pump	
Well depth:	41.05	ft
Stick up height:	2.92	ft
Depth to sand pack (BGS):	24.25	ft
Depth to screened interval (BGS):	26.05	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	30.51	ft
Initial Head Change:	3.98	ft
Total well length:	43.97	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.1537	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	13.46	ft
L_e / r_w:	53.8400	
A (dimensionless):	3.287	
B (dimensionless):	0.549	
Drawdown at time = 0 (y_0):	0.62	ft
Drawdown at time = t (y_t):	0.08	ft
Elapsed Time between y_0 and y_t (t):	37	sec
Initial water column in well (L_w):	13.46	ft
$\ln(R_e/r_w)$ =	2.51	
K =	1.24E-04	ft/sec
	3.77E-03	**cm/sec**
	3902.00	ft/yr



Water above sand pack:	No
%Duration below sand pack:	100.00%
Water above screen:	No
%Duration below screen:	100.00%

Slug Test MW-22

Initial offset in logger reading (feet):	0.134	Date:	01/07/2008
Offset increment in logger reading (feet/sec):	-0.000007		
Initial depth to water table (feet):	15.31		
Depth of probe below water table (feet):	4.579		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/7/2008 14:39:05	52745.5	0.0	0.55	0.420	4.158	0.61890
1/7/2008 14:39:07	52747.0	1.5	0.7	0.574	4.004	0.60251
1/7/2008 14:39:09	52749.5	4.0	0.8	0.673	3.906	0.59175
1/7/2008 14:39:12	52752.5	7.0	0.9	0.771	3.808	0.58071
1/7/2008 14:39:15	52755.0	9.5	1.01	0.881	3.698	0.56798
1/7/2008 14:39:16	52756.5	11.0	1.12	0.988	3.591	0.55523
1/7/2008 14:39:18	52758.0	12.5	1.22	1.090	3.489	0.54271
1/7/2008 14:39:20	52760.0	14.5	1.31	1.186	3.393	0.53060
1/7/2008 14:39:22	52762.5	17.0	1.4	1.269	3.310	0.51984
1/7/2008 14:39:26	52766.0	20.5	1.47	1.346	3.233	0.50961
1/7/2008 14:39:30	52770.0	24.5	1.55	1.425	3.154	0.49886
1/7/2008 14:39:34	52774.0	28.5	1.63	1.498	3.081	0.48869
1/7/2008 14:39:38	52778.0	32.5	1.7	1.569	3.010	0.47856
1/7/2008 14:39:42	52782.0	36.5	1.77	1.642	2.937	0.46789
1/7/2008 14:39:46	52786.5	41.0	1.85	1.717	2.862	0.45666
1/7/2008 14:39:51	52791.0	45.5	1.92	1.789	2.790	0.44558
1/7/2008 14:39:55	52795.5	50.0	1.99	1.858	2.721	0.43470
1/7/2008 14:40:00	52800.0	54.5	2.06	1.927	2.652	0.42354
1/7/2008 14:40:04	52804.5	59.0	2.12	1.991	2.588	0.41293
1/7/2008 14:40:08	52808.5	63.0	2.18	2.050	2.529	0.40291
1/7/2008 14:40:13	52813.0	67.5	2.24	2.112	2.467	0.39212
1/7/2008 14:40:17	52817.5	72.0	2.3	2.171	2.408	0.38160
1/7/2008 14:40:22	52822.0	76.5	2.36	2.229	2.350	0.37101
1/7/2008 14:40:26	52826.5	81.0	2.42	2.288	2.291	0.35995
1/7/2008 14:40:31	52831.0	85.5	2.47	2.344	2.235	0.34920
1/7/2008 14:40:35	52835.5	90.0	2.53	2.398	2.181	0.33857
1/7/2008 14:40:40	52840.5	95.0	2.58	2.450	2.129	0.32808
1/7/2008 14:40:45	52845.0	99.5	2.63	2.499	2.080	0.31796
1/7/2008 14:40:50	52850.5	105.0	2.68	2.551	2.027	0.30695
1/7/2008 14:40:56	52856.0	110.5	2.73	2.598	1.980	0.29676
1/7/2008 14:41:01	52861.5	116.0	2.77	2.646	1.932	0.28609
1/7/2008 14:41:06	52866.5	121.0	2.82	2.692	1.886	0.27562
1/7/2008 14:41:11	52871.5	126.0	2.86	2.736	1.842	0.26536
1/7/2008 14:41:16	52876.5	131.0	2.91	2.780	1.798	0.25486
1/7/2008 14:41:21	52881.5	136.0	2.95	2.822	1.756	0.24459
1/7/2008 14:41:26	52886.5	141.0	2.99	2.866	1.712	0.23356
1/7/2008 14:41:31	52891.0	145.5	3.03	2.905	1.673	0.22354
1/7/2008 14:41:36	52896.0	150.5	3.08	2.948	1.631	0.21249
1/7/2008 14:41:41	52901.0	155.5	3.11	2.987	1.592	0.20197
1/7/2008 14:41:45	52905.5	160.0	3.15	3.027	1.552	0.19091
1/7/2008 14:41:51	52911.0	165.5	3.19	3.066	1.513	0.17985
1/7/2008 14:41:56	52916.0	170.5	3.23	3.102	1.477	0.16938
1/7/2008 14:42:01	52921.0	175.5	3.26	3.136	1.443	0.15926
1/7/2008 14:42:06	52926.0	180.5	3.3	3.171	1.408	0.14858

Slug Test MW-22

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/7/2008 14:42:10	52930.5	185.0	3.33	3.204	1.375	0.13827
1/7/2008 14:42:15	52935.0	189.5	3.36	3.236	1.343	0.12804
1/7/2008 14:42:19	52939.5	194.0	3.4	3.269	1.310	0.11722
1/7/2008 14:42:24	52944.0	198.5	3.43	3.300	1.279	0.10681
1/7/2008 14:42:28	52948.5	203.0	3.46	3.331	1.248	0.09614
1/7/2008 14:42:33	52953.0	207.5	3.49	3.362	1.217	0.08520
1/7/2008 14:42:37	52957.5	212.0	3.52	3.392	1.187	0.07435
1/7/2008 14:42:42	52962.0	216.5	3.55	3.421	1.158	0.06359
1/7/2008 14:42:46	52966.5	221.0	3.58	3.448	1.131	0.05333
1/7/2008 14:42:51	52971.5	226.0	3.6	3.477	1.102	0.04203
1/7/2008 14:42:56	52976.5	231.0	3.63	3.506	1.073	0.03043
1/7/2008 14:43:01	52981.5	236.0	3.66	3.533	1.046	0.01935
1/7/2008 14:43:06	52986.0	240.5	3.69	3.558	1.021	0.00882
1/7/2008 14:43:11	52991.0	245.5	3.71	3.584	0.994	-0.00240
1/7/2008 14:43:15	52995.5	250.0	3.73	3.607	0.971	-0.01258
1/7/2008 14:43:20	53000.0	254.5	3.76	3.630	0.948	-0.02300
1/7/2008 14:43:25	53005.0	259.5	3.78	3.653	0.925	-0.03367
1/7/2008 14:43:29	53009.5	264.0	3.8	3.676	0.902	-0.04462
1/7/2008 14:43:35	53015.0	269.5	3.83	3.698	0.880	-0.05536
1/7/2008 14:43:39	53019.5	274.0	3.85	3.719	0.859	-0.06586
1/7/2008 14:43:44	53024.0	278.5	3.87	3.740	0.838	-0.07662
1/7/2008 14:43:49	53029.0	283.5	3.89	3.761	0.817	-0.08766
1/7/2008 14:43:53	53033.5	288.0	3.91	3.780	0.798	-0.09789
1/7/2008 14:43:58	53038.5	293.0	3.93	3.801	0.778	-0.10893
1/7/2008 14:44:02	53042.5	297.0	3.95	3.820	0.759	-0.11968
1/7/2008 14:44:07	53047.0	301.5	3.97	3.839	0.740	-0.13071
1/7/2008 14:44:12	53052.0	306.5	3.98	3.858	0.721	-0.14202
1/7/2008 14:44:17	53057.0	311.5	4	3.876	0.703	-0.15302
1/7/2008 14:44:21	53061.0	315.5	4.02	3.893	0.686	-0.16367
1/7/2008 14:44:25	53065.5	320.0	4.04	3.910	0.669	-0.17459
1/7/2008 14:44:30	53070.0	324.5	4.05	3.926	0.653	-0.18512
1/7/2008 14:44:34	53074.0	328.5	4.07	3.943	0.636	-0.19660
1/7/2008 14:44:38	53078.5	333.0	4.09	3.959	0.620	-0.20769
1/7/2008 14:44:43	53083.0	337.5	4.1	3.975	0.604	-0.21907
1/7/2008 14:44:47	53087.0	341.5	4.12	3.989	0.590	-0.22928
1/7/2008 14:44:51	53091.5	346.0	4.13	4.004	0.575	-0.24049
1/7/2008 14:44:56	53096.5	351.0	4.15	4.019	0.560	-0.25200
1/7/2008 14:45:00	53100.5	355.0	4.16	4.033	0.546	-0.26302
1/7/2008 14:45:04	53104.0	358.5	4.17	4.046	0.533	-0.27351
1/7/2008 14:45:09	53109.0	363.5	4.19	4.060	0.519	-0.28511
1/7/2008 14:45:12	53112.5	367.0	4.2	4.073	0.506	-0.29615
1/7/2008 14:45:16	53116.0	370.5	4.21	4.085	0.494	-0.30660
1/7/2008 14:45:19	53119.5	374.0	4.22	4.098	0.481	-0.31822
1/7/2008 14:45:23	53123.5	378.0	4.24	4.110	0.469	-0.32922
1/7/2008 14:45:27	53127.0	381.5	4.25	4.121	0.458	-0.33956
1/7/2008 14:45:31	53131.5	386.0	4.26	4.133	0.446	-0.35113
1/7/2008 14:45:34	53134.5	389.0	4.27	4.144	0.434	-0.36201
1/7/2008 14:45:38	53138.5	393.0	4.28	4.154	0.424	-0.37215
1/7/2008 14:45:42	53142.5	397.0	4.29	4.164	0.414	-0.38254

Slug Test MW-22

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/7/2008 14:45:46	53146.5	401.0	4.3	4.175	0.403	-0.39425
1/7/2008 14:45:50	53150.0	404.5	4.31	4.185	0.393	-0.40518
1/7/2008 14:45:54	53154.5	409.0	4.32	4.196	0.382	-0.41753
1/7/2008 14:45:59	53159.0	413.5	4.33	4.205	0.373	-0.42791
1/7/2008 14:46:03	53163.5	418.0	4.34	4.214	0.364	-0.43854
1/7/2008 14:46:07	53167.0	421.5	4.35	4.223	0.355	-0.44944
1/7/2008 14:46:11	53171.5	426.0	4.36	4.233	0.345	-0.46188
1/7/2008 14:46:15	53175.5	430.0	4.37	4.241	0.337	-0.47209
1/7/2008 14:46:19	53179.5	434.0	4.38	4.249	0.329	-0.48256
1/7/2008 14:46:24	53184.0	438.5	4.38	4.259	0.320	-0.49464
1/7/2008 14:46:30	53190.5	445.0	4.39	4.268	0.311	-0.50709
1/7/2008 14:46:35	53195.0	449.5	4.4	4.277	0.302	-0.51988
1/7/2008 14:46:40	53200.0	454.5	4.41	4.285	0.294	-0.53159
1/7/2008 14:46:45	53205.0	459.5	4.42	4.293	0.286	-0.54362
1/7/2008 14:46:49	53209.5	464.0	4.43	4.300	0.279	-0.55443
1/7/2008 14:46:55	53215.0	469.5	4.43	4.308	0.271	-0.56713
1/7/2008 14:47:01	53221.0	475.5	4.44	4.316	0.263	-0.58021
1/7/2008 14:47:05	53225.5	480.0	4.45	4.323	0.256	-0.59198
1/7/2008 14:47:11	53231.5	486.0	4.45	4.329	0.250	-0.60236
1/7/2008 14:47:16	53236.0	490.5	4.46	4.335	0.244	-0.61298
1/7/2008 14:47:19	53239.5	494.0	4.47	4.341	0.238	-0.62384
1/7/2008 14:47:26	53246.0	500.5	4.47	4.347	0.232	-0.63503
1/7/2008 14:47:32	53252.5	507.0	4.48	4.354	0.225	-0.64843
1/7/2008 14:47:37	53257.0	511.5	4.49	4.360	0.219	-0.66025
1/7/2008 14:47:41	53261.0	515.5	4.49	4.366	0.213	-0.67239
1/7/2008 14:47:45	53265.0	519.5	4.5	4.372	0.207	-0.68488
1/7/2008 14:47:53	53273.5	528.0	4.5	4.377	0.202	-0.69565
1/7/2008 14:48:03	53283.0	537.5	4.51	4.383	0.195	-0.70892
1/7/2008 14:48:09	53289.5	544.0	4.51	4.389	0.189	-0.72256
1/7/2008 14:48:19	53299.5	554.0	4.52	4.395	0.183	-0.73671
1/7/2008 14:48:31	53311.5	566.0	4.53	4.402	0.176	-0.75382
1/7/2008 14:48:37	53317.0	571.5	4.53	4.406	0.172	-0.76388
1/7/2008 14:48:46	53326.5	581.0	4.54	4.411	0.168	-0.77426
1/7/2008 14:48:55	53335.5	590.0	4.54	4.415	0.164	-0.78487
1/7/2008 14:49:05	53345.0	599.5	4.54	4.419	0.160	-0.79577
1/7/2008 14:49:12	53352.0	606.5	4.55	4.423	0.156	-0.80690
1/7/2008 14:49:27	53367.5	622.0	4.55	4.427	0.152	-0.81849
1/7/2008 14:49:37	53377.5	632.0	4.56	4.432	0.147	-0.83323
1/7/2008 14:49:52	53392.5	647.0	4.56	4.436	0.143	-0.84554
1/7/2008 14:49:58	53398.0	652.5	4.56	4.440	0.139	-0.85801
1/7/2008 14:50:22	53422.5	677.0	4.57	4.443	0.136	-0.86805
1/7/2008 14:50:48	53448.5	703.0	4.57	4.447	0.131	-0.88165
1/7/2008 14:51:19	53479.0	733.5	4.58	4.453	0.126	-0.89924
1/7/2008 14:51:19	53479.5	734.0	4.57	4.450	0.129	-0.88904
1/7/2008 14:51:21	53481.0	735.5	4.58	4.453	0.126	-0.89929
1/7/2008 14:51:21	53481.5	736.0	4.57	4.450	0.129	-0.88909
1/7/2008 14:51:24	53484.5	739.0	4.58	4.453	0.126	-0.89937
1/7/2008 14:51:25	53485.0	739.5	4.57	4.450	0.129	-0.88917
1/7/2008 14:51:27	53487.0	741.5	4.58	4.453	0.126	-0.89943

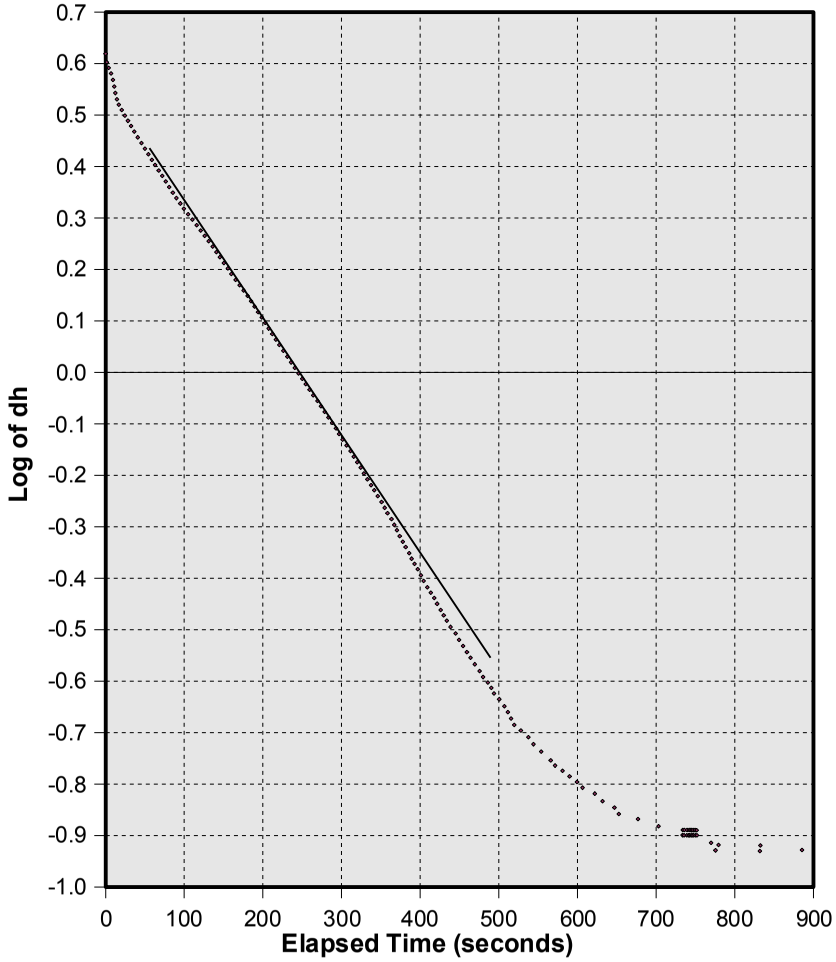
Slug Test MW-22

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/7/2008 14:51:27	53487.5	742.0	4.57	4.450	0.129	-0.88923
1/7/2008 14:51:28	53488.0	742.5	4.58	4.453	0.126	-0.89945
1/7/2008 14:51:29	53489.0	743.5	4.57	4.450	0.129	-0.88926
1/7/2008 14:51:30	53490.0	744.5	4.58	4.453	0.126	-0.89950
1/7/2008 14:51:30	53490.5	745.0	4.57	4.450	0.129	-0.88930
1/7/2008 14:51:31	53491.5	746.0	4.58	4.453	0.126	-0.89954
1/7/2008 14:51:32	53492.5	747.0	4.57	4.450	0.129	-0.88934
1/7/2008 14:51:33	53493.0	747.5	4.58	4.453	0.126	-0.89957
1/7/2008 14:51:35	53495.0	749.5	4.57	4.450	0.129	-0.88940
1/7/2008 14:51:35	53495.5	750.0	4.58	4.453	0.126	-0.89963
1/7/2008 14:51:37	53497.0	751.5	4.57	4.450	0.129	-0.88945
1/7/2008 14:51:37	53497.5	752.0	4.58	4.453	0.126	-0.89968
1/7/2008 14:51:55	53515.5	770.0	4.58	4.457	0.122	-0.91414
1/7/2008 14:52:01	53521.0	775.5	4.58	4.461	0.118	-0.92877
1/7/2008 14:52:05	53525.0	779.5	4.58	4.458	0.121	-0.91795
1/7/2008 14:52:57	53577.5	832.0	4.58	4.461	0.117	-0.93022
1/7/2008 14:52:58	53578.0	832.5	4.58	4.458	0.120	-0.91927
1/7/2008 14:53:51	53631.0	885.5	4.58	4.461	0.118	-0.92789

Slug Test MW-22

Slug Test by Bouwer and Rice

Displacement Method:	Pump	
Well depth:	18.12	ft
Stick up height:	2.76	ft
Depth to sand pack (BGS):	6.85	ft
Depth to screened interval (BGS):	8.12	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	15.31	ft
Initial Head Change:	4.16	ft
Total well length:	20.88	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.1537	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	10.00	ft
Length of open section (L_e):	5.57	ft
L_e / r_w:	22.2800	
A (dimensionless):	2.310	
B (dimensionless):	0.381	
Drawdown at time = 0 (y_0):	2.00	ft
Drawdown at time = t (y_t):	0.56	ft
Elapsed Time between y_0 and y_t (t):	242	sec
Initial water column in well (L_w):	5.57	ft
$\ln(R_e/r_w)$ =	1.78	
K =	1.98E-05	ft/sec
	6.04E-04	**cm/sec**
	625.19	ft/yr



Water above sand pack:	No
%Duration below sand pack:	100.00%
Water above screen:	No
%Duration below screen:	100.00%

Slug Test MW-23

Initial offset in logger reading (feet):	0.196	Date:	01/07/2008
Offset increment in logger reading (feet/sec):	-0.000039		
Initial depth to water table (feet):	17.6		
Depth of probe below water table (feet):	5.219		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/7/2008 13:42:49	49369.5	0.0	0.43	0.254	4.965	0.69596
1/7/2008 13:42:51	49371.5	2.0	0.59	0.412	4.807	0.68191
1/7/2008 13:42:52	49372.5	3.0	0.72	0.543	4.676	0.66991
1/7/2008 13:42:57	49377.0	7.5	0.84	0.657	4.562	0.65917
1/7/2008 13:43:00	49380.0	10.5	0.96	0.779	4.440	0.64739
1/7/2008 13:43:02	49382.0	12.5	1.06	0.886	4.333	0.63679
1/7/2008 13:43:04	49384.5	15.0	1.18	1.000	4.219	0.62520
1/7/2008 13:43:07	49387.0	17.5	1.29	1.112	4.107	0.61350
1/7/2008 13:43:08	49388.5	19.0	1.39	1.216	4.003	0.60236
1/7/2008 13:43:10	49390.0	20.5	1.49	1.312	3.907	0.59181
1/7/2008 13:43:12	49392.0	22.5	1.61	1.432	3.788	0.57836
1/7/2008 13:43:13	49393.5	24.0	1.7	1.519	3.701	0.56826
1/7/2008 13:43:16	49396.0	26.5	1.79	1.610	3.609	0.55744
1/7/2008 13:43:18	49398.5	29.0	1.87	1.693	3.526	0.54732
1/7/2008 13:43:21	49401.0	31.5	1.95	1.776	3.443	0.53697
1/7/2008 13:43:23	49403.5	34.0	2.04	1.862	3.357	0.52597
1/7/2008 13:43:26	49406.0	36.5	2.12	1.943	3.276	0.51535
1/7/2008 13:43:28	49408.5	39.0	2.2	2.022	3.197	0.50474
1/7/2008 13:43:31	49411.0	41.5	2.28	2.101	3.118	0.49386
1/7/2008 13:43:33	49413.5	44.0	2.36	2.181	3.038	0.48255
1/7/2008 13:43:35	49415.5	46.0	2.43	2.254	2.965	0.47198
1/7/2008 13:43:37	49417.5	48.0	2.5	2.326	2.894	0.46144
1/7/2008 13:43:39	49419.5	50.0	2.57	2.396	2.824	0.45079
1/7/2008 13:43:41	49421.5	52.0	2.64	2.462	2.757	0.44051
1/7/2008 13:43:43	49423.5	54.0	2.71	2.529	2.690	0.42981
1/7/2008 13:43:45	49425.5	56.0	2.77	2.595	2.624	0.41901
1/7/2008 13:43:47	49427.5	58.0	2.84	2.664	2.555	0.40743
1/7/2008 13:43:49	49429.5	60.0	2.9	2.724	2.495	0.39710
1/7/2008 13:43:51	49431.5	62.0	2.96	2.782	2.437	0.38687
1/7/2008 13:43:54	49434.0	64.5	3.02	2.846	2.373	0.37529
1/7/2008 13:43:56	49436.0	66.5	3.08	2.900	2.319	0.36528
1/7/2008 13:43:58	49438.0	68.5	3.13	2.958	2.261	0.35426
1/7/2008 13:44:00	49440.0	70.5	3.19	3.012	2.207	0.34375
1/7/2008 13:44:02	49442.0	72.5	3.24	3.064	2.155	0.33338
1/7/2008 13:44:04	49444.5	75.0	3.3	3.125	2.095	0.32109
1/7/2008 13:44:06	49446.5	77.0	3.35	3.175	2.044	0.31058
1/7/2008 13:44:08	49448.5	79.0	3.4	3.222	1.997	0.30047
1/7/2008 13:44:10	49450.5	81.0	3.46	3.281	1.938	0.28743
1/7/2008 13:44:12	49452.0	82.5	3.5	3.326	1.893	0.27721
1/7/2008 13:44:15	49455.5	86.0	3.55	3.373	1.846	0.26626
1/7/2008 13:44:18	49458.0	88.5	3.59	3.415	1.804	0.25625
1/7/2008 13:44:21	49461.5	92.0	3.64	3.463	1.756	0.24450
1/7/2008 13:44:25	49465.0	95.5	3.68	3.509	1.710	0.23294
1/7/2008 13:44:27	49467.5	98.0	3.72	3.549	1.670	0.22263

Slug Test MW-23

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/7/2008 13:44:29	49469.5	100.0	3.77	3.596	1.624	0.21048
1/7/2008 13:44:32	49472.0	102.5	3.81	3.636	1.584	0.19962
1/7/2008 13:44:35	49475.0	105.5	3.85	3.677	1.542	0.18819
1/7/2008 13:44:38	49478.0	108.5	3.89	3.719	1.500	0.17617
1/7/2008 13:44:41	49481.0	111.5	3.93	3.758	1.461	0.16470
1/7/2008 13:44:43	49483.5	114.0	3.97	3.792	1.427	0.15444
1/7/2008 13:44:46	49486.5	117.0	4	3.829	1.390	0.14300
1/7/2008 13:44:49	49489.5	120.0	4.04	3.863	1.356	0.13220
1/7/2008 13:44:52	49492.5	123.0	4.07	3.899	1.320	0.12048
1/7/2008 13:44:55	49495.5	126.0	4.11	3.935	1.285	0.10877
1/7/2008 13:44:58	49498.5	129.0	4.14	3.970	1.249	0.09673
1/7/2008 13:45:01	49501.0	131.5	4.17	4.000	1.219	0.08614
1/7/2008 13:45:04	49504.0	134.5	4.21	4.035	1.184	0.07345
1/7/2008 13:45:06	49506.5	137.0	4.24	4.062	1.157	0.06340
1/7/2008 13:45:09	49509.5	140.0	4.26	4.091	1.128	0.05233
1/7/2008 13:45:12	49512.5	143.0	4.29	4.120	1.099	0.04097
1/7/2008 13:45:15	49515.0	145.5	4.32	4.145	1.074	0.03094
1/7/2008 13:45:18	49518.0	148.5	4.35	4.174	1.045	0.01900
1/7/2008 13:45:21	49521.0	151.5	4.38	4.204	1.016	0.00673
1/7/2008 13:45:24	49524.0	154.5	4.4	4.231	0.988	-0.00503
1/7/2008 13:45:26	49526.5	157.0	4.43	4.254	0.965	-0.01529
1/7/2008 13:45:29	49529.5	160.0	4.45	4.279	0.940	-0.02674
1/7/2008 13:45:32	49532.0	162.5	4.47	4.302	0.917	-0.03754
1/7/2008 13:45:34	49534.5	165.0	4.5	4.325	0.894	-0.04862
1/7/2008 13:45:37	49537.5	168.0	4.52	4.350	0.869	-0.06099
1/7/2008 13:45:40	49540.5	171.0	4.55	4.375	0.844	-0.07373
1/7/2008 13:45:43	49543.5	174.0	4.57	4.398	0.821	-0.08579
1/7/2008 13:45:46	49546.5	177.0	4.59	4.422	0.798	-0.09820
1/7/2008 13:45:49	49549.0	179.5	4.61	4.442	0.778	-0.10928
1/7/2008 13:45:51	49551.5	182.0	4.63	4.461	0.758	-0.12008
1/7/2008 13:45:54	49554.0	184.5	4.65	4.482	0.737	-0.13233
1/7/2008 13:45:57	49557.0	187.5	4.67	4.501	0.718	-0.14374
1/7/2008 13:45:59	49559.5	190.0	4.69	4.521	0.698	-0.15607
1/7/2008 13:46:02	49562.0	192.5	4.71	4.538	0.681	-0.16684
1/7/2008 13:46:04	49564.5	195.0	4.73	4.555	0.664	-0.17788
1/7/2008 13:46:07	49567.0	197.5	4.74	4.571	0.648	-0.18854
1/7/2008 13:46:09	49569.0	199.5	4.76	4.586	0.633	-0.19876
1/7/2008 13:46:12	49572.0	202.5	4.78	4.605	0.614	-0.21209
1/7/2008 13:46:14	49574.5	205.0	4.79	4.620	0.600	-0.22218
1/7/2008 13:46:17	49577.0	207.5	4.81	4.635	0.584	-0.23325
1/7/2008 13:46:19	49579.5	210.0	4.82	4.649	0.570	-0.24386
1/7/2008 13:46:22	49582.5	213.0	4.84	4.666	0.553	-0.25709
1/7/2008 13:46:25	49585.5	216.0	4.85	4.680	0.539	-0.26831
1/7/2008 13:46:28	49588.0	218.5	4.86	4.693	0.526	-0.27899
1/7/2008 13:46:30	49590.5	221.0	4.88	4.705	0.514	-0.28910
1/7/2008 13:46:33	49593.0	223.5	4.89	4.718	0.501	-0.30031
1/7/2008 13:46:36	49596.0	226.5	4.9	4.730	0.489	-0.31094
1/7/2008 13:46:38	49598.5	229.0	4.91	4.744	0.476	-0.32274
1/7/2008 13:46:41	49601.5	232.0	4.93	4.756	0.464	-0.33395

Slug Test MW-23

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/7/2008 13:46:44	49604.0	234.5	4.94	4.767	0.452	-0.34447
1/7/2008 13:46:47	49607.5	238.0	4.95	4.779	0.440	-0.35628
1/7/2008 13:46:50	49610.0	240.5	4.96	4.790	0.429	-0.36737
1/7/2008 13:46:52	49612.5	243.0	4.97	4.800	0.419	-0.37770
1/7/2008 13:46:55	49615.0	245.5	4.98	4.810	0.409	-0.38830
1/7/2008 13:46:58	49618.0	248.5	4.99	4.821	0.398	-0.40026
1/7/2008 13:47:00	49620.5	251.0	5	4.831	0.388	-0.41143
1/7/2008 13:47:03	49623.5	254.0	5.01	4.841	0.378	-0.42291
1/7/2008 13:47:06	49626.0	256.5	5.02	4.851	0.369	-0.43350
1/7/2008 13:47:10	49630.0	260.5	5.03	4.861	0.358	-0.44563
1/7/2008 13:47:12	49632.5	263.0	5.04	4.870	0.349	-0.45679
1/7/2008 13:47:15	49635.0	265.5	5.05	4.878	0.341	-0.46698
1/7/2008 13:47:18	49638.0	268.5	5.05	4.886	0.333	-0.47743
1/7/2008 13:47:21	49641.0	271.5	5.06	4.894	0.325	-0.48815
1/7/2008 13:47:24	49644.0	274.5	5.07	4.903	0.316	-0.50050
1/7/2008 13:47:27	49647.0	277.5	5.08	4.911	0.308	-0.51181
1/7/2008 13:47:30	49650.5	281.0	5.09	4.920	0.300	-0.52344
1/7/2008 13:47:33	49653.5	284.0	5.1	4.929	0.290	-0.53686
1/7/2008 13:47:37	49657.5	288.0	5.1	4.937	0.282	-0.54923
1/7/2008 13:47:42	49662.5	293.0	5.11	4.945	0.274	-0.56201
1/7/2008 13:47:45	49665.5	296.0	5.12	4.952	0.267	-0.57344
1/7/2008 13:47:48	49668.5	299.0	5.13	4.958	0.261	-0.58350
1/7/2008 13:47:52	49672.0	302.5	5.13	4.964	0.255	-0.59383
1/7/2008 13:47:55	49675.0	305.5	5.14	4.970	0.249	-0.60438
1/7/2008 13:47:58	49678.0	308.5	5.14	4.978	0.242	-0.61699
1/7/2008 13:48:02	49682.0	312.5	5.15	4.984	0.235	-0.62820
1/7/2008 13:48:05	49685.0	315.5	5.16	4.990	0.229	-0.63963
1/7/2008 13:48:08	49688.5	319.0	5.16	4.996	0.223	-0.65141
1/7/2008 13:48:13	49693.0	323.5	5.17	5.002	0.217	-0.66360
1/7/2008 13:48:15	49695.0	325.5	5.17	5.007	0.212	-0.67388
1/7/2008 13:48:18	49698.5	329.0	5.18	5.013	0.206	-0.68664
1/7/2008 13:48:22	49702.5	333.0	5.19	5.020	0.200	-0.69983
1/7/2008 13:48:27	49707.0	337.5	5.19	5.026	0.193	-0.71347
1/7/2008 13:48:30	49710.0	340.5	5.2	5.031	0.188	-0.72512
1/7/2008 13:48:35	49715.0	345.5	5.2	5.037	0.182	-0.73964
1/7/2008 13:48:39	49719.0	349.5	5.21	5.041	0.178	-0.74966
1/7/2008 13:48:42	49722.5	353.0	5.21	5.045	0.174	-0.75987
1/7/2008 13:48:46	49726.0	356.5	5.21	5.049	0.170	-0.77033
1/7/2008 13:48:51	49731.5	362.0	5.22	5.054	0.165	-0.78124
1/7/2008 13:48:55	49735.0	365.5	5.22	5.059	0.160	-0.79493
1/7/2008 13:48:59	49739.0	369.5	5.23	5.063	0.156	-0.80633
1/7/2008 13:49:03	49743.5	374.0	5.23	5.067	0.152	-0.81809
1/7/2008 13:49:06	49746.5	377.0	5.24	5.071	0.148	-0.83001
1/7/2008 13:49:12	49752.0	382.5	5.24	5.075	0.144	-0.84256
1/7/2008 13:49:15	49755.0	385.5	5.24	5.080	0.140	-0.85518
1/7/2008 13:49:22	49762.0	392.5	5.25	5.084	0.135	-0.86868
1/7/2008 13:49:24	49764.5	395.0	5.25	5.087	0.132	-0.87873
1/7/2008 13:49:29	49769.5	400.0	5.25	5.091	0.128	-0.89273
1/7/2008 13:49:35	49775.5	406.0	5.26	5.095	0.124	-0.90733

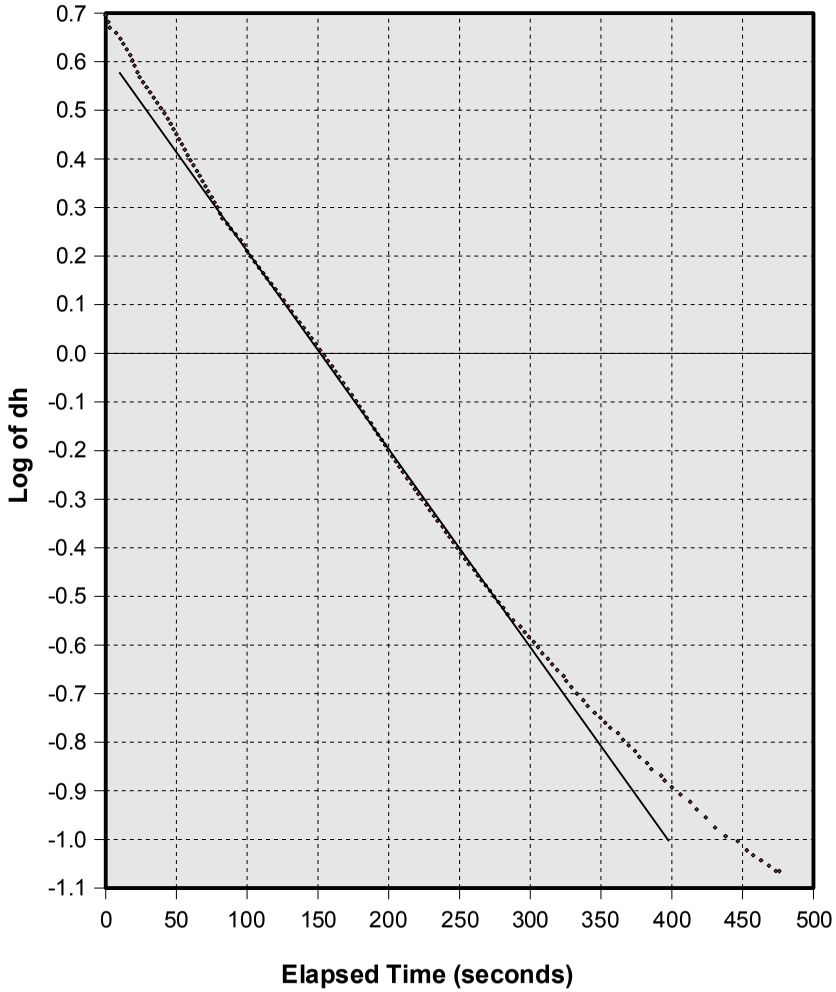
Slug Test MW-23

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/7/2008 13:49:42	49782.5	413.0	5.26	5.100	0.120	-0.92257
1/7/2008 13:49:47	49787.0	417.5	5.27	5.104	0.115	-0.93801
1/7/2008 13:49:53	49793.5	424.0	5.27	5.108	0.111	-0.95432
1/7/2008 13:50:00	49800.0	430.5	5.28	5.113	0.106	-0.97535
1/7/2008 13:50:07	49807.5	438.0	5.28	5.118	0.102	-0.99331
1/7/2008 13:50:16	49816.0	446.5	5.28	5.120	0.099	-1.00339
1/7/2008 13:50:22	49822.5	453.0	5.29	5.124	0.095	-1.02240
1/7/2008 13:50:27	49827.0	457.5	5.29	5.126	0.093	-1.03246
1/7/2008 13:50:32	49832.5	463.0	5.29	5.129	0.091	-1.04294
1/7/2008 13:50:38	49838.0	468.5	5.29	5.131	0.088	-1.05367
1/7/2008 13:50:43	49843.0	473.5	5.29	5.133	0.086	-1.06459
1/7/2008 13:50:45	49845.5	476.0	5.29	5.133	0.086	-1.06507

Slug Test MW-23

Slug Test by Bouwer and Rice

Displacement Method:	Pump	
Well depth:	21.54	ft
Stick up height:	2.65	ft
Depth to sand pack (BGS):	5.25	ft
Depth to screened interval (BGS):	6.54	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	17.60	ft
Initial Head Change:	4.97	ft
Total well length:	24.19	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.1537	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	6.59	ft
L_e / r_w:	26.3600	
A (dimensionless):	2.442	
B (dimensionless):	0.405	
Drawdown at time = 0 (y_0):	2.23	ft
Drawdown at time = t (y_t):	0.27	ft
Elapsed Time between y_0 and y_t (t):	226.5	sec
Initial water column in well (L_w):	6.59	ft
$\ln(R_e/r_w)$ =	1.92	
K =	3.22E-05	ft/sec
	9.83E-04	**cm/sec**
	1016.77	ft/yr



Water above sand pack:	No
%Duration below sand pack:	100.00%
Water above screen:	No
%Duration below screen:	100.00%

Slug Test MW-24

Initial offset in logger reading (feet):	0.105	Date:	01/09/2008
Offset increment in logger reading (feet/sec):	0.000073		
Initial depth to water table (feet):	33.71		
Depth of probe below water table (feet):	4.631		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 16:00:25	57625.5	0.0	3.38	3.239	1.393	0.14389
1/9/2008 16:00:26	57626.0	0.5	3.5	3.364	1.268	0.10306
1/9/2008 16:00:26	57626.5	1.0	3.64	3.501	1.131	0.05341
1/9/2008 16:00:27	57627.0	1.5	3.72	3.583	1.048	0.02032
1/9/2008 16:00:27	57627.5	2.0	3.84	3.704	0.927	-0.03295
1/9/2008 16:00:28	57628.0	2.5	3.93	3.789	0.842	-0.07470
1/9/2008 16:00:28	57628.5	3.0	4.02	3.887	0.744	-0.12842
1/9/2008 16:00:29	57629.0	3.5	4.09	3.955	0.676	-0.17002
1/9/2008 16:00:29	57629.5	4.0	4.18	4.043	0.588	-0.23056
1/9/2008 16:00:30	57630.0	4.5	4.23	4.090	0.541	-0.26670
1/9/2008 16:00:30	57630.5	5.0	4.27	4.132	0.499	-0.30176
1/9/2008 16:00:31	57631.0	5.5	4.31	4.174	0.457	-0.33989
1/9/2008 16:00:31	57631.5	6.0	4.34	4.205	0.426	-0.37035
1/9/2008 16:00:32	57632.0	6.5	4.37	4.234	0.397	-0.40091
1/9/2008 16:00:32	57632.5	7.0	4.36	4.226	0.405	-0.39221
1/9/2008 16:00:33	57633.0	7.5	4.41	4.273	0.358	-0.44570
1/9/2008 16:00:33	57633.5	8.0	4.44	4.298	0.333	-0.47706
1/9/2008 16:00:34	57634.0	8.5	4.44	4.307	0.324	-0.48889
1/9/2008 16:00:34	57634.5	9.0	4.47	4.334	0.297	-0.52658
1/9/2008 16:00:35	57635.0	9.5	4.48	4.342	0.289	-0.53836
1/9/2008 16:00:35	57635.5	10.0	4.5	4.361	0.271	-0.56779
1/9/2008 16:00:36	57636.0	10.5	4.51	4.371	0.261	-0.58408
1/9/2008 16:00:36	57636.5	11.0	4.52	4.382	0.250	-0.60275
1/9/2008 16:00:37	57637.0	11.5	4.53	4.392	0.240	-0.62044
1/9/2008 16:00:37	57637.5	12.0	4.54	4.402	0.230	-0.63889
1/9/2008 16:00:38	57638.0	12.5	4.55	4.411	0.221	-0.65617
1/9/2008 16:00:38	57638.5	13.0	4.56	4.419	0.213	-0.67213
1/9/2008 16:00:39	57639.0	13.5	4.56	4.425	0.207	-0.68448
1/9/2008 16:00:39	57639.5	14.0	4.57	4.431	0.201	-0.69719
1/9/2008 16:00:40	57640.0	14.5	4.58	4.440	0.192	-0.71702
1/9/2008 16:00:40	57640.5	15.0	4.58	4.446	0.186	-0.73073
1/9/2008 16:00:41	57641.0	15.5	4.59	4.451	0.180	-0.74489
1/9/2008 16:00:41	57641.5	16.0	4.6	4.457	0.174	-0.75953
1/9/2008 16:00:42	57642.0	16.5	4.6	4.462	0.169	-0.77210
1/9/2008 16:00:42	57642.5	17.0	4.61	4.468	0.163	-0.78770
1/9/2008 16:00:43	57643.0	17.5	4.61	4.472	0.159	-0.79839
1/9/2008 16:00:43	57643.5	18.0	4.62	4.478	0.153	-0.81498
1/9/2008 16:00:44	57644.0	18.5	4.62	4.482	0.149	-0.82637
1/9/2008 16:00:44	57644.5	19.0	4.63	4.487	0.144	-0.84107
1/9/2008 16:00:45	57645.0	19.5	4.63	4.491	0.140	-0.85318
1/9/2008 16:00:45	57645.5	20.0	4.63	4.495	0.136	-0.86563
1/9/2008 16:00:46	57646.0	20.5	4.64	4.497	0.134	-0.87193
1/9/2008 16:00:46	57646.5	21.0	4.64	4.501	0.130	-0.88494
1/9/2008 16:00:47	57647.0	21.5	4.64	4.505	0.126	-0.89835

Slug Test MW-24

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 16:00:47	57647.5	22.0	4.65	4.509	0.122	-0.91219
1/9/2008 16:00:48	57648.0	22.5	4.65	4.512	0.119	-0.92284
1/9/2008 16:00:48	57648.5	23.0	4.65	4.516	0.115	-0.93749
1/9/2008 16:00:49	57649.0	23.5	4.66	4.520	0.112	-0.95266
1/9/2008 16:00:50	57650.0	24.5	4.66	4.524	0.108	-0.96823
1/9/2008 16:00:50	57650.5	25.0	4.66	4.526	0.106	-0.97622
1/9/2008 16:00:51	57651.0	25.5	4.67	4.528	0.104	-0.98437
1/9/2008 16:00:51	57651.5	26.0	4.67	4.532	0.100	-1.00130
1/9/2008 16:00:52	57652.0	26.5	4.67	4.533	0.099	-1.00552
1/9/2008 16:00:52	57652.5	27.0	4.67	4.536	0.096	-1.01875
1/9/2008 16:00:53	57653.0	27.5	4.68	4.539	0.093	-1.03240
1/9/2008 16:00:54	57654.0	28.5	4.68	4.543	0.089	-1.05118
1/9/2008 16:00:54	57654.5	29.0	4.68	4.544	0.087	-1.06088
1/9/2008 16:00:55	57655.5	30.0	4.69	4.547	0.084	-1.07576
1/9/2008 16:00:56	57656.5	31.0	4.69	4.550	0.081	-1.09116
1/9/2008 16:00:57	57657.0	31.5	4.69	4.549	0.082	-1.08564
1/9/2008 16:00:57	57657.5	32.0	4.69	4.551	0.080	-1.09615
1/9/2008 16:00:58	57658.5	33.0	4.69	4.555	0.076	-1.11797
1/9/2008 16:00:59	57659.5	34.0	4.7	4.557	0.074	-1.12909
1/9/2008 16:01:00	57660.0	34.5	4.7	4.558	0.073	-1.13476
1/9/2008 16:01:00	57660.5	35.0	4.7	4.560	0.071	-1.14655
1/9/2008 16:01:01	57661.0	35.5	4.7	4.562	0.069	-1.15867
1/9/2008 16:01:02	57662.0	36.5	4.7	4.564	0.067	-1.17090
1/9/2008 16:01:03	57663.5	38.0	4.71	4.566	0.066	-1.18324
1/9/2008 16:01:04	57664.5	39.0	4.71	4.568	0.064	-1.19619
1/9/2008 16:01:06	57666.0	40.5	4.71	4.570	0.062	-1.20928
1/9/2008 16:01:06	57666.5	41.0	4.71	4.572	0.060	-1.22331
1/9/2008 16:01:07	57667.5	42.0	4.71	4.574	0.058	-1.23754
1/9/2008 16:01:08	57668.0	42.5	4.71	4.571	0.060	-1.22252
1/9/2008 16:01:08	57668.5	43.0	4.71	4.573	0.058	-1.23699
1/9/2008 16:01:10	57670.0	44.5	4.72	4.575	0.056	-1.25139
1/9/2008 16:01:12	57672.0	46.5	4.72	4.575	0.056	-1.25026
1/9/2008 16:01:12	57672.5	47.0	4.72	4.577	0.054	-1.26570
1/9/2008 16:01:13	57673.0	47.5	4.72	4.575	0.056	-1.24969
1/9/2008 16:01:13	57673.5	48.0	4.72	4.577	0.054	-1.26512
1/9/2008 16:01:15	57675.0	49.5	4.72	4.579	0.052	-1.28050
1/9/2008 16:01:17	57677.0	51.5	4.72	4.579	0.053	-1.27929
1/9/2008 16:01:18	57678.5	53.0	4.72	4.581	0.051	-1.29519
1/9/2008 16:01:20	57680.5	55.0	4.72	4.581	0.051	-1.29394
1/9/2008 16:01:21	57681.0	55.5	4.72	4.583	0.049	-1.31105
1/9/2008 16:01:21	57681.5	56.0	4.72	4.581	0.051	-1.29332
1/9/2008 16:01:23	57683.0	57.5	4.72	4.582	0.049	-1.30975
1/9/2008 16:01:25	57685.0	59.5	4.72	4.582	0.049	-1.30846
1/9/2008 16:01:25	57685.5	60.0	4.73	4.585	0.046	-1.33546
1/9/2008 16:01:26	57686.5	61.0	4.72	4.582	0.049	-1.30749
1/9/2008 16:01:27	57687.0	61.5	4.73	4.585	0.046	-1.33443
1/9/2008 16:01:28	57688.5	63.0	4.72	4.582	0.049	-1.30620
1/9/2008 16:01:29	57689.0	63.5	4.73	4.585	0.046	-1.33306
1/9/2008 16:01:30	57690.5	65.0	4.73	4.585	0.047	-1.33204

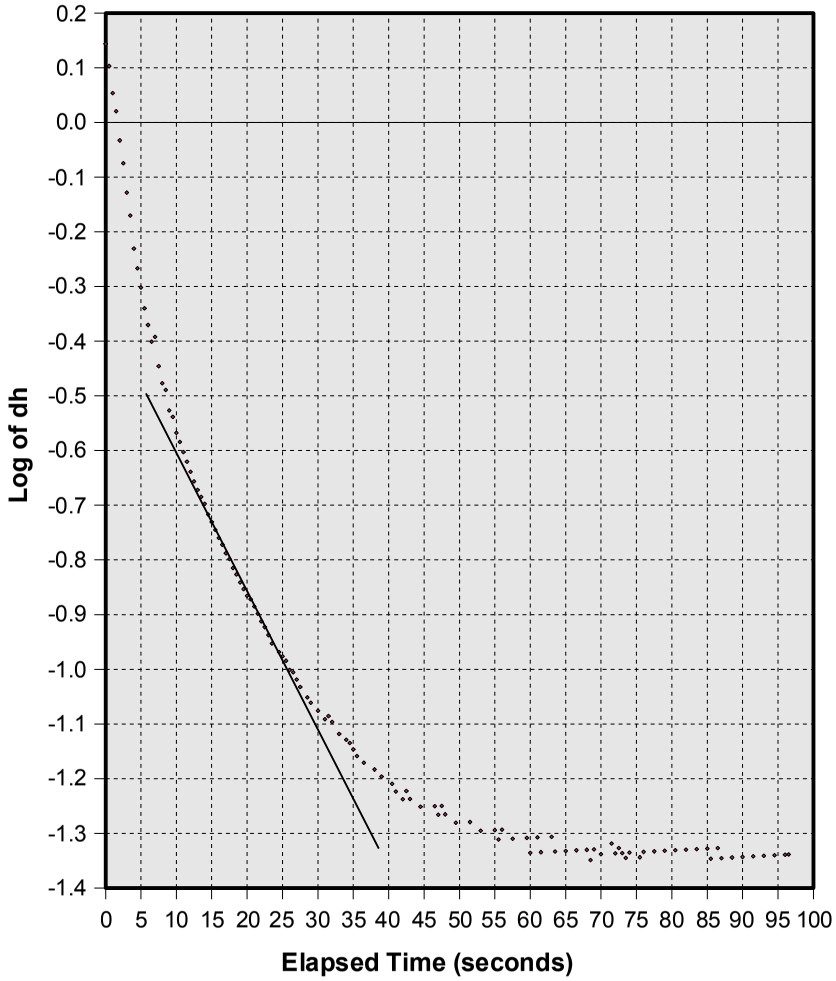
Slug Test MW-24

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 16:01:32	57692.0	66.5	4.73	4.585	0.047	-1.33101
1/9/2008 16:01:33	57693.5	68.0	4.73	4.585	0.047	-1.32999
1/9/2008 16:01:34	57694.0	68.5	4.73	4.587	0.045	-1.34862
1/9/2008 16:01:34	57694.5	69.0	4.73	4.585	0.047	-1.32931
1/9/2008 16:01:35	57695.5	70.0	4.73	4.585	0.046	-1.33799
1/9/2008 16:01:37	57697.0	71.5	4.73	4.583	0.048	-1.31848
1/9/2008 16:01:37	57697.5	72.0	4.73	4.585	0.046	-1.33661
1/9/2008 16:01:38	57698.0	72.5	4.73	4.584	0.047	-1.32694
1/9/2008 16:01:38	57698.5	73.0	4.73	4.585	0.046	-1.33592
1/9/2008 16:01:39	57699.0	73.5	4.73	4.586	0.045	-1.34508
1/9/2008 16:01:39	57699.5	74.0	4.73	4.585	0.046	-1.33523
1/9/2008 16:01:41	57701.0	75.5	4.73	4.586	0.045	-1.34368
1/9/2008 16:01:41	57701.5	76.0	4.73	4.585	0.046	-1.33386
1/9/2008 16:01:43	57703.0	77.5	4.73	4.585	0.046	-1.33283
1/9/2008 16:01:44	57704.5	79.0	4.73	4.585	0.047	-1.33181
1/9/2008 16:01:46	57706.0	80.5	4.73	4.585	0.047	-1.33078
1/9/2008 16:01:47	57707.5	82.0	4.73	4.585	0.047	-1.32976
1/9/2008 16:01:49	57709.0	83.5	4.73	4.584	0.047	-1.32875
1/9/2008 16:01:50	57710.5	85.0	4.73	4.584	0.047	-1.32773
1/9/2008 16:01:51	57711.0	85.5	4.73	4.586	0.045	-1.34625
1/9/2008 16:01:52	57712.0	86.5	4.73	4.584	0.047	-1.32672
1/9/2008 16:01:52	57712.5	87.0	4.73	4.586	0.045	-1.34520
1/9/2008 16:01:54	57714.0	88.5	4.73	4.586	0.045	-1.34414
1/9/2008 16:01:55	57715.5	90.0	4.73	4.586	0.045	-1.34309
1/9/2008 16:01:57	57717.0	91.5	4.73	4.586	0.045	-1.34204
1/9/2008 16:01:58	57718.5	93.0	4.73	4.586	0.046	-1.34100
1/9/2008 16:02:00	57720.0	94.5	4.73	4.586	0.046	-1.33995
1/9/2008 16:02:01	57721.5	96.0	4.73	4.586	0.046	-1.33891
1/9/2008 16:02:02	57722.0	96.5	4.73	4.586	0.046	-1.33856

Slug Test MW-24

Slug Test by Bouwer and Rice

Displacement Method:	Pump	
Well depth:	35.35	ft
Stick up height:	2.75	ft
Depth to sand pack (BGS):	19.30	ft
Depth to screened interval (BGS):	20.35	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	33.71	ft
Initial Head Change:	1.39	ft
Total well length:	38.10	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.1537	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	4.39	ft
L_e / r_w:	17.5600	
A (dimensionless):	2.159	
B (dimensionless):	0.351	
Drawdown at time = 0 (y_0):	0.32	ft
Drawdown at time = t (y_t):	0.11	ft
Elapsed Time between y_0 and y_t (t):	10.5	sec
Initial water column in well (L_w):	4.39	ft
$\ln(R_e/r_w)$ =	1.60	
K =	4.36E-04	ft/sec
	1.33E-02	**cm/sec**
	13757.84	ft/yr



Water above sand pack:	No
%Duration below sand pack:	100.00%
Water above screen:	No
%Duration below screen:	100.00%

Slug Test MW-25

Initial offset in logger reading (feet):	0.133	Date:	01/08/2008
Offset increment in logger reading (feet/sec):	0.000001		
Initial depth to water table (feet):	33.05		
Depth of probe below water table (feet):	9.078		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/8/2008 15:56:00	57360.0	0.0	4.08	3.944	5.133	0.71039
1/8/2008 15:56:17	57377.5	17.5	4.2	4.063	5.014	0.70021
1/8/2008 15:56:28	57388.5	28.5	4.35	4.216	4.861	0.68675
1/8/2008 15:56:32	57392.5	32.5	4.46	4.328	4.749	0.67663
1/8/2008 15:56:55	57415.5	55.5	4.57	4.437	4.640	0.66655
1/8/2008 15:57:23	57443.5	83.5	4.68	4.544	4.533	0.65642
1/8/2008 15:57:52	57472.5	112.5	4.78	4.648	4.429	0.64634
1/8/2008 15:58:21	57501.5	141.5	4.88	4.749	4.328	0.63633
1/8/2008 15:58:50	57530.5	170.5	4.98	4.849	4.228	0.62618
1/8/2008 15:59:20	57560.0	200.0	5.08	4.947	4.130	0.61600
1/8/2008 15:59:48	57588.0	228.0	5.18	5.043	4.034	0.60579
1/8/2008 16:00:14	57614.5	254.5	5.27	5.135	3.942	0.59577
1/8/2008 16:00:42	57642.5	282.5	5.36	5.226	3.852	0.58563
1/8/2008 16:01:11	57671.5	311.5	5.45	5.314	3.764	0.57560
1/8/2008 16:01:41	57701.5	341.5	5.54	5.402	3.676	0.56533
1/8/2008 16:02:11	57731.0	371.0	5.62	5.487	3.591	0.55517
1/8/2008 16:02:41	57761.0	401.0	5.7	5.570	3.508	0.54501
1/8/2008 16:03:09	57789.0	429.0	5.78	5.650	3.428	0.53500
1/8/2008 16:03:38	57818.0	458.0	5.86	5.729	3.349	0.52488
1/8/2008 16:04:06	57846.5	486.5	5.94	5.806	3.272	0.51478
1/8/2008 16:04:35	57875.5	515.5	6.02	5.881	3.197	0.50471
1/8/2008 16:05:05	57905.0	545.0	6.09	5.955	3.123	0.49454
1/8/2008 16:05:35	57935.0	575.0	6.16	6.028	3.050	0.48427
1/8/2008 16:06:05	57965.0	605.0	6.23	6.099	2.979	0.47405
1/8/2008 16:06:34	57994.0	634.0	6.3	6.167	2.911	0.46402
1/8/2008 16:07:02	58022.5	662.5	6.37	6.235	2.843	0.45376
1/8/2008 16:07:30	58050.5	690.5	6.44	6.301	2.777	0.44356
1/8/2008 16:08:00	58080.0	720.0	6.5	6.366	2.712	0.43328
1/8/2008 16:08:29	58109.0	749.0	6.56	6.428	2.650	0.42324
1/8/2008 16:08:58	58138.5	778.5	6.62	6.490	2.588	0.41296
1/8/2008 16:09:27	58167.0	807.0	6.68	6.550	2.528	0.40278
1/8/2008 16:09:55	58195.5	835.5	6.74	6.608	2.470	0.39271
1/8/2008 16:10:24	58224.5	864.5	6.8	6.666	2.412	0.38239
1/8/2008 16:10:53	58253.0	893.0	6.86	6.722	2.356	0.37220
1/8/2008 16:11:20	58280.5	920.5	6.91	6.776	2.302	0.36213
1/8/2008 16:11:48	58308.0	948.0	6.96	6.829	2.248	0.35183
1/8/2008 16:12:15	58335.0	975.0	7.02	6.881	2.196	0.34167
1/8/2008 16:12:42	58362.0	1002.0	7.07	6.932	2.145	0.33147
1/8/2008 16:13:09	58389.0	1029.0	7.12	6.981	2.096	0.32144
1/8/2008 16:13:36	58416.0	1056.0	7.16	7.029	2.048	0.31139
1/8/2008 16:14:02	58442.5	1082.5	7.21	7.076	2.001	0.30131
1/8/2008 16:14:28	58468.5	1108.5	7.26	7.122	1.955	0.29122
1/8/2008 16:14:55	58495.0	1135.0	7.3	7.168	1.909	0.28089
1/8/2008 16:15:21	58521.5	1161.5	7.35	7.212	1.865	0.27077

Slug Test MW-25

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/8/2008 16:15:48	58548.5	1188.5	7.39	7.256	1.821	0.26041
1/8/2008 16:16:16	58576.5	1216.5	7.43	7.299	1.778	0.25004
1/8/2008 16:16:41	58601.0	1241.0	7.48	7.340	1.737	0.23991
1/8/2008 16:17:06	58626.5	1266.5	7.52	7.382	1.695	0.22929
1/8/2008 16:17:32	58652.5	1292.5	7.56	7.421	1.657	0.21919
1/8/2008 16:17:57	58677.5	1317.5	7.59	7.459	1.619	0.20912
1/8/2008 16:18:22	58702.5	1342.5	7.63	7.497	1.581	0.19881
1/8/2008 16:18:47	58727.5	1367.5	7.67	7.534	1.544	0.18853
1/8/2008 16:19:12	58752.0	1392.0	7.71	7.570	1.508	0.17829
1/8/2008 16:19:37	58777.0	1417.0	7.74	7.605	1.473	0.16809
1/8/2008 16:20:03	58803.0	1443.0	7.78	7.640	1.438	0.15765
1/8/2008 16:20:27	58827.5	1467.5	7.81	7.674	1.404	0.14727
1/8/2008 16:20:52	58852.5	1492.5	7.84	7.707	1.371	0.13694
1/8/2008 16:21:19	58879.0	1519.0	7.88	7.740	1.338	0.12637
1/8/2008 16:21:42	58902.5	1542.5	7.91	7.771	1.307	0.11619
1/8/2008 16:22:05	58925.5	1565.5	7.94	7.802	1.276	0.10577
1/8/2008 16:22:28	58948.5	1588.5	7.97	7.832	1.246	0.09544
1/8/2008 16:22:52	58972.0	1612.0	8	7.861	1.217	0.08522
1/8/2008 16:23:15	58995.5	1635.5	8.03	7.890	1.188	0.07476
1/8/2008 16:23:38	59018.0	1658.0	8.05	7.919	1.159	0.06403
1/8/2008 16:23:59	59039.5	1679.5	8.08	7.946	1.132	0.05380
1/8/2008 16:24:21	59061.0	1701.0	8.11	7.973	1.105	0.04332
1/8/2008 16:24:42	59082.5	1722.5	8.13	7.999	1.079	0.03299
1/8/2008 16:25:05	59105.0	1745.0	8.16	8.024	1.054	0.02282
1/8/2008 16:25:26	59126.5	1766.5	8.18	8.049	1.029	0.01240
1/8/2008 16:25:49	59149.5	1789.5	8.21	8.074	1.004	0.00173
1/8/2008 16:26:11	59171.0	1811.0	8.23	8.097	0.981	-0.00833
1/8/2008 16:26:36	59196.0	1836.0	8.26	8.122	0.956	-0.01953
1/8/2008 16:27:00	59220.0	1860.0	8.28	8.144	0.934	-0.02963
1/8/2008 16:27:25	59245.5	1885.5	8.3	8.167	0.911	-0.04044
1/8/2008 16:27:48	59268.5	1908.5	8.32	8.188	0.890	-0.05056
1/8/2008 16:28:13	59293.0	1933.0	8.34	8.209	0.869	-0.06092
1/8/2008 16:28:40	59320.5	1960.5	8.37	8.230	0.848	-0.07153
1/8/2008 16:29:09	59349.5	1989.5	8.39	8.249	0.828	-0.08188
1/8/2008 16:29:40	59380.0	2020.0	8.41	8.269	0.808	-0.09248
1/8/2008 16:30:12	59412.0	2052.0	8.42	8.288	0.789	-0.10279
1/8/2008 16:30:53	59453.0	2093.0	8.44	8.308	0.769	-0.11392
1/8/2008 16:31:38	59498.5	2138.5	8.46	8.327	0.750	-0.12475
1/8/2008 16:32:23	59543.0	2183.0	8.48	8.346	0.731	-0.13586
1/8/2008 16:33:04	59584.5	2224.5	8.5	8.364	0.713	-0.14666
1/8/2008 16:33:28	59608.5	2248.5	8.52	8.381	0.696	-0.15712
1/8/2008 16:33:57	59637.5	2277.5	8.53	8.398	0.679	-0.16784
1/8/2008 16:34:26	59666.5	2306.5	8.55	8.416	0.661	-0.17948
1/8/2008 16:34:58	59698.0	2338.0	8.57	8.432	0.646	-0.19009
1/8/2008 16:35:25	59725.5	2365.5	8.58	8.447	0.631	-0.20028
1/8/2008 16:35:59	59759.0	2399.0	8.6	8.463	0.615	-0.21142
1/8/2008 16:36:29	59789.0	2429.0	8.61	8.478	0.600	-0.22213
1/8/2008 16:36:58	59818.0	2458.0	8.63	8.493	0.585	-0.23312
1/8/2008 16:37:32	59852.0	2492.0	8.64	8.508	0.570	-0.24438

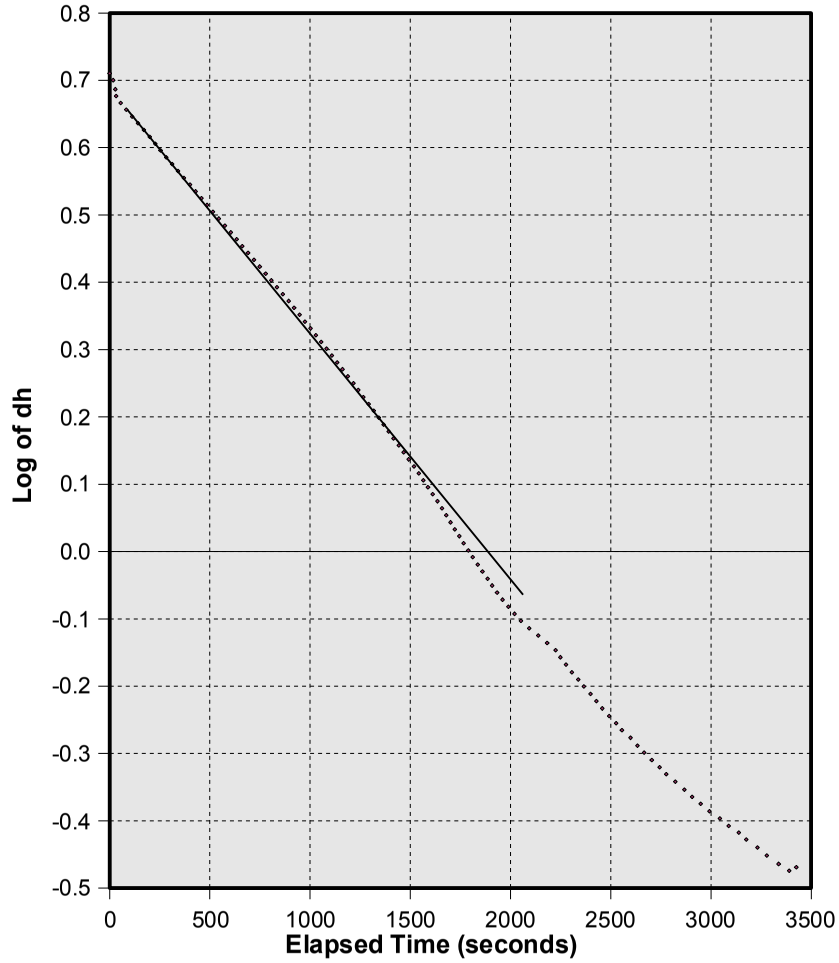
Slug Test MW-25

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/8/2008 16:38:07	59887.5	2527.5	8.66	8.522	0.556	-0.25516
1/8/2008 16:38:35	59915.5	2555.5	8.67	8.535	0.543	-0.26542
1/8/2008 16:39:18	59958.5	2598.5	8.69	8.549	0.529	-0.27673
1/8/2008 16:39:53	59993.5	2633.5	8.7	8.563	0.515	-0.28836
1/8/2008 16:40:26	60026.5	2666.5	8.71	8.575	0.503	-0.29857
1/8/2008 16:41:04	60064.5	2704.5	8.72	8.588	0.490	-0.30992
1/8/2008 16:41:43	60103.5	2743.5	8.74	8.600	0.478	-0.32065
1/8/2008 16:42:17	60137.0	2777.0	8.75	8.611	0.467	-0.33074
1/8/2008 16:43:02	60182.0	2822.0	8.76	8.623	0.455	-0.34200
1/8/2008 16:43:47	60227.0	2867.0	8.77	8.635	0.443	-0.35357
1/8/2008 16:44:26	60266.0	2906.0	8.78	8.646	0.432	-0.36445
1/8/2008 16:45:08	60308.0	2948.0	8.79	8.656	0.422	-0.37457
1/8/2008 16:45:52	60352.5	2992.5	8.8	8.667	0.411	-0.38600
1/8/2008 16:46:44	60404.5	3044.5	8.81	8.676	0.401	-0.39664
1/8/2008 16:47:28	60448.0	3088.0	8.82	8.686	0.391	-0.40755
1/8/2008 16:48:19	60499.5	3139.5	8.83	8.695	0.382	-0.41760
1/8/2008 16:48:56	60536.0	3176.0	8.84	8.704	0.373	-0.42791
1/8/2008 16:49:52	60592.0	3232.0	8.85	8.714	0.363	-0.43963
1/8/2008 16:50:39	60639.0	3279.0	8.86	8.724	0.353	-0.45169
1/8/2008 16:51:37	60697.5	3337.5	8.87	8.734	0.343	-0.46409
1/8/2008 16:52:30	60750.0	3390.0	8.88	8.742	0.336	-0.47426
1/8/2008 16:53:05	60785.5	3425.5	8.88	8.738	0.340	-0.46907

Slug Test MW-25

Slug Test by Bouwer and Rice

Displacement Method:	Pump	
Well depth:	44.48	ft
Stick up height:	2.79	ft
Depth to sand pack (BGS):	28.10	ft
Depth to screened interval (BGS):	29.48	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	33.05	ft
Initial Head Change:	5.13	ft
Total well length:	47.27	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.1537	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	14.22	ft
L_e / r_w:	56.8800	
A (dimensionless):	3.384	
B (dimensionless):	0.566	
Drawdown at time = 0 (y_0):	4.80	ft
Drawdown at time = t (y_t):	1.78	ft
Elapsed Time between y_0 and y_t (t):	1185.5	sec
Initial water column in well (L_w):	14.22	ft
$\ln(R_e/r_w)$ =	2.55	
K =	1.77E-06	ft/sec
	5.41E-05	**cm/sec**
	55.93	ft/yr



Water above sand pack:	No
%Duration below sand pack:	100.00%
Water above screen:	No
%Duration below screen:	100.00%

Slug Test MW-26

Initial offset in logger reading (feet):	0.129	Date:	01/09/2008
Offset increment in logger reading (feet/sec):	0.000065		
Initial depth to water table (feet):	29.91		
Depth of probe below water table (feet):	5.931		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 13:49:20	49760.5	0.0	15.1	14.953	9.022	0.95528
1/9/2008 13:49:21	49761.0	0.5	14.87	14.717	8.785	0.94377
1/9/2008 13:49:27	49767.0	6.5	14.65	14.498	8.566	0.93278
1/9/2008 13:49:30	49770.0	9.5	14.42	14.263	8.332	0.92074
1/9/2008 13:49:33	49773.0	12.5	14.2	14.044	8.113	0.90916
1/9/2008 13:49:35	49775.5	15.0	14.01	13.855	7.924	0.89892
1/9/2008 13:49:38	49778.0	17.5	13.82	13.671	7.739	0.88871
1/9/2008 13:49:41	49781.0	20.5	13.61	13.462	7.530	0.87680
1/9/2008 13:49:43	49783.5	23.0	13.44	13.288	7.357	0.86670
1/9/2008 13:49:46	49786.5	26.0	13.24	13.088	7.157	0.85472
1/9/2008 13:49:49	49789.0	28.5	13.08	12.925	6.994	0.84470
1/9/2008 13:49:52	49792.0	31.5	12.9	12.742	6.810	0.83318
1/9/2008 13:49:55	49795.0	34.5	12.72	12.569	6.637	0.82199
1/9/2008 13:49:58	49798.0	37.5	12.55	12.399	6.467	0.81071
1/9/2008 13:50:01	49801.0	40.5	12.39	12.233	6.302	0.79947
1/9/2008 13:50:04	49804.0	43.5	12.23	12.074	6.143	0.78836
1/9/2008 13:50:07	49807.0	46.5	12.07	11.920	5.988	0.77732
1/9/2008 13:50:10	49810.0	49.5	11.92	11.770	5.838	0.76628
1/9/2008 13:50:13	49813.0	52.5	11.78	11.621	5.689	0.75504
1/9/2008 13:50:16	49816.0	55.5	11.63	11.478	5.547	0.74405
1/9/2008 13:50:19	49819.0	58.5	11.5	11.343	5.412	0.73333
1/9/2008 13:50:22	49822.0	61.5	11.37	11.215	5.283	0.72292
1/9/2008 13:50:25	49825.0	64.5	11.25	11.090	5.158	0.71251
1/9/2008 13:50:28	49828.0	67.5	11.13	10.971	5.039	0.70235
1/9/2008 13:50:31	49831.0	70.5	11.01	10.855	4.924	0.69231
1/9/2008 13:50:34	49834.0	73.5	10.9	10.742	4.811	0.68221
1/9/2008 13:50:37	49837.5	77.0	10.77	10.617	4.685	0.67075
1/9/2008 13:50:41	49841.0	80.5	10.65	10.495	4.563	0.65927
1/9/2008 13:50:44	49844.5	84.0	10.54	10.378	4.447	0.64807
1/9/2008 13:50:48	49848.0	87.5	10.43	10.268	4.337	0.63717
1/9/2008 13:50:51	49851.5	91.0	10.32	10.159	4.228	0.62609
1/9/2008 13:50:55	49855.0	94.5	10.21	10.053	4.121	0.61504
1/9/2008 13:50:58	49858.5	98.0	10.11	9.951	4.019	0.60413
1/9/2008 13:51:02	49862.5	102.0	10.01	9.847	3.916	0.59282
1/9/2008 13:51:06	49866.5	106.0	9.91	9.750	3.819	0.58190
1/9/2008 13:51:10	49870.5	110.0	9.81	9.656	3.724	0.57104
1/9/2008 13:51:14	49874.5	114.0	9.73	9.570	3.639	0.56099
1/9/2008 13:51:18	49878.5	118.0	9.64	9.485	3.554	0.55069
1/9/2008 13:51:23	49883.0	122.5	9.56	9.396	3.464	0.53964
1/9/2008 13:51:27	49887.0	126.5	9.48	9.316	3.384	0.52946
1/9/2008 13:51:31	49891.0	130.5	9.4	9.238	3.307	0.51943
1/9/2008 13:51:35	49895.0	134.5	9.32	9.161	3.230	0.50916
1/9/2008 13:51:39	49899.0	138.5	9.25	9.087	3.155	0.49906
1/9/2008 13:51:43	49903.0	142.5	9.18	9.015	3.083	0.48900

Slug Test MW-26

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 13:51:47	49907.0	146.5	9.11	8.944	3.013	0.47899
1/9/2008 13:51:51	49911.5	151.0	9.03	8.868	2.937	0.46785
1/9/2008 13:51:55	49915.5	155.0	8.96	8.800	2.868	0.45763
1/9/2008 13:52:00	49920.0	159.5	8.89	8.727	2.795	0.44639
1/9/2008 13:52:04	49924.5	164.0	8.82	8.655	2.724	0.43517
1/9/2008 13:52:09	49929.0	168.5	8.75	8.588	2.656	0.42430
1/9/2008 13:52:13	49933.0	172.5	8.69	8.527	2.595	0.41417
1/9/2008 13:52:17	49937.5	177.0	8.62	8.461	2.530	0.40311
1/9/2008 13:52:21	49941.5	181.0	8.57	8.403	2.472	0.39299
1/9/2008 13:52:26	49946.0	185.5	8.5	8.340	2.408	0.38172
1/9/2008 13:52:30	49950.5	190.0	8.44	8.280	2.348	0.37071
1/9/2008 13:52:34	49954.5	194.0	8.39	8.223	2.292	0.36018
1/9/2008 13:52:38	49958.5	198.0	8.33	8.170	2.239	0.34996
1/9/2008 13:52:43	49963.0	202.5	8.28	8.115	2.183	0.33910
1/9/2008 13:52:47	49967.0	206.5	8.23	8.063	2.132	0.32878
1/9/2008 13:52:51	49971.5	211.0	8.17	8.009	2.078	0.31758
1/9/2008 13:52:55	49975.5	215.0	8.13	7.961	2.029	0.30737
1/9/2008 13:53:00	49980.0	219.5	8.07	7.909	1.977	0.29604
1/9/2008 13:53:04	49984.5	224.0	8.03	7.859	1.928	0.28507
1/9/2008 13:53:09	49989.0	228.5	7.98	7.810	1.879	0.27382
1/9/2008 13:53:13	49993.5	233.0	7.93	7.764	1.832	0.26298
1/9/2008 13:53:17	49997.5	237.0	7.89	7.719	1.788	0.25236
1/9/2008 13:53:21	50001.5	241.0	7.85	7.678	1.747	0.24222
1/9/2008 13:53:25	50005.5	245.0	7.81	7.638	1.706	0.23210
1/9/2008 13:53:30	50010.0	249.5	7.76	7.595	1.663	0.22094
1/9/2008 13:53:34	50014.5	254.0	7.72	7.553	1.622	0.21002
1/9/2008 13:53:38	50018.5	258.0	7.68	7.514	1.583	0.19937
1/9/2008 13:53:43	50023.0	262.5	7.64	7.472	1.540	0.18761
1/9/2008 13:53:47	50027.5	267.0	7.6	7.432	1.501	0.17639
1/9/2008 13:53:51	50031.5	271.0	7.57	7.397	1.466	0.16606
1/9/2008 13:53:56	50036.0	275.5	7.53	7.360	1.428	0.15487
1/9/2008 13:54:00	50040.0	279.5	7.5	7.326	1.394	0.14432
1/9/2008 13:54:04	50044.5	284.0	7.46	7.291	1.360	0.13351
1/9/2008 13:54:08	50048.5	288.0	7.43	7.259	1.328	0.12308
1/9/2008 13:54:12	50052.5	292.0	7.4	7.228	1.296	0.11273
1/9/2008 13:54:16	50056.5	296.0	7.37	7.198	1.266	0.10247
1/9/2008 13:54:20	50060.5	300.0	7.34	7.168	1.237	0.09232
1/9/2008 13:54:24	50064.5	304.0	7.31	7.138	1.207	0.08156
1/9/2008 13:54:28	50068.5	308.0	7.28	7.110	1.178	0.07127
1/9/2008 13:54:32	50072.5	312.0	7.25	7.083	1.151	0.06110
1/9/2008 13:54:37	50077.0	316.5	7.23	7.053	1.122	0.04991
1/9/2008 13:54:41	50081.0	320.5	7.2	7.027	1.096	0.03962
1/9/2008 13:54:45	50085.0	324.5	7.17	7.001	1.069	0.02908
1/9/2008 13:54:49	50089.5	329.0	7.15	6.973	1.042	0.01785
1/9/2008 13:54:53	50093.5	333.0	7.12	6.947	1.016	0.00676
1/9/2008 13:54:57	50097.5	337.0	7.1	6.923	0.991	-0.00374
1/9/2008 13:55:02	50102.0	341.5	7.07	6.900	0.968	-0.01406
1/9/2008 13:55:06	50106.0	345.5	7.05	6.875	0.944	-0.02508
1/9/2008 13:55:10	50110.0	349.5	7.03	6.853	0.922	-0.03545

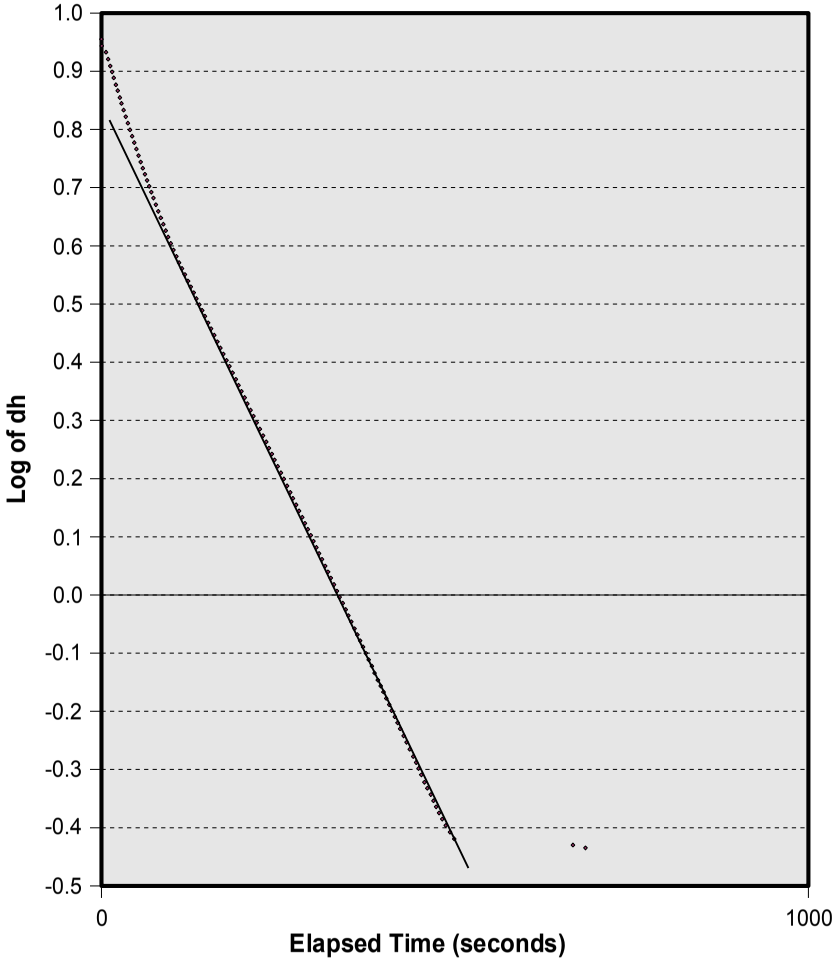
Slug Test MW-26

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 13:55:14	50114.0	353.5	7.01	6.831	0.899	-0.04607
1/9/2008 13:55:18	50118.5	358.0	6.98	6.807	0.875	-0.05796
1/9/2008 13:55:22	50122.5	362.0	6.96	6.786	0.855	-0.06814
1/9/2008 13:55:26	50126.5	366.0	6.94	6.766	0.835	-0.07856
1/9/2008 13:55:30	50130.5	370.0	6.92	6.746	0.814	-0.08923
1/9/2008 13:55:34	50134.5	374.0	6.9	6.725	0.794	-0.10017
1/9/2008 13:55:38	50138.5	378.0	6.88	6.705	0.774	-0.11140
1/9/2008 13:55:43	50143.0	382.5	6.86	6.686	0.754	-0.12237
1/9/2008 13:55:47	50147.0	386.5	6.84	6.666	0.734	-0.13419
1/9/2008 13:55:51	50151.5	391.0	6.82	6.645	0.714	-0.14636
1/9/2008 13:55:55	50155.5	395.0	6.81	6.629	0.698	-0.15637
1/9/2008 13:55:59	50159.5	399.0	6.79	6.613	0.681	-0.16662
1/9/2008 13:56:03	50163.5	403.0	6.77	6.596	0.664	-0.17776
1/9/2008 13:56:07	50167.5	407.0	6.76	6.579	0.648	-0.18853
1/9/2008 13:56:11	50171.0	410.5	6.74	6.564	0.633	-0.19886
1/9/2008 13:56:15	50175.5	415.0	6.73	6.549	0.617	-0.20949
1/9/2008 13:56:19	50179.5	419.0	6.71	6.535	0.603	-0.21964
1/9/2008 13:56:23	50183.0	422.5	6.7	6.520	0.589	-0.23001
1/9/2008 13:56:28	50188.0	427.5	6.68	6.504	0.573	-0.24222
1/9/2008 13:56:32	50192.0	431.5	6.67	6.490	0.558	-0.25318
1/9/2008 13:56:36	50196.5	436.0	6.65	6.474	0.543	-0.26524
1/9/2008 13:56:41	50201.5	441.0	6.64	6.459	0.528	-0.27768
1/9/2008 13:56:45	50205.5	445.0	6.63	6.447	0.515	-0.28789
1/9/2008 13:56:49	50209.0	448.5	6.62	6.435	0.503	-0.29832
1/9/2008 13:56:53	50213.0	452.5	6.6	6.422	0.491	-0.30904
1/9/2008 13:56:57	50217.5	457.0	6.59	6.408	0.477	-0.32187
1/9/2008 13:57:01	50221.5	461.0	6.58	6.397	0.465	-0.33226
1/9/2008 13:57:06	50226.5	466.0	6.57	6.385	0.454	-0.34296
1/9/2008 13:57:10	50230.0	469.5	6.56	6.374	0.443	-0.35384
1/9/2008 13:57:14	50234.0	473.5	6.55	6.364	0.432	-0.36402
1/9/2008 13:57:18	50238.0	477.5	6.54	6.354	0.422	-0.37445
1/9/2008 13:57:22	50242.5	482.0	6.53	6.343	0.412	-0.38517
1/9/2008 13:57:27	50247.5	487.0	6.52	6.333	0.402	-0.39620
1/9/2008 13:57:33	50253.5	493.0	6.51	6.323	0.391	-0.40758
1/9/2008 13:57:39	50259.5	499.0	6.5	6.312	0.381	-0.41928
1/9/2008 14:00:27	50427.5	667.0	6.5	6.303	0.372	-0.42967
1/9/2008 14:00:45	50445.0	684.5	6.5	6.299	0.368	-0.43454

Slug Test MW-26

Slug Test by Bouwer and Rice

Displacement Method:	Injection	
Well depth:	49.80	ft
Stick up height:	2.61	ft
Depth to sand pack (BGS):	33.50	ft
Depth to screened interval (BGS):	34.80	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	29.91	ft
Initial Head Change:	9.02	ft
Total well length:	52.41	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.0833	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	15.00	ft
L_e / r_w:	60.0000	
A (dimensionless):	3.472	
B (dimensionless):	0.581	
Drawdown at time = 0 (y_0):	4.50	ft
Drawdown at time = t (y_t):	0.39	ft
Elapsed Time between y_0 and y_t (t):	413	sec
Initial water column in well (L_w):	22.50	ft
$\ln(R_e/r_w)$ =	2.77	
K =	3.81E-06	ft/sec
	1.16E-04	**cm/sec**
	120.27	ft/yr



Water above sand pack:	Yes
%Duration below sand pack:	0.00%
Water above screen:	Yes
%Duration below screen:	0.00%

Slug Test MW-27

Initial offset in logger reading (feet):	0.115	Date:	01/09/2008
Offset increment in logger reading (feet/sec):	0.000001		
Initial depth to water table (feet):	20.38		
Depth of probe below water table (feet):	5.665		

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 12:10:52	43852.5	0.0	10.75	10.630	4.965	0.69596
1/9/2008 12:11:04	43864.0	11.5	10.63	10.513	4.848	0.68560
1/9/2008 12:11:30	43890.0	37.5	10.51	10.397	4.732	0.67508
1/9/2008 12:11:50	43910.0	57.5	10.4	10.286	4.621	0.66477
1/9/2008 12:12:09	43929.0	76.5	10.29	10.178	4.513	0.65450
1/9/2008 12:12:28	43948.5	96.0	10.19	10.074	4.409	0.64437
1/9/2008 12:12:47	43967.5	115.0	10.09	9.973	4.308	0.63431
1/9/2008 12:13:06	43986.5	134.0	9.99	9.872	4.207	0.62401
1/9/2008 12:13:25	44005.5	153.0	9.89	9.776	4.111	0.61398
1/9/2008 12:13:45	44025.0	172.5	9.8	9.682	4.017	0.60393
1/9/2008 12:14:04	44044.0	191.5	9.7	9.589	3.924	0.59376
1/9/2008 12:14:23	44063.0	210.5	9.61	9.499	3.834	0.58368
1/9/2008 12:14:42	44082.5	230.0	9.53	9.410	3.745	0.57348
1/9/2008 12:15:01	44101.5	249.0	9.44	9.324	3.659	0.56339
1/9/2008 12:15:20	44120.0	267.5	9.36	9.240	3.575	0.55331
1/9/2008 12:15:39	44139.0	286.5	9.27	9.156	3.491	0.54298
1/9/2008 12:15:58	44158.5	306.0	9.19	9.076	3.411	0.53291
1/9/2008 12:16:18	44178.0	325.5	9.11	8.997	3.332	0.52273
1/9/2008 12:16:37	44197.0	344.5	9.04	8.921	3.256	0.51271
1/9/2008 12:16:56	44216.0	363.5	8.96	8.846	3.181	0.50259
1/9/2008 12:17:14	44234.0	381.5	8.89	8.773	3.108	0.49250
1/9/2008 12:17:33	44253.0	400.5	8.82	8.701	3.036	0.48232
1/9/2008 12:17:51	44271.5	419.0	8.75	8.631	2.966	0.47219
1/9/2008 12:18:10	44290.5	438.0	8.68	8.562	2.897	0.46197
1/9/2008 12:18:28	44308.5	456.0	8.61	8.496	2.831	0.45196
1/9/2008 12:18:46	44326.5	474.0	8.54	8.429	2.764	0.44156
1/9/2008 12:19:05	44345.5	493.0	8.48	8.365	2.700	0.43138
1/9/2008 12:19:24	44364.5	512.0	8.42	8.303	2.638	0.42129
1/9/2008 12:19:43	44383.0	530.5	8.36	8.240	2.575	0.41079
1/9/2008 12:20:02	44402.0	549.5	8.3	8.180	2.515	0.40055
1/9/2008 12:20:20	44420.0	567.5	8.24	8.122	2.457	0.39041
1/9/2008 12:20:37	44437.5	585.0	8.18	8.065	2.400	0.38022
1/9/2008 12:20:55	44455.5	603.0	8.12	8.008	2.343	0.36978
1/9/2008 12:21:14	44474.0	621.5	8.07	7.953	2.288	0.35946
1/9/2008 12:21:32	44492.5	640.0	8.01	7.899	2.234	0.34908
1/9/2008 12:21:50	44510.0	657.5	7.96	7.846	2.182	0.33885
1/9/2008 12:22:07	44527.5	675.0	7.91	7.796	2.132	0.32878
1/9/2008 12:22:24	44544.5	692.0	7.86	7.747	2.083	0.31868
1/9/2008 12:22:41	44561.0	708.5	7.82	7.699	2.035	0.30856
1/9/2008 12:22:58	44578.5	726.0	7.77	7.652	1.988	0.29840
1/9/2008 12:23:16	44596.5	744.0	7.72	7.605	1.941	0.28801
1/9/2008 12:23:34	44614.0	761.5	7.68	7.559	1.895	0.27759
1/9/2008 12:23:52	44632.0	779.5	7.63	7.514	1.850	0.26715
1/9/2008 12:24:09	44649.5	797.0	7.59	7.469	1.805	0.25645

Slug Test MW-27

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 12:24:26	44666.5	814.0	7.54	7.425	1.761	0.24573
1/9/2008 12:24:43	44683.0	830.5	7.5	7.384	1.720	0.23550
1/9/2008 12:24:59	44699.0	846.5	7.46	7.344	1.680	0.22528
1/9/2008 12:25:17	44717.0	864.5	7.42	7.304	1.640	0.21481
1/9/2008 12:25:35	44735.0	882.5	7.38	7.265	1.601	0.20435
1/9/2008 12:25:51	44751.0	898.5	7.34	7.227	1.563	0.19391
1/9/2008 12:26:08	44768.0	915.5	7.31	7.190	1.526	0.18350
1/9/2008 12:26:24	44784.5	932.0	7.27	7.155	1.491	0.17342
1/9/2008 12:26:40	44800.5	948.0	7.24	7.121	1.457	0.16340
1/9/2008 12:26:58	44818.0	965.5	7.2	7.086	1.422	0.15284
1/9/2008 12:27:14	44834.5	982.0	7.17	7.052	1.388	0.14232
1/9/2008 12:27:30	44850.5	998.0	7.14	7.019	1.355	0.13187
1/9/2008 12:27:46	44866.5	1014.0	7.1	6.987	1.323	0.12148
1/9/2008 12:28:02	44882.0	1029.5	7.07	6.956	1.292	0.11118
1/9/2008 12:28:18	44898.5	1046.0	7.04	6.925	1.261	0.10063
1/9/2008 12:28:33	44913.5	1061.0	7.01	6.896	1.232	0.09052
1/9/2008 12:28:49	44929.0	1076.5	6.98	6.867	1.203	0.08017
1/9/2008 12:29:05	44945.0	1092.5	6.95	6.838	1.174	0.06956
1/9/2008 12:29:20	44960.5	1108.0	6.93	6.811	1.147	0.05945
1/9/2008 12:29:36	44976.0	1123.5	6.9	6.784	1.120	0.04910
1/9/2008 12:29:53	44993.0	1140.5	6.87	6.757	1.093	0.03849
1/9/2008 12:30:07	45007.5	1155.0	6.85	6.731	1.067	0.02803
1/9/2008 12:30:23	45023.5	1171.0	6.82	6.706	1.042	0.01773
1/9/2008 12:30:38	45038.5	1186.0	6.8	6.681	1.017	0.00717
1/9/2008 12:30:53	45053.0	1200.5	6.77	6.656	0.992	-0.00364
1/9/2008 12:31:09	45069.0	1216.5	6.75	6.633	0.969	-0.01384
1/9/2008 12:31:25	45085.0	1232.5	6.73	6.610	0.946	-0.02428
1/9/2008 12:31:40	45100.0	1247.5	6.7	6.587	0.923	-0.03498
1/9/2008 12:31:53	45113.5	1261.0	6.68	6.566	0.902	-0.04498
1/9/2008 12:32:08	45128.5	1276.0	6.66	6.545	0.881	-0.05522
1/9/2008 12:32:22	45142.5	1290.0	6.64	6.524	0.860	-0.06571
1/9/2008 12:32:37	45157.5	1305.0	6.62	6.504	0.840	-0.07594
1/9/2008 12:32:51	45171.0	1318.5	6.6	6.484	0.820	-0.08641
1/9/2008 12:33:05	45185.0	1332.5	6.58	6.465	0.801	-0.09661
1/9/2008 12:33:20	45200.0	1347.5	6.56	6.445	0.781	-0.10760
1/9/2008 12:33:35	45215.0	1362.5	6.54	6.426	0.762	-0.11831
1/9/2008 12:33:49	45229.5	1377.0	6.52	6.407	0.743	-0.12929
1/9/2008 12:34:03	45243.5	1391.0	6.51	6.390	0.726	-0.13935
1/9/2008 12:34:17	45257.5	1405.0	6.49	6.373	0.709	-0.14965
1/9/2008 12:34:31	45271.5	1419.0	6.47	6.354	0.690	-0.16146
1/9/2008 12:34:46	45286.5	1434.0	6.45	6.337	0.672	-0.17231
1/9/2008 12:35:00	45300.0	1447.5	6.44	6.320	0.655	-0.18344
1/9/2008 12:35:15	45315.5	1463.0	6.42	6.304	0.639	-0.19418
1/9/2008 12:35:28	45328.5	1476.0	6.41	6.289	0.624	-0.20449
1/9/2008 12:35:43	45343.5	1491.0	6.39	6.273	0.608	-0.21577
1/9/2008 12:35:55	45355.5	1503.0	6.38	6.259	0.594	-0.22588
1/9/2008 12:36:08	45368.5	1516.0	6.36	6.245	0.580	-0.23624
1/9/2008 12:36:22	45382.5	1530.0	6.35	6.230	0.565	-0.24762
1/9/2008 12:36:37	45397.0	1544.5	6.33	6.215	0.550	-0.25930

Slug Test MW-27

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 12:36:50	45410.0	1557.5	6.32	6.202	0.537	-0.26969
1/9/2008 12:37:04	45424.0	1571.5	6.3	6.188	0.523	-0.28116
1/9/2008 12:37:14	45434.5	1582.0	6.29	6.176	0.511	-0.29124
1/9/2008 12:37:28	45448.0	1595.5	6.28	6.164	0.499	-0.30156
1/9/2008 12:37:42	45462.5	1610.0	6.27	6.151	0.486	-0.31302
1/9/2008 12:37:57	45477.5	1625.0	6.25	6.138	0.473	-0.32480
1/9/2008 12:38:11	45491.0	1638.5	6.24	6.126	0.461	-0.33596
1/9/2008 12:38:24	45504.0	1651.5	6.23	6.114	0.449	-0.34741
1/9/2008 12:38:38	45518.5	1666.0	6.22	6.102	0.437	-0.35918
1/9/2008 12:38:50	45530.0	1677.5	6.21	6.092	0.427	-0.36923
1/9/2008 12:39:01	45541.0	1688.5	6.2	6.082	0.417	-0.37952
1/9/2008 12:39:11	45551.0	1698.5	6.19	6.072	0.407	-0.39006
1/9/2008 12:39:22	45562.0	1709.5	6.18	6.062	0.397	-0.40086
1/9/2008 12:39:31	45571.0	1718.5	6.17	6.052	0.387	-0.41194
1/9/2008 12:39:48	45588.0	1735.5	6.16	6.042	0.377	-0.42331
1/9/2008 12:40:02	45602.0	1749.5	6.15	6.033	0.368	-0.43381
1/9/2008 12:40:13	45613.0	1760.5	6.14	6.022	0.357	-0.44698
1/9/2008 12:40:25	45625.5	1773.0	6.13	6.012	0.347	-0.45932
1/9/2008 12:40:34	45634.5	1782.0	6.12	6.004	0.339	-0.46945
1/9/2008 12:40:49	45649.0	1796.5	6.11	5.995	0.330	-0.48114
1/9/2008 12:41:03	45663.0	1810.5	6.1	5.987	0.322	-0.49180
1/9/2008 12:41:16	45676.0	1823.5	6.09	5.978	0.313	-0.50412
1/9/2008 12:41:28	45688.0	1835.5	6.09	5.970	0.305	-0.51536
1/9/2008 12:41:39	45699.0	1846.5	6.08	5.963	0.298	-0.52545
1/9/2008 12:41:50	45710.0	1857.5	6.07	5.956	0.291	-0.53577
1/9/2008 12:42:03	45723.5	1871.0	6.06	5.948	0.283	-0.54788
1/9/2008 12:42:14	45734.5	1882.0	6.06	5.940	0.275	-0.56034
1/9/2008 12:42:24	45744.5	1892.0	6.05	5.933	0.268	-0.57154
1/9/2008 12:42:36	45756.0	1903.5	6.04	5.926	0.261	-0.58304
1/9/2008 12:42:48	45768.5	1916.0	6.04	5.920	0.255	-0.59314
1/9/2008 12:43:00	45780.0	1927.5	6.03	5.914	0.249	-0.60349
1/9/2008 12:43:08	45788.5	1936.0	6.02	5.907	0.242	-0.61587
1/9/2008 12:43:23	45803.0	1950.5	6.02	5.901	0.236	-0.62679
1/9/2008 12:43:35	45815.0	1962.5	6.01	5.894	0.229	-0.63987
1/9/2008 12:43:47	45827.5	1975.0	6	5.888	0.223	-0.65141
1/9/2008 12:44:02	45842.0	1989.5	6	5.882	0.217	-0.66326
1/9/2008 12:44:17	45857.5	2005.0	5.99	5.877	0.212	-0.67340
1/9/2008 12:44:26	45866.0	2013.5	5.99	5.872	0.207	-0.68377
1/9/2008 12:44:39	45879.5	2027.0	5.98	5.866	0.201	-0.69656
1/9/2008 12:44:48	45888.5	2036.0	5.98	5.860	0.195	-0.70972
1/9/2008 12:44:58	45898.0	2045.5	5.97	5.854	0.189	-0.72330
1/9/2008 12:45:08	45908.0	2055.5	5.97	5.849	0.184	-0.73495
1/9/2008 12:45:16	45916.0	2063.5	5.96	5.844	0.179	-0.74692
1/9/2008 12:45:26	45926.5	2074.0	5.96	5.839	0.174	-0.75924
1/9/2008 12:45:35	45935.5	2083.0	5.95	5.834	0.169	-0.77191
1/9/2008 12:45:51	45951.0	2098.5	5.95	5.830	0.165	-0.78233
1/9/2008 12:46:00	45960.0	2107.5	5.94	5.826	0.161	-0.79300
1/9/2008 12:46:06	45966.0	2113.5	5.94	5.822	0.157	-0.80394
1/9/2008 12:46:19	45979.5	2127.0	5.93	5.817	0.152	-0.81801

Slug Test MW-27

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 12:46:29	45989.5	2137.0	5.93	5.813	0.148	-0.82961
1/9/2008 12:46:46	46006.0	2153.5	5.93	5.809	0.144	-0.84154
1/9/2008 12:47:07	46027.0	2174.5	5.92	5.805	0.140	-0.85381
1/9/2008 12:47:14	46034.5	2182.0	5.92	5.801	0.136	-0.86641
1/9/2008 12:47:23	46043.5	2191.0	5.91	5.797	0.132	-0.87939
1/9/2008 12:47:35	46055.0	2202.5	5.91	5.793	0.128	-0.89278
1/9/2008 12:47:47	46067.5	2215.0	5.91	5.788	0.124	-0.90660
1/9/2008 12:48:10	46090.0	2237.5	5.9	5.784	0.120	-0.92089
1/9/2008 12:48:26	46106.5	2254.0	5.9	5.780	0.116	-0.93566
1/9/2008 12:48:40	46120.0	2267.5	5.89	5.776	0.112	-0.95093
1/9/2008 12:48:49	46129.5	2277.0	5.89	5.772	0.108	-0.96676
1/9/2008 12:49:00	46140.0	2287.5	5.88	5.767	0.103	-0.98738
1/9/2008 12:49:09	46149.5	2297.0	5.88	5.762	0.098	-1.00903
1/9/2008 12:49:10	46150.0	2297.5	5.88	5.765	0.101	-0.99593
1/9/2008 12:49:10	46150.5	2298.0	5.88	5.762	0.098	-1.00903
1/9/2008 12:49:22	46162.5	2310.0	5.88	5.758	0.094	-1.02718
1/9/2008 12:49:33	46173.5	2321.0	5.87	5.754	0.090	-1.04611
1/9/2008 12:49:46	46186.0	2333.5	5.87	5.750	0.086	-1.06591
1/9/2008 12:50:05	46205.0	2352.5	5.87	5.748	0.084	-1.07620
1/9/2008 12:50:07	46207.0	2354.5	5.87	5.750	0.086	-1.06598
1/9/2008 12:50:07	46207.5	2355.0	5.87	5.748	0.084	-1.07621
1/9/2008 12:50:08	46208.0	2355.5	5.87	5.750	0.086	-1.06598
1/9/2008 12:50:09	46209.0	2356.5	5.87	5.748	0.084	-1.07622
1/9/2008 12:50:16	46216.5	2364.0	5.86	5.746	0.082	-1.08672
1/9/2008 12:50:17	46217.0	2364.5	5.87	5.748	0.084	-1.07624
1/9/2008 12:50:19	46219.0	2366.5	5.86	5.746	0.082	-1.08673
1/9/2008 12:50:21	46221.0	2368.5	5.87	5.748	0.084	-1.07626
1/9/2008 12:50:22	46222.0	2369.5	5.86	5.745	0.081	-1.09207
1/9/2008 12:50:31	46231.5	2379.0	5.86	5.743	0.079	-1.10298
1/9/2008 12:50:34	46234.0	2381.5	5.86	5.741	0.077	-1.11414
1/9/2008 12:50:35	46235.0	2382.5	5.86	5.743	0.079	-1.10299
1/9/2008 12:50:36	46236.0	2383.5	5.86	5.741	0.077	-1.11415
1/9/2008 12:50:45	46245.5	2393.0	5.86	5.744	0.080	-1.09756
1/9/2008 12:50:46	46246.5	2394.0	5.86	5.741	0.077	-1.11419
1/9/2008 12:50:47	46247.5	2395.0	5.86	5.743	0.079	-1.10304
1/9/2008 12:50:48	46248.0	2395.5	5.86	5.741	0.077	-1.11419
1/9/2008 12:50:48	46248.5	2396.0	5.86	5.743	0.079	-1.10304
1/9/2008 12:50:50	46250.0	2397.5	5.86	5.741	0.077	-1.11420
1/9/2008 12:50:51	46251.5	2399.0	5.86	5.743	0.079	-1.10305
1/9/2008 12:50:54	46254.0	2401.5	5.86	5.741	0.077	-1.11421
1/9/2008 12:50:54	46254.5	2402.0	5.86	5.743	0.079	-1.10306
1/9/2008 12:50:55	46255.5	2403.0	5.86	5.741	0.077	-1.11422
1/9/2008 12:50:56	46256.0	2403.5	5.86	5.743	0.079	-1.10307
1/9/2008 12:50:57	46257.0	2404.5	5.86	5.741	0.077	-1.11422
1/9/2008 12:50:57	46257.5	2405.0	5.86	5.744	0.080	-1.09760
1/9/2008 12:50:58	46258.5	2406.0	5.86	5.742	0.078	-1.10862
1/9/2008 12:51:00	46260.0	2407.5	5.86	5.744	0.080	-1.09761
1/9/2008 12:51:00	46260.5	2408.0	5.86	5.742	0.078	-1.10862
1/9/2008 12:51:02	46262.0	2409.5	5.86	5.740	0.076	-1.11993

Slug Test MW-27

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 12:51:03	46263.0	2410.5	5.86	5.742	0.078	-1.10863
1/9/2008 12:51:03	46263.5	2411.0	5.86	5.740	0.076	-1.11993
1/9/2008 12:51:06	46266.5	2414.0	5.85	5.737	0.073	-1.13747
1/9/2008 12:51:09	46269.0	2416.5	5.86	5.740	0.076	-1.11995
1/9/2008 12:51:09	46269.5	2417.0	5.85	5.737	0.073	-1.13748
1/9/2008 12:51:14	46274.0	2421.5	5.85	5.735	0.071	-1.14958
1/9/2008 12:51:19	46279.0	2426.5	5.85	5.733	0.069	-1.16204
1/9/2008 12:51:20	46280.5	2428.0	5.85	5.735	0.071	-1.14961
1/9/2008 12:51:21	46281.0	2428.5	5.85	5.733	0.069	-1.16205
1/9/2008 12:51:29	46289.5	2437.0	5.85	5.731	0.067	-1.17488
1/9/2008 12:51:30	46290.5	2438.0	5.85	5.733	0.069	-1.16208
1/9/2008 12:51:31	46291.0	2438.5	5.85	5.731	0.067	-1.17489
1/9/2008 12:51:33	46293.5	2441.0	5.85	5.733	0.069	-1.16210
1/9/2008 12:51:34	46294.0	2441.5	5.85	5.731	0.067	-1.17490
1/9/2008 12:51:36	46296.0	2443.5	5.85	5.733	0.069	-1.16211
1/9/2008 12:51:36	46296.5	2444.0	5.85	5.731	0.067	-1.17491
1/9/2008 12:51:41	46301.5	2449.0	5.85	5.729	0.065	-1.18812
1/9/2008 12:51:42	46302.0	2449.5	5.85	5.731	0.067	-1.17493
1/9/2008 12:51:42	46302.5	2450.0	5.85	5.729	0.065	-1.18813
1/9/2008 12:51:43	46303.0	2450.5	5.85	5.731	0.067	-1.17494
1/9/2008 12:51:43	46303.5	2451.0	5.85	5.729	0.065	-1.18813
1/9/2008 12:51:46	46306.5	2454.0	5.85	5.731	0.067	-1.17495
1/9/2008 12:51:47	46307.0	2454.5	5.85	5.729	0.065	-1.18815
1/9/2008 12:51:48	46308.0	2455.5	5.85	5.731	0.067	-1.17496
1/9/2008 12:51:48	46308.5	2456.0	5.85	5.729	0.065	-1.18815
1/9/2008 12:51:50	46310.0	2457.5	5.85	5.731	0.067	-1.17497
1/9/2008 12:51:50	46310.5	2458.0	5.85	5.729	0.065	-1.18816
1/9/2008 12:51:53	46313.5	2461.0	5.85	5.731	0.067	-1.17498
1/9/2008 12:51:54	46314.0	2461.5	5.85	5.729	0.065	-1.18818
1/9/2008 12:51:55	46315.5	2463.0	5.85	5.731	0.067	-1.17499
1/9/2008 12:51:56	46316.0	2463.5	5.85	5.729	0.065	-1.18819
1/9/2008 12:51:57	46317.0	2464.5	5.85	5.731	0.067	-1.17500
1/9/2008 12:52:03	46323.0	2470.5	5.85	5.729	0.065	-1.18822
1/9/2008 12:52:03	46323.5	2471.0	5.85	5.731	0.067	-1.17502
1/9/2008 12:52:05	46325.0	2472.5	5.85	5.729	0.065	-1.18822
1/9/2008 12:52:07	46327.0	2474.5	5.85	5.732	0.068	-1.16859
1/9/2008 12:52:08	46328.0	2475.5	5.85	5.729	0.065	-1.18824
1/9/2008 12:52:08	46328.5	2476.0	5.85	5.732	0.068	-1.16859
1/9/2008 12:52:09	46329.0	2476.5	5.85	5.729	0.065	-1.18824
1/9/2008 12:52:09	46329.5	2477.0	5.85	5.731	0.067	-1.17505
1/9/2008 12:52:10	46330.0	2477.5	5.85	5.729	0.065	-1.18825
1/9/2008 12:52:10	46330.5	2478.0	5.85	5.731	0.067	-1.17505
1/9/2008 12:52:11	46331.0	2478.5	5.85	5.729	0.065	-1.18825
1/9/2008 12:52:13	46333.0	2480.5	5.84	5.727	0.063	-1.20187
1/9/2008 12:52:20	46340.0	2487.5	5.84	5.725	0.061	-1.21595
1/9/2008 12:52:21	46341.5	2489.0	5.84	5.727	0.063	-1.20191
1/9/2008 12:52:22	46342.0	2489.5	5.84	5.725	0.061	-1.21596
1/9/2008 12:52:26	46346.5	2494.0	5.84	5.727	0.063	-1.20193
1/9/2008 12:52:27	46347.0	2494.5	5.84	5.725	0.061	-1.21598

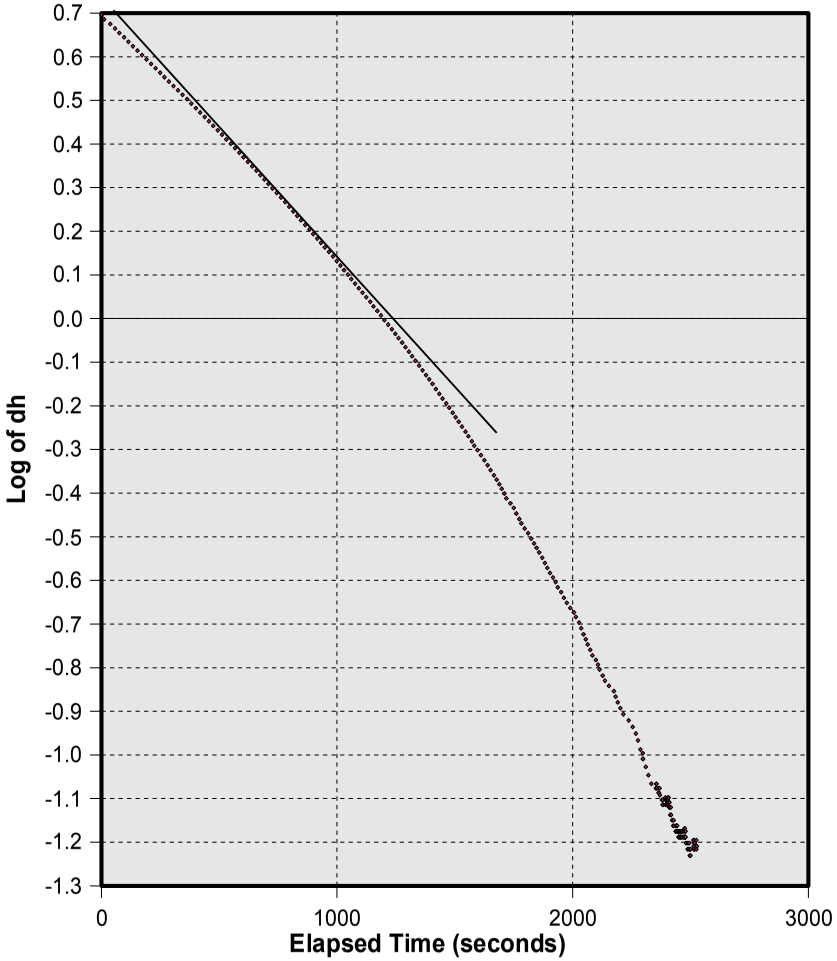
Slug Test MW-27

Time	Time (sec)	Elapsed Time (sec)	Logger Reading (ft)	Adjusted Reading (ft)	dh (ft)	Log of dh
1/9/2008 12:52:29	46349.5	2497.0	5.84	5.723	0.059	-1.23052
1/9/2008 12:52:30	46350.5	2498.0	5.84	5.725	0.061	-1.21600
1/9/2008 12:52:32	46352.0	2499.5	5.84	5.723	0.059	-1.23053
1/9/2008 12:52:32	46352.5	2500.0	5.84	5.725	0.061	-1.21601
1/9/2008 12:52:44	46364.5	2512.0	5.85	5.728	0.064	-1.19515
1/9/2008 12:52:45	46365.0	2512.5	5.84	5.726	0.062	-1.20898
1/9/2008 12:52:47	46367.0	2514.5	5.85	5.728	0.064	-1.19516
1/9/2008 12:52:47	46367.5	2515.0	5.84	5.725	0.061	-1.21608
1/9/2008 12:52:48	46368.0	2515.5	5.84	5.727	0.063	-1.20202
1/9/2008 12:52:48	46368.5	2516.0	5.84	5.725	0.061	-1.21608
1/9/2008 12:52:49	46369.0	2516.5	5.84	5.727	0.063	-1.20203
1/9/2008 12:52:49	46369.5	2517.0	5.84	5.725	0.061	-1.21609
1/9/2008 12:52:50	46370.0	2517.5	5.84	5.727	0.063	-1.20203
1/9/2008 12:52:57	46377.0	2524.5	5.84	5.725	0.061	-1.21612
1/9/2008 12:52:57	46377.5	2525.0	5.85	5.728	0.064	-1.19520
1/9/2008 12:53:00	46380.0	2527.5	5.84	5.726	0.062	-1.20905

Slug Test MW-27

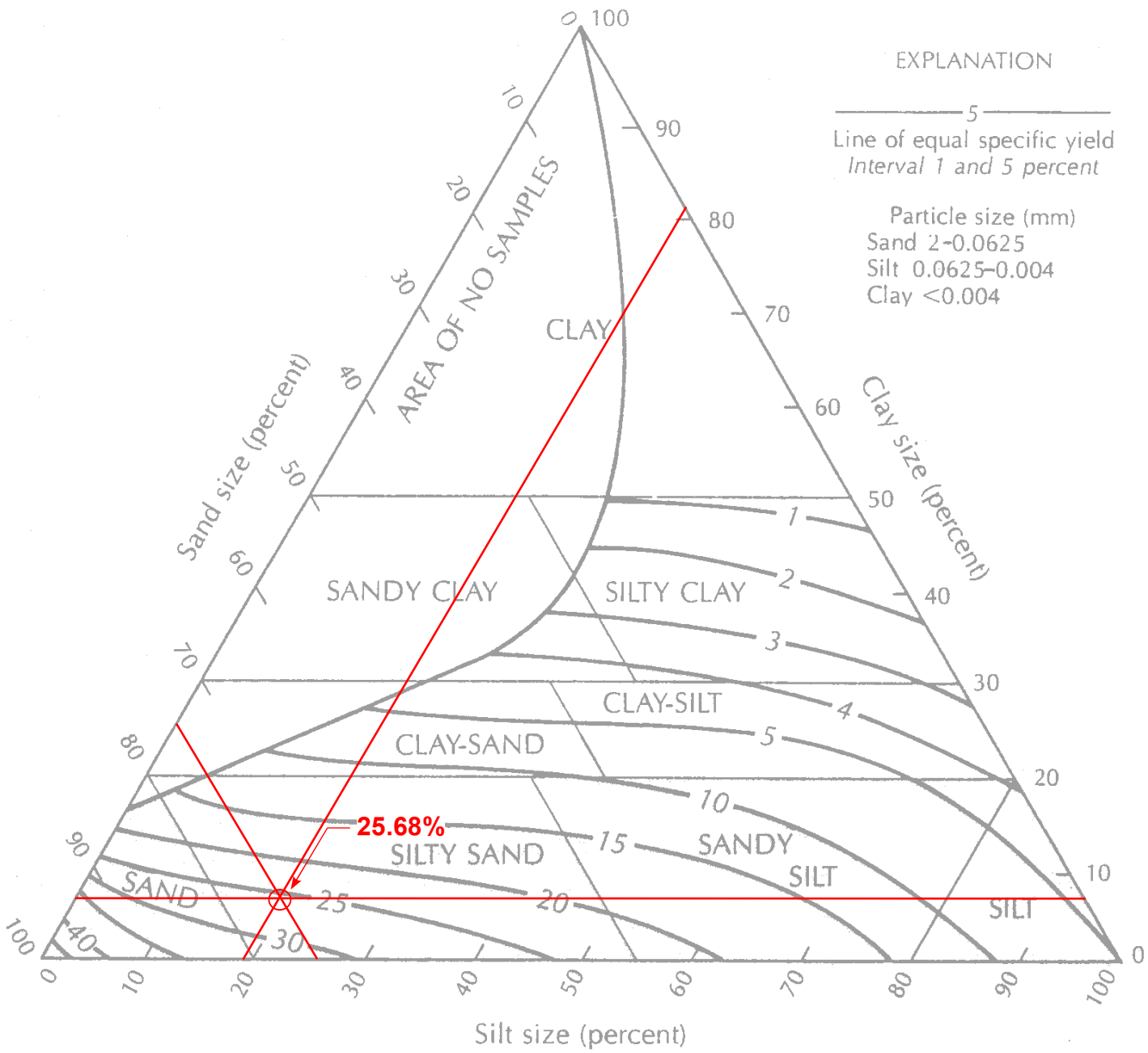
Slug Test by Bouwer and Rice

Displacement Method:	Injection	
Well depth:	49.82	ft
Stick up height:	3.00	ft
Depth to sand pack (BGS):	33.00	ft
Depth to screened interval (BGS):	34.82	ft
Well diameter:	2.00	in
Diameter of annular space:	6.00	in
Initial depth to water table from top of pipe:	20.38	ft
Initial Head Change:	4.97	ft
Total well length:	52.82	ft
Radius of well casing:	0.0833	ft
Assumed porosity of sand/gravel pack:	30%	
Adjusted radius of well casing:	0.1537	ft
r_c:	0.0833	ft
Radius of gravel pack (r_w):	0.2500	ft
Screened interval:	15.00	ft
Length of open section (L_e):	15.00	ft
L_e / r_w:	60.0000	
A (dimensionless):	3.472	
B (dimensionless):	0.581	
Drawdown at time = 0 (y_0):	2.74	ft
Drawdown at time = t (y_t):	1.26	ft
Elapsed Time between y_0 and y_t (t):	565.5	sec
Initial water column in well (L_w):	32.44	ft
$\ln(R_e/r_w)$ =	2.92	
K =	9.28E-07	ft/sec
	2.83E-05	**cm/sec**
	29.26	ft/yr



Water above sand pack:	Yes
%Duration below sand pack:	0.00%
Water above screen:	Yes
%Duration below screen:	0.00%

Figure B-1: Calculation of effective porosity from re-calculated grain size distribution, MW-16 35-36'



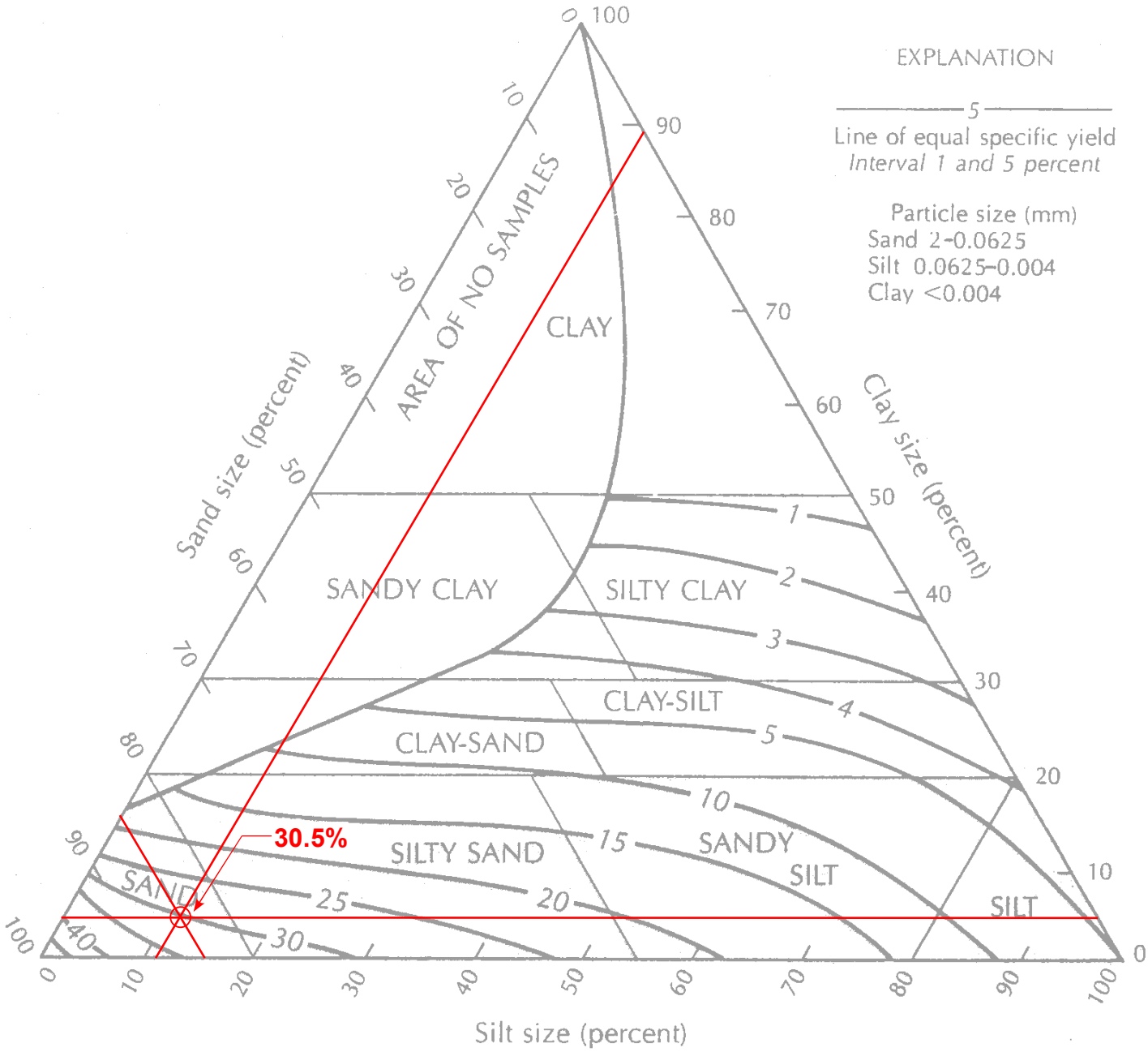
MW-16 35-36'

Soil Type	Proportion (%)
Sand	74.6%
Silt	18.8%
Clay	6.6%

AGU Soil Classification
Silty Sand

Effective Porosity
n_e = 25.68%

Figure B-2: Calculation of effective porosity from re-calculated grain size distribution, MW-22 17-18'



MW-22 17-18'

Soil Type	Proportion (%)
Sand	84.0%
Silt	11.2%
Clay	4.8%

AGU Soil Classification
Sand

Effective Porosity
n_e = 30.5%

APPENDIX E

Supplemental Sample Information

Prepared for

Alexander County Landfill - Permit #02-01
Taylorsville, Alexander County, North Carolina

MESCO Project Number: G07060.0

Completed on 5/15/2008

Municipal Services Garner, NC
Engineering Company, P.A. Boone, NC

Municipal Engineering Services Company, P.A.
Garner, Boone and Morehead City, North Carolina

1 SUPPLIMENTAL SAMPLE INFORMATION

Appendix II sampling was performed on monitoring wells MW-16, MW-24, and MW-26 on April 17, 2008. Only Appendix I constituents were detected. Detected constituent results were similar to the January 2008 results. Table E-1 summarizes detected constituents in MW-16, MW-24 and MW-26.

Monitoring wells MW-5, MW-11, MW-1B and MW-19 were sampled for Appendix I metals on April 17, 2008. Split samples were collected from these monitoring wells and analyzed for Appendix I total metals and Appendix I dissolved metals. Dissolved metal analysis was performed on laboratory filtered samples. Table E-2 summarizes detected metal constituents, with the J qualitative code excluded. Table E-3 summarizes detected metal constituents, with the J qualitative code included.

Supplemental sampling detected Barium, Chromium, Cobalt, Copper and Zinc at quantifiable levels. Sample results did not exceed NCAC 2L levels for any of the detected constituents. Uniquely, dissolved Chromium in MW-19 and dissolved Zinc in MW-1B exceeded their total concentrations. Based on sample results, it appears that total metals and dissolved metals are essentially equal, indicating a fully developed well and care to limit total suspended solids while sampling.

Interwell statistical analysis could not be performed due to the hydrogeology. There is no true un-impacted up-gradient background well. Intrawell analysis performed on detected metals did not identify any statistically significant results. As reported, Barium, Chromium, Cobalt, Copper and Zinc have been detected in surface water samples, multiple monitoring wells, background samples, and NURE sediment samples. It has been identified that the primary source of impact is from landfill gas migration. Typically metals have a limited occurrence in landfill gas. Based on sample results, natural occurrence of metals and the identified source of impact inorganic Appendix I metals are currently not constituents of concern.

Respectfully submitted,
MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.

Ethan J. Caldwell, P.G.
Professional Geologist

Table E-1: Supplemental Sample Data

Well ID	Parameter Name[1]	Sample Date	Result	Unit	Qual Code	PQL[2]	NCGW2L[3]	2L Exceedance
MW-16	1,1-Dichloroethane	04/17/2008	15	ug/L		0.090	70	
MW-16	**1,2-Dichloropropane**	**04/17/2008**	**1**	**ug/L**		**0.18**	**0.51**	**0.49**
MW-16	**1,4-Dichlorobenzene**	**04/17/2008**	**1.6**	**ug/L**		**0.15**	**1.4**	**0.2**
MW-16	Barium	04/17/2008	66.4	ug/L	J	0.20	2000	
MW-16	**Benzene**	**04/17/2008**	**3.6**	**ug/L**		**0.12**	**1**	**2.6**
MW-16	Chloride	04/17/2008	1700	ug/L	J	480	250000	
MW-16	cis-1,2-Dichloroethene	04/17/2008	12	ug/L		0.14	70	
MW-16	Cobalt	04/17/2008	13.3	ug/L		2.0	70[4]	
MW-16	Copper	04/17/2008	4	ug/L	J	0.60	1000	
MW-16	Lead	04/17/2008	2.4	ug/L	J	2.0	15	
MW-16	Mercury	04/17/2008	0.41	ug/L		0.11	1.1	
MW-16	Methylene chloride	04/17/2008	3.8	ug/L		0.088	4.6	
MW-16	Nickel	04/17/2008	7.8	ug/L	J	2.0	100	
MW-16	**Tetrachloroethene**	**04/17/2008**	**3.3**	**ug/L**		**0.25**	**0.7**	**2.6**
MW-16	Thallium	04/17/2008	0.12	ug/L	J	0.036	0.28[4]	
MW-16	**Trichloroethene**	**04/17/2008**	**3.6**	**ug/L**		**0.23**	**2.8**	**0.8**
MW-16	Xylenes	04/17/2008	2.6	ug/L	J	0.21	530	
MW-16	Zinc	04/17/2008	14.7	ug/L		1.0	1050	
MW-24	1,1-Dichloroethane	04/17/2008	1.2	ug/L	J	0.090	70	
MW-24	**1,4-Dichlorobenzene**	**04/17/2008**	**2.5**	**ug/L**		**0.15**	**1.4**	**1.1**
MW-24	Barium	04/17/2008	90.6	ug/L	J	0.20	2000	
MW-24	**Benzene**	**04/17/2008**	**1.3**	**ug/L**		**0.12**	**1**	**0.3**
MW-24	Chlorobenzene	04/17/2008	0.58	ug/L	J	0.16	50	
MW-24	cis-1,2-Dichloroethene	04/17/2008	7.2	ug/L		0.14	70	
MW-24	Cobalt	04/17/2008	38.1	ug/L		2.0	70[4]	
MW-24	Mercury	04/17/2008	0.13	ug/L	J	0.11	1.1	
MW-24	Nickel	04/17/2008	4.5	ug/L	J	2.0	100	
MW-24	Zinc	04/17/2008	12.3	ug/L		1.0	1050	
MW-26	1,1-Dichloroethane	04/17/2008	1.6	ug/L	J	0.090	70	
MW-26	**1,4-Dichlorobenzene**	**04/17/2008**	**3.2**	**ug/L**		**0.15**	**1.4**	**1.8**
MW-26	Barium	04/17/2008	105	ug/L		0.20	2000	
MW-26	**Benzene**	**04/17/2008**	**1.6**	**ug/L**		**0.12**	**1**	**0.6**
MW-26	Chlorobenzene	04/17/2008	0.81	ug/L	J	0.16	50	
MW-26	Chloroethane	04/17/2008	1.5	ug/L	J	0.40	2800	
MW-26	cis-1,2-Dichloroethene	04/17/2008	26	ug/L		0.14	70	
MW-26	Cobalt	04/17/2008	85.2	ug/L		2.0	70[4]	
MW-26	Lead	04/17/2008	2.7	ug/L	J	2.0	15	
MW-26	Nickel	04/17/2008	20.7	ug/L	J	2.0	100	
MW-26	Tetrachloroethene	04/17/2008	0.48	ug/L	J	0.25	0.7	
MW-26	Thallium	04/17/2008	0.114	ug/L	J	0.036	0.28[4]	
MW-26	Trichloroethene	04/17/2008	0.43	ug/L	J	0.23	2.8	
MW-26	Zinc	04/17/2008	38.4	ug/L		1.0	1050	

[1] Table only contains detected constituents.
[2] PQL = Practical Quantitation Limit
[3] NCGW2L = North Carolina Ground Water 2L Standard
[4] North Carolina Ground Protection Standard

Table E-2: Metal Analysis - Total vs. Dissolved - J data excluded

Well ID	Parameter Name[1]	Sample Date	Result	Unit	Qual Code	PQL[2]	NCGW2L[3]	2L Exceedance
MW-11	Barium	04/17/2008	116	ug/L		0.20	2000	
MW-11	Barium (Dissolved)	04/17/2008	115	ug/L	B	0.20	2000	
MW-5	Barium	04/17/2008	108	ug/L		0.20	2000	
MW-19	Chromium (Dissolved)	04/17/2008	20.3	ug/L		2.0	50	
MW-19	Chromium	04/17/2008	11.4	ug/L		2.0	50	
MW-11	Cobalt	04/17/2008	113	ug/L		2.0	70[4]	
MW-11	Cobalt (Dissolved)	04/17/2008	105	ug/L		2.0	70[4]	
MW-1B	Cobalt	04/17/2008	58	ug/L		2.0	70[4]	
MW-1B	Cobalt (Dissolved)	04/17/2008	54.9	ug/L		2.0	70[4]	
MW-5	Cobalt	04/17/2008	12.4	ug/L		2.0	70[4]	
MW-19	Copper	04/17/2008	22.3	ug/L		0.60	1000	
MW-19	Copper (Dissolved)	04/17/2008	15.7	ug/L		0.60	1000	
MW-11	Zinc	04/17/2008	32.7	ug/L		1.0	1050	
MW-11	Zinc (Dissolved)	04/17/2008	31	ug/L	B	1.0	1050	
MW-19	Zinc	04/17/2008	26.2	ug/L		1.0	1050	
MW-19	Zinc (Dissolved)	04/17/2008	15.3	ug/L	B	1.0	1050	
MW-1B	Zinc (Dissolved)	04/17/2008	16.6	ug/L	B	1.0	1050	
MW-1B	Zinc	04/17/2008	16.1	ug/L		1.0	1050	

[1] Table only contains detected constituents.
[2] PQL = Practical Quantitation Limit
[3] NCGW2L = North Carolina Ground Water 2L Standard
[4] Groundwater Protection Standard
B = Analyte was detected in the associated method blank

Table E-3: Metal Analysis - Total vs. Dissolved

Well ID	Parameter Name[1]	Sample Date	Result	Unit	Qual Code	PQL[2]	NCGW2L[3]	2L Exceedance
MW-11	Barium	04/17/2008	116	ug/L		0.20	2000	
MW-11	Barium (Dissolved)	04/17/2008	115	ug/L	B	0.20	2000	
MW-19	Barium	04/17/2008	78.1	ug/L	J	0.20	2000	
MW-19	Barium (Dissolved)	04/17/2008	67.2	ug/L	B,J	0.20	2000	
MW-1B	Barium	04/17/2008	89.6	ug/L	J	0.20	2000	
MW-1B	Barium (Dissolved)	04/17/2008	85.5	ug/L	B,J	0.20	2000	
MW-5	Barium	04/17/2008	108	ug/L		0.20	2000	
MW-5	Barium (Dissolved)	04/17/2008	98.1	ug/L	B,J	0.20	2000	
MW-19	Chromium (Dissolved)	04/17/2008	20.3	ug/L		2.0	50	
MW-19	Chromium	04/17/2008	11.4	ug/L		2.0	50	
MW-11	Cobalt	04/17/2008	113	ug/L		2.0	70[4]	
MW-11	Cobalt (Dissolved)	04/17/2008	105	ug/L		2.0	70[4]	
MW-19	Cobalt (Dissolved)	04/17/2008	2	ug/L	J	2.0	70[4]	
MW-1B	Cobalt	04/17/2008	58	ug/L		2.0	70[4]	
MW-1B	Cobalt (Dissolved)	04/17/2008	54.9	ug/L		2.0	70[4]	
MW-5	Cobalt	04/17/2008	12.4	ug/L		2.0	70[4]	
MW-5	Cobalt (Dissolved)	04/17/2008	9.3	ug/L	J	2.0	70[4]	
MW-19	Copper	04/17/2008	22.3	ug/L		0.60	1000	
MW-19	Copper (Dissolved)	04/17/2008	15.7	ug/L		0.60	1000	
MW-1B	Copper (Dissolved)	04/17/2008	1.4	ug/L	J	0.60	1000	
MW-1B	Copper	04/17/2008	1	ug/L	J	0.60	1000	
MW-19	Lead (Dissolved)	04/17/2008	4.8	ug/L	J	2.0	15	
MW-19	Lead	04/17/2008	4.5	ug/L	J	2.0	15	
MW-1B	Lead (Dissolved)	04/17/2008	2.3	ug/L	J	2.0	15	
MW-5	Lead (Dissolved)	04/17/2008	2.3	ug/L	J	2.0	15	
MW-11	Nickel (Dissolved)	04/17/2008	14.9	ug/L	J	2.0	100	
MW-11	Nickel	04/17/2008	14.6	ug/L	J	2.0	100	
MW-19	Nickel (Dissolved)	04/17/2008	21.3	ug/L	J	2.0	100	
MW-19	Nickel	04/17/2008	9.5	ug/L	J	2.0	100	
MW-1B	Nickel (Dissolved)	04/17/2008	7.8	ug/L	J	2.0	100	
MW-1B	Nickel	04/17/2008	6.8	ug/L	J	2.0	100	
MW-11	Thallium (Dissolved)	04/17/2008	0.302	ug/L	J	0.036	0.28[4]	
MW-11	Thallium	04/17/2008	0.195	ug/L	J	0.036	0.28[4]	
MW-19	Thallium (Dissolved)	04/17/2008	0.073	ug/L	J	0.036	0.28[4]	
MW-19	Thallium	04/17/2008	0.043	ug/L	J	0.036	0.28[4]	
MW-1B	Thallium (Dissolved)	04/17/2008	0.121	ug/L	J	0.036	0.28[4]	
MW-1B	Thallium	04/17/2008	0.06	ug/L	J	0.036	0.28[4]	
MW-19	Vanadium	04/17/2008	13	ug/L	J	1.0	3.5[4]	
MW-19	Vanadium (Dissolved)	04/17/2008	12.1	ug/L	J	1.0	3.5[4]	
MW-11	Zinc	04/17/2008	32.7	ug/L		1.0	1050	
MW-11	Zinc (Dissolved)	04/17/2008	31	ug/L	B	1.0	1050	
MW-19	Zinc	04/17/2008	26.2	ug/L		1.0	1050	
MW-19	Zinc (Dissolved)	04/17/2008	15.3	ug/L	B	1.0	1050	
MW-1B	Zinc (Dissolved)	04/17/2008	16.6	ug/L	B	1.0	1050	
MW-1B	Zinc	04/17/2008	16.1	ug/L		1.0	1050	
MW-5	Zinc (Dissolved)	04/17/2008	2.6	ug/L	JB	1.0	1050	
MW-5	Zinc	04/17/2008	1.7	ug/L	J	1.0	1050	

[1] Table only contains detected constituents.

[2] PQL = Practical Quantitation Limit

[3] NCGW2L = North Carolina Ground Water 2L Standard

[4] Groundwater Protection Standard

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-5

Parameter: Barium, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 27.5862%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 29
Maximum Baseline Concentration = 3490
Confidence Level = 96.7%
False Positive Rate = 3.3%

Baseline Samples	Date	Result
	10/1/1994	3490
	1/31/1995	1980
	2/15/1995	1450
	3/7/1995	1820
	12/7/1995	ND<500
	5/6/1996	ND<500
	11/11/1996	1600
	6/24/1997	180
	12/3/1997	720
	6/4/1998	1800
	11/18/1998	2800
	5/13/1999	320
	12/6/1999	94
	5/17/2000	380
	12/11/2000	310
	6/13/2001	320
	12/27/2001	190
	6/13/2002	220
	1/2/2003	150
	6/24/2003	140
	12/12/2003	ND<500
	6/15/2004	ND<500
	12/29/2004	ND<500
	6/22/2005	ND<500
	1/12/2006	ND<500
	7/7/2006	ND<500
	12/14/2006	70.8
	6/27/2007	59
	12/19/2007	102

Date	Samples	Mean	Impacted
4/17/2008	2	103.05	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-11

Parameter: Barium, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 40%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 1000
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	12/11/2000	830
	6/12/2001	700
	12/27/2001	1000
	6/13/2002	530
	1/3/2003	120
	6/24/2003	150
	12/11/2003	ND<500
	6/15/2004	ND<500
	12/29/2004	ND<500
	6/22/2005	ND<500
	1/12/2006	ND<500
	7/7/2006	ND<500
	12/14/2006	107
	6/27/2007	104
	12/27/2007	304

Date	Samples	Mean	Impacted
4/17/2008	2	115.5	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-19

Parameter: Chromium, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 6.66667%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 20.3
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	1/8/2008	ND<2
	4/17/2008	20.3
	4/17/2008	11.4

Date	Samples	Mean	Impacted
4/17/2008	2	15.85	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-11

Parameter: Cobalt, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 340
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	12/11/2000	340
	6/12/2001	130
	12/27/2001	140
	6/13/2002	120
	1/3/2003	140
	6/24/2003	160
	12/11/2003	120
	6/15/2004	120
	12/29/2004	120
	6/22/2005	110
	1/12/2006	100
	7/7/2006	110
	12/14/2006	117
	6/27/2007	98.9
	12/27/2007	107

Date	Samples	Mean	Impacted
4/17/2008	2	109	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-1B

Parameter: Cobalt, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 120
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	6/25/2003	29
	12/11/2003	38
	6/16/2004	51
	12/30/2004	120
	6/23/2005	67
	1/13/2006	60
	7/6/2006	65.1
	12/15/2006	69.8
	6/28/2007	42.6
	12/28/2007	59.7
	4/17/2008	54.9
	4/17/2008	58

Date	Samples	Mean	Impacted
4/17/2008	2	56.45	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-5

Parameter: Cobalt, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 1400
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	10/1/1994	900
	1/31/1995	496
	2/15/1995	454
	3/7/1995	320
	12/7/1995	88
	5/6/1996	157
	11/11/1996	76
	6/24/1997	36
	12/3/1997	350
	6/4/1998	1400
	11/18/1998	850
	5/13/1999	81
	12/6/1999	16
	5/17/2000	64
	12/11/2000	71

Date	Samples	Mean	Impacted
4/17/2008	2	10.85	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-19

Parameter: Copper

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 22.3
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	1/8/2008	4.2
	4/17/2008	15.7
	4/17/2008	22.3

Date	Samples	Mean	Impacted
4/17/2008	2	19	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-19

Parameter: Zinc, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 0%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 26.2
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	1/8/2008	3.8
	4/17/2008	26.2
	4/17/2008	15.3

Date	Samples	Mean	Impacted
4/17/2008	2	20.75	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-11

Parameter: Zinc, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 26.6667%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 560
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	12/11/2000	560
	6/12/2001	410
	12/27/2001	250
	6/13/2002	190
	1/3/2003	62
	6/24/2003	93
	12/11/2003	70
	6/15/2004	98
	12/29/2004	ND<50
	6/22/2005	ND<50
	1/12/2006	ND<50
	7/7/2006	ND<50
	12/14/2006	32.5
	6/27/2007	40.7
	12/27/2007	246

Date	Samples	Mean	Impacted
4/17/2008	2	31.85	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-1B

Parameter: Zinc, total

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 33.3333%
Future Samples (k) = 1
Recent Dates = 1
Baseline Samples (n) = 15
Maximum Baseline Concentration = 150
Confidence Level = 93.8%
False Positive Rate = 6.2%

Baseline Samples	Date	Result
	6/25/2003	23
	12/11/2003	150
	6/16/2004	ND<50
	12/30/2004	ND<50
	6/23/2005	ND<50
	1/13/2006	ND<50
	7/6/2006	ND<50
	12/15/2006	15.1
	6/28/2007	28.9
	12/28/2007	22.5
	4/17/2008	16.1
	4/17/2008	16.6

Date	Samples	Mean	Impacted
4/17/2008	2	16.35	FALSE

Environmental Conservation Laboratories, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515

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Wednesday, April 30, 2008

Municipal Engineering Services (MU001)

Attn: Jonathan Pfohl

P.O. Box 97

Garner, NC 27529

RE: Laboratory Results for
Project Number: G07003.0, Project Name/Desc: Alexander Co. Closed C&D
ENCO Workorder: C804069

Dear Jonathan Pfohl,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, April 18, 2008.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 66.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: MW-16 MS/MSD **Lab ID:** C804069-01 **Sampled:** 04/17/08 11:30 **Received:** 04/18/08 11:30

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 376.2	04/24/08		04/21/08	14:08	4/21/2008	14:08
EPA 6010B	10/14/08		04/21/08	07:27	4/23/2008	11:37
EPA 6020	10/14/08		04/21/08	07:34	4/24/2008	14:38
EPA 7470A	05/15/08		04/22/08	09:33	4/23/2008	16:27
EPA 8081A	04/24/08	06/01/08	04/22/08	07:26	4/23/2008	13:40
EPA 8082	04/17/09	04/22/09	04/22/08	07:26	4/23/2008	13:40
EPA 8151A	04/24/08	06/01/08	04/22/08	11:14	4/25/2008	06:15
EPA 8260B	05/01/08		04/23/08	13:42	4/24/2008	04:09
EPA 8270C	04/24/08	05/31/08	04/21/08	17:30	4/23/2008	19:19
SM4500-Cl/E	05/15/08		04/23/08	11:03	4/23/2008	14:39

Client ID: MW-16 MS/MSD **Lab ID:** C804069-01RE1 **Sampled:** 04/17/08 11:30 **Received:** 04/18/08 11:30

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 9014	05/01/08		04/22/08	14:03	4/24/2008	10:58

Client ID: MW-24 **Lab ID:** C804069-02 **Sampled:** 04/17/08 08:30 **Received:** 04/18/08 11:30

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 376.2	04/24/08		04/21/08	14:08	4/21/2008	14:08
EPA 6010B	10/14/08		04/21/08	07:27	4/23/2008	12:00
EPA 6020	10/14/08		04/21/08	07:34	4/24/2008	14:52
EPA 7470A	05/15/08		04/22/08	09:33	4/23/2008	17:28
EPA 8081A	04/24/08	06/01/08	04/22/08	07:26	4/23/2008	15:15
EPA 8082	04/17/09	04/22/09	04/22/08	07:26	4/23/2008	15:15
EPA 8151A	04/24/08	06/01/08	04/22/08	11:14	4/25/2008	15:08
EPA 8260B	05/01/08		04/21/08	09:52	4/22/2008	14:12
EPA 8270C	04/24/08	05/31/08	04/21/08	17:30	4/23/2008	19:46

Client ID: MW-24 **Lab ID:** C804069-02RE1 **Sampled:** 04/17/08 08:30 **Received:** 04/18/08 11:30

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 9014	05/01/08		04/22/08	14:03	4/24/2008	11:04

Client ID: MW-26 **Lab ID:** C804069-03 **Sampled:** 04/17/08 10:00 **Received:** 04/18/08 11:30

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)	
EPA 376.2	04/24/08		04/21/08	14:08	4/21/2008	14:08
EPA 6010B	10/14/08		04/21/08	07:27	4/23/2008	12:07
EPA 6020	10/14/08		04/21/08	07:34	4/24/2008	14:55
EPA 7470A	05/15/08		04/22/08	09:33	4/23/2008	17:31
EPA 8081A	04/24/08	06/01/08	04/22/08	07:26	4/23/2008	15:40
EPA 8082	04/17/09	04/22/09	04/22/08	07:26	4/23/2008	15:40
EPA 8151A	04/24/08	06/01/08	04/22/08	11:14	4/25/2008	15:40
EPA 8260B	05/01/08		04/21/08	09:52	4/22/2008	14:41
EPA 8270C	04/24/08	05/31/08	04/21/08	17:30	4/23/2008	20:14

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Client ID:	MW-26	Lab ID:	C804069-03RE1	Sampled:	04/17/08 10:00	Received:	04/18/08 11:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 9014	05/01/08	04/22/08 14:03	4/24/2008 11:06

Client ID:	MW-11	Lab ID:	C804069-04	Sampled:	04/17/08 12:10	Received:	04/18/08 11:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	10/14/08	04/21/08 07:27	4/23/2008 12:14
EPA 6010B	10/14/08	04/24/08 07:14	4/28/2008 14:46
EPA 6020	10/14/08	04/21/08 07:34	4/24/2008 14:57
EPA 6020	10/14/08	04/24/08 07:17	4/28/2008 11:49

Client ID:	MW-5	Lab ID:	C804069-05	Sampled:	04/17/08 13:00	Received:	04/18/08 11:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	10/14/08	04/21/08 07:27	4/23/2008 12:21
EPA 6010B	10/14/08	04/24/08 07:14	4/28/2008 15:07
EPA 6020	10/14/08	04/21/08 07:34	4/24/2008 15:09
EPA 6020	10/14/08	04/24/08 07:17	4/28/2008 11:41

Client ID:	MW-1B	Lab ID:	C804069-06	Sampled:	04/17/08 13:40	Received:	04/18/08 11:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	10/14/08	04/21/08 07:27	4/23/2008 12:28
EPA 6010B	10/14/08	04/24/08 07:14	4/28/2008 15:30
EPA 6020	10/14/08	04/21/08 07:34	4/24/2008 15:11
EPA 6020	10/14/08	04/24/08 07:17	4/28/2008 11:52

Client ID:	MW-19	Lab ID:	C804069-07	Sampled:	04/17/08 14:40	Received:	04/18/08 11:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	10/14/08	04/21/08 07:27	4/23/2008 12:51
EPA 6010B	10/14/08	04/24/08 07:14	4/28/2008 15:37
EPA 6020	10/14/08	04/21/08 07:34	4/24/2008 15:14
EPA 6020	10/14/08	04/24/08 07:17	4/28/2008 11:54

Client ID:	TB	Lab ID:	C804069-10	Sampled:	04/17/08 00:00	Received:	04/18/08 11:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	05/01/08	04/22/08 12:57	4/22/2008 21:29

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: MW-16 MS/MSD **Lab ID: C804069-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	15		1	0.090	1.0	5	ug/L	EPA 8260B	
1,2-Dichloropropane	1.0		1	0.18	1.0	1	ug/L	EPA 8260B	
1,4-Dichlorobenzene	1.6		1	0.15	1.0	1	ug/L	EPA 8260B	
Barium	66.4	J	1	0.20	10.0	100	ug/L	EPA 6010B	
Benzene	3.6		1	0.12	1.0	1	ug/L	EPA 8260B	
Chloride	1700	J	1	480	5000	NE	ug/L	SM4500-Cl/E	
cis-1,2-Dichloroethene	12		1	0.14	1.0	5	ug/L	EPA 8260B	
Cobalt	13.3		1	2.0	10.0	10	ug/L	EPA 6010B	
Copper	4.00	J	1	0.60	10.0	10	ug/L	EPA 6010B	
Lead	2.4	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Mercury	0.41		1	0.11	0.20	0.2	ug/L	EPA 7470A	
Methylene chloride	3.8		1	0.088	1.0	1	ug/L	EPA 8260B	
Nickel	7.8	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Tetrachloroethene	3.3		1	0.25	1.0	1	ug/L	EPA 8260B	
Thallium	0.120	J	1	0.036	1.00	5.5	ug/L	EPA 6020	
Trichloroethene	3.6		1	0.23	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)	2.6	J	1	0.21	1.0	5	ug/L	EPA 8260B	
Zinc	14.7		1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID: MW-24 **Lab ID: C804069-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	1.2	J	1	0.090	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	2.5		1	0.15	1.0	1	ug/L	EPA 8260B	
Barium	90.6	J	1	0.20	10.0	100	ug/L	EPA 6010B	
Benzene	1.3		1	0.12	1.0	1	ug/L	EPA 8260B	
Chlorobenzene	0.58	J	1	0.16	1.0	3	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	7.2		1	0.14	1.0	5	ug/L	EPA 8260B	
Cobalt	38.1		1	2.0	10.0	10	ug/L	EPA 6010B	
Mercury	0.13	J	1	0.11	0.20	0.2	ug/L	EPA 7470A	
Nickel	4.5	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Zinc	12.3		1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID: MW-26 **Lab ID: C804069-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	1.6	J	1	0.090	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	3.2		1	0.15	1.0	1	ug/L	EPA 8260B	
Barium	105		1	0.20	10.0	100	ug/L	EPA 6010B	
Benzene	1.6		1	0.12	1.0	1	ug/L	EPA 8260B	
Chlorobenzene	0.81	J	1	0.16	1.0	3	ug/L	EPA 8260B	
Chloroethane	1.5	J	1	0.40	1.0	10	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	26		1	0.14	1.0	5	ug/L	EPA 8260B	
Cobalt	85.2		1	2.0	10.0	10	ug/L	EPA 6010B	
Lead	2.7	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Nickel	20.7	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Tetrachloroethene	0.48	J	1	0.25	1.0	1	ug/L	EPA 8260B	
Thallium	0.114	J	1	0.036	1.00	5.5	ug/L	EPA 6020	
Trichloroethene	0.43	J	1	0.23	1.0	1	ug/L	EPA 8260B	
Zinc	38.4		1	1.0	10.0	10	ug/L	EPA 6010B	

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Client ID:	MW-11					Lab ID:	C804069-04		
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium	115	B	1	0.20	10.0	100	ug/L	EPA 6010B	
Barium	116		1	0.20	10.0	100	ug/L	EPA 6010B	
Cobalt	113		1	2.0	10.0	10	ug/L	EPA 6010B	
Cobalt	105		1	2.0	10.0	10	ug/L	EPA 6010B	
Nickel	14.9	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Nickel	14.6	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Thallium	0.195	J	1	0.036	1.00	5.5	ug/L	EPA 6020	
Thallium	0.302	J	1	0.036	1.00	5.5	ug/L	EPA 6020	
Zinc	32.7		1	1.0	10.0	10	ug/L	EPA 6010B	
Zinc	31.0	B	1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID:	MW-5					Lab ID:	C804069-05		
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium	108		1	0.20	10.0	100	ug/L	EPA 6010B	
Barium	98.1	JB	1	0.20	10.0	100	ug/L	EPA 6010B	
Cobalt	12.4		1	2.0	10.0	10	ug/L	EPA 6010B	
Cobalt	9.3	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Lead	2.3	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Zinc	1.7	J	1	1.0	10.0	10	ug/L	EPA 6010B	
Zinc	2.6	JB	1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID:	MW-1B					Lab ID:	C804069-06		
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium	85.5	JB	1	0.20	10.0	100	ug/L	EPA 6010B	
Barium	89.6	J	1	0.20	10.0	100	ug/L	EPA 6010B	
Cobalt	54.9		1	2.0	10.0	10	ug/L	EPA 6010B	
Cobalt	58.0		1	2.0	10.0	10	ug/L	EPA 6010B	
Copper	1.00	J	1	0.60	10.0	10	ug/L	EPA 6010B	
Copper	1.40	J	1	0.60	10.0	10	ug/L	EPA 6010B	
Lead	2.3	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Nickel	6.8	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Nickel	7.8	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Thallium	0.121	J	1	0.036	1.00	5.5	ug/L	EPA 6020	
Thallium	0.060	J	1	0.036	1.00	5.5	ug/L	EPA 6020	
Zinc	16.6	B	1	1.0	10.0	10	ug/L	EPA 6010B	
Zinc	16.1		1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID:	MW-19					Lab ID:	C804069-07		
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium	67.2	JB	1	0.20	10.0	100	ug/L	EPA 6010B	
Barium	78.1	J	1	0.20	10.0	100	ug/L	EPA 6010B	
Chromium	20.3		1	2.0	10.0	10	ug/L	EPA 6010B	
Chromium	11.4		1	2.0	10.0	10	ug/L	EPA 6010B	
Cobalt	2.0	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Copper	15.7		1	0.60	10.0	10	ug/L	EPA 6010B	
Copper	22.3		1	0.60	10.0	10	ug/L	EPA 6010B	
Lead	4.8	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Lead	4.5	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Nickel	9.5	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Nickel	21.3	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Thallium	0.043	J	1	0.036	1.00	5.5	ug/L	EPA 6020	

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Client ID:	MW-19					Lab ID:	C804069-07		
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Thallium	0.073	J	1	0.036	1.00	5.5	ug/L	EPA 6020	
Vanadium	12.1	J	1	1.0	10.0	25	ug/L	EPA 6010B	
Vanadium	13.0	J	1	1.0	10.0	25	ug/L	EPA 6010B	
Zinc	15.3	B	1	1.0	10.0	10	ug/L	EPA 6010B	
Zinc	26.2		1	1.0	10.0	10	ug/L	EPA 6010B	

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ANALYTICAL RESULTS

Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	04/24/08 04:09	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
1,1-Dichloroethane [75-34-3] ^	**15**		ug/L	1	0.090	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
1,1-Dichloroethene [75-35-4] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
1,1-Dichloropropene [563-58-6] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
1,2,4-Trichlorobenzene [120-82-1] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/24/08 04:09	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	04/24/08 04:09	jkg	
1,2-Dibromoethane [106-93-4] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
1,2-Dichloroethane [107-06-2] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
1,2-Dichloropropane [78-87-5] ^	**1.0**		ug/L	1	0.18	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
1,3-Dichlorobenzene [541-73-1] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
1,3-Dichloropropane [142-28-9] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
1,4-Dichlorobenzene [106-46-7] ^	**1.6**		ug/L	1	0.15	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
2,2-Dichloropropane [594-20-7] ^	0.16	U	ug/L	1	0.16	1.0	15	EPA 8260B	04/24/08 04:09	jkg	
2-Butanone [78-93-3] ^	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	04/24/08 04:09	jkg	
2-Hexanone [591-78-6] ^	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	04/24/08 04:09	jkg	
3-Chloropropene [107-05-1] ^	0.20	U	ug/L	1	0.20	1.0	10	EPA 8260B	04/24/08 04:09	jkg	
4-Methyl-2-pentanone [108-10-1] ^	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	04/24/08 04:09	jkg	
Acetone [67-64-1] ^	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	04/24/08 04:09	jkg	
Acetonitrile [75-05-8] ^	1.8	U	ug/L	1	1.8	10	55	EPA 8260B	04/24/08 04:09	jkg	
Acrolein [107-02-8] ^	2.1	U	ug/L	1	2.1	10	53	EPA 8260B	04/24/08 04:09	jkg	
Acrylonitrile [107-13-1] ^	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	04/24/08 04:09	jkg	
Benzene [71-43-2] ^	**3.6**		ug/L	1	0.12	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Bromochloromethane [74-97-5] ^	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	04/24/08 04:09	jkg	
Bromodichloromethane [75-27-4] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Bromoform [75-25-2] ^	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	04/24/08 04:09	jkg	
Bromomethane [74-83-9] ^	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	04/24/08 04:09	jkg	
Carbon disulfide [75-15-0] ^	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	04/24/08 04:09	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Chlorobenzene [108-90-7] ^	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	04/24/08 04:09	jkg	
Chloroethane [75-00-3] ^	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	04/24/08 04:09	jkg	
Chloroform [67-66-3] ^	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
Chloromethane [74-87-3] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Chloroprene [126-99-8] ^	0.19	U	ug/L	1	0.19	1.0	20	EPA 8260B	04/24/08 04:09	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	**12**		ug/L	1	0.14	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Dibromochloromethane [124-48-1] ^	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	04/24/08 04:09	jkg	
Dibromomethane [74-95-3] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/24/08 04:09	jkg	
Dichlorodifluoromethane [75-71-8] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/24/08 04:09	jkg	

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Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Ethyl Methacrylate [97-63-2] ^	0.17	U	ug/L	1	0.17	2.0	10	EPA 8260B	04/24/08 04:09	jkg	
Ethylbenzene [100-41-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Hexachlorobutadiene [87-68-3] ^	0.33	U	ug/L	1	0.33	1.0	10	EPA 8260B	04/24/08 04:09	jkg	
Iodomethane [74-88-4] ^	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	04/24/08 04:09	jkg	
Isobutyl alcohol [78-83-1] ^	8.4	U	ug/L	1	8.4	20	100	EPA 8260B	04/24/08 04:09	jkg	
Methacrylonitrile [126-98-7] ^	0.69	U	ug/L	1	0.69	10	100	EPA 8260B	04/24/08 04:09	jkg	
Methyl Methacrylate [80-62-6] ^	0.38	U	ug/L	1	0.38	1.0	30	EPA 8260B	04/24/08 04:09	jkg	
Methylene chloride [75-09-2] ^	**3.8**		ug/L	1	0.088	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Naphthalene [91-20-3] ^	0.25	U	ug/L	1	0.25	1.0	10	EPA 8260B	04/24/08 04:09	jkg	
Propionitrile [107-12-0] ^	1.6	U	ug/L	1	1.6	10	150	EPA 8260B	04/24/08 04:09	jkg	
Styrene [100-42-5] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Tetrachloroethene [127-18-4] ^	**3.3**		ug/L	1	0.25	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Toluene [108-88-3] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	04/24/08 04:09	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	04/24/08 04:09	jkg	
Trichloroethene [79-01-6] ^	**3.6**		ug/L	1	0.23	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Trichlorofluoromethane [75-69-4] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Vinyl acetate [108-05-4] ^	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	04/24/08 04:09	jkg	
Vinyl chloride [75-01-4] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/24/08 04:09	jkg	
Xylenes (Total) [1330-20-7]	**2.6**	J	ug/L	1	0.21	1.0	5	EPA 8260B	04/24/08 04:09	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*77 %*	*69-120*	*8D23026*	*EPA 8260B*	*04/24/08 04:09*	*jkg*	
Dibromofluoromethane	*40*	*1*	*50.0*	*81 %*	*61-120*	*8D23026*	*EPA 8260B*	*04/24/08 04:09*	*jkg*	
Toluene-d8	*42*	*1*	*50.0*	*85 %*	*75-99*	*8D23026*	*EPA 8260B*	*04/24/08 04:09*	*jkg*	

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Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,2,4,5-Tetrachlorobenzene [95-94-3] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270C	04/23/08 19:19	DFM	
1,3,5-Trinitrobenzene [99-35-4] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 19:19	DFM	
1,3-Dinitrobenzene [99-65-0] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:19	DFM	
1,4-Naphthoquinone [130-15-4] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
1,4-Phenylenediamine [106-50-3] ^	4.0	U	ug/L	1	4.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
1-Naphthylamine [134-32-7] ^	2.5	U	ug/L	1	2.5	10	10	EPA 8270C	04/23/08 19:19	DFM	
2,3,4,6-Tetrachlorophenol [58-90-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
2,4,5-Trichlorophenol [95-95-4] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
2,4,6-Trichlorophenol [88-06-2] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 19:19	DFM	
2,4-Dichlorophenol [120-83-2] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270C	04/23/08 19:19	DFM	
2,4-Dimethylphenol [105-67-9] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
2,4-Dinitrophenol [51-28-5] ^	1.7	U	ug/L	1	1.7	10	50	EPA 8270C	04/23/08 19:19	DFM	
2,4-Dinitrotoluene [121-14-2] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:19	DFM	
2,6-Dichlorophenol [87-65-0] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270C	04/23/08 19:19	DFM	
2,6-Dinitrotoluene [606-20-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
2-Acetylaminofluorene [53-96-3] ^	1.3	U	ug/L	1	1.3	10	20	EPA 8270C	04/23/08 19:19	DFM	
2-Chloronaphthalene [91-58-7] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270C	04/23/08 19:19	DFM	
2-Chlorophenol [95-57-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
2-Methyl-4,6-dinitrophenol [534-52-1] ^	1.4	U	ug/L	1	1.4	10	50	EPA 8270C	04/23/08 19:19	DFM	
2-Methylnaphthalene [91-57-6] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
2-Methylphenol [95-48-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
2-Naphthylamine [91-59-8] ^	4.0	U	ug/L	1	4.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
2-Nitroaniline [88-74-4] ^	1.2	U	ug/L	1	1.2	10	50	EPA 8270C	04/23/08 19:19	DFM	
2-Nitrophenol [88-75-5] ^	1.8	U	ug/L	1	1.8	10	10	EPA 8270C	04/23/08 19:19	DFM	
3 & 4-Methylphenol	1.9	U	ug/L	1	1.9	20	10	EPA 8270C	04/23/08 19:19	DFM	
3,3'-Dichlorobenzidine [91-94-1] ^	1.8	U	ug/L	1	1.8	10	20	EPA 8270C	04/23/08 19:19	DFM	
3,3'-Dimethylbenzidine [119-93-7] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
3-Methylcholanthrene [56-49-5] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:19	DFM	
3-Nitroaniline [99-09-2] ^	1.6	U	ug/L	1	1.6	10	50	EPA 8270C	04/23/08 19:19	DFM	
4-Aminobiphenyl [92-67-1] ^	3.1	U	ug/L	1	3.1	10	20	EPA 8270C	04/23/08 19:19	DFM	
4-Bromophenyl-phenylether [101-55-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:19	DFM	
4-Chloro-3-methylphenol [59-50-7] ^	1.4	U	ug/L	1	1.4	10	20	EPA 8270C	04/23/08 19:19	DFM	
4-Chloroaniline [106-47-8] ^	1.6	U	ug/L	1	1.6	10	20	EPA 8270C	04/23/08 19:19	DFM	
4-Chlorophenyl-phenylether [7005-72-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:19	DFM	
4-Nitroaniline [100-01-6] ^	1.4	U	ug/L	1	1.4	10	20	EPA 8270C	04/23/08 19:19	DFM	
4-Nitrophenol [100-02-7] ^	1.2	U	ug/L	1	1.2	10	50	EPA 8270C	04/23/08 19:19	DFM	
5-Nitro-o-toluidine [99-55-8] ^	0.60	U	ug/L	1	0.60	10	10	EPA 8270C	04/23/08 19:19	DFM	
7,12-Dimethylbenz(a)anthracene [57-97-6] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
Acenaphthene [83-32-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Acenaphthylene [208-96-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Acetophenone [98-86-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Anthracene [120-12-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Benzo(a)anthracene [56-55-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Benzo(a)pyrene [50-32-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Benzo(b)fluoranthene [205-99-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	

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Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Benzo(g,h,i)perylene [191-24-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Benzo(k)fluoranthene [207-08-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Benzyl alcohol [100-51-6] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:19	DFM	
Bis(2-chloroethoxy)methane [111-91-1] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Bis(2-chloroethyl)ether [111-44-4] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
Bis(2-chloroisopropyl)ether [108-60-1] ^	2.2	U	ug/L	1	2.2	10	10	EPA 8270C	04/23/08 19:19	DFM	
Bis(2-ethylhexyl)phthalate [117-81-7] ^	1.9	U	ug/L	1	1.9	10	15	EPA 8270C	04/23/08 19:19	DFM	
Butylbenzylphthalate [85-68-7] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 19:19	DFM	
Chlorobenzilate [510-15-6] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
Chrysene [218-01-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Diallate [2303-16-4] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:19	DFM	
Dibenzo(a,h)anthracene [53-70-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Dibenzofuran [132-64-9] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:19	DFM	
Diethylphthalate [84-66-2] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:19	DFM	
Dimethoate [60-51-5] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:19	DFM	
Dimethylphthalate [131-11-3] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
Di-n-butylphthalate [84-74-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Di-n-octylphthalate [117-84-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Disulfoton [298-04-4] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Ethyl methanesulfonate [62-50-0] ^	1.1	U	ug/L	1	1.1	10	20	EPA 8270C	04/23/08 19:19	DFM	
Famphur [52-85-7] ^	1.8	U	ug/L	1	1.8	10	20	EPA 8270C	04/23/08 19:19	DFM	
Fluoranthene [206-44-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Fluorene [86-73-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Hexachlorobenzene [118-74-1] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
Hexachlorobutadiene [87-68-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Hexachlorocyclopentadiene [77-47-4] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Hexachloroethane [67-72-1] ^	2.4	U	ug/L	1	2.4	10	10	EPA 8270C	04/23/08 19:19	DFM	
Hexachloropropene [1888-71-7] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
Indeno(1,2,3-cd)pyrene [193-39-5] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Isodrin [465-73-6] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:19	DFM	
Isophorone [78-59-1] ^	1.8	U	ug/L	1	1.8	10	10	EPA 8270C	04/23/08 19:19	DFM	
Isosafrole [120-58-1] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:19	DFM	
Kepone [143-50-0] ^	1.5	U	ug/L	1	1.5	20	20	EPA 8270C	04/23/08 19:19	DFM	
Methapyrilene [91-80-5] ^	3.8	U	ug/L	1	3.8	10	100	EPA 8270C	04/23/08 19:19	DFM	
Methyl Methanesulfonate [66-27-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Methyl parathion [298-00-0] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:19	DFM	
Nitrobenzene [98-95-3] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:19	DFM	
N-Nitrosodiethylamine [55-18-5] ^	1.9	U	ug/L	1	1.9	10	20	EPA 8270C	04/23/08 19:19	DFM	
N-Nitrosodimethylamine [62-75-9] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:19	DFM	
N-Nitrosodi-n-butylamine [924-16-3] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
N-Nitroso-di-n-propylamine [621-64-7] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
N-Nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4]	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
N-Nitrosomethylethylamine [10595-95-6] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:19	DFM	
N-Nitrosopiperidine [100-75-4] ^	1.5	U	ug/L	1	1.5	10	20	EPA 8270C	04/23/08 19:19	DFM	
N-Nitrosopyrrolidine [930-55-2] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:19	DFM	

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Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
O,O,O-Triethyl phosphorothioate [126-68-1] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
o-Toluidine [95-53-4] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270C	04/23/08 19:19	DFM	
Parathion [56-38-2] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:19	DFM	
p-Dimethylaminoazobenzene [60-11-7] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:19	DFM	
Pentachlorobenzene [608-93-5] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:19	DFM	
Pentachloronitrobenzene [82-68-8] ^	1.1	U	ug/L	1	1.1	10	20	EPA 8270C	04/23/08 19:19	DFM	
Phenacetin [62-44-2] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:19	DFM	
Phenanthrene [85-01-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Phenol [108-95-2] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270C	04/23/08 19:19	DFM	
Phorate [298-02-2] ^	4.1	U	ug/L	1	4.1	10	10	EPA 8270C	04/23/08 19:19	DFM	
Pronamide [23950-58-5] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Pyrene [129-00-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:19	DFM	
Safrole [94-59-7] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:19	DFM	
Thionazin [297-97-2] ^	1.2	U	ug/L	1	1.2	10	20	EPA 8270C	04/23/08 19:19	DFM	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,6-Tribromophenol	*75*	*1*	*100*	*75 %*	*40-124*	*8D21028*	*EPA 8270C*	*04/23/08 19:19*	*DFM*	
2-Fluorobiphenyl	*37*	*1*	*50.0*	*74 %*	*36-100*	*8D21028*	*EPA 8270C*	*04/23/08 19:19*	*DFM*	
2-Fluorophenol	*50*	*1*	*100*	*50 %*	*38-71*	*8D21028*	*EPA 8270C*	*04/23/08 19:19*	*DFM*	
Nitrobenzene-d5	*38*	*1*	*50.0*	*77 %*	*45-92*	*8D21028*	*EPA 8270C*	*04/23/08 19:19*	*DFM*	
Phenol-d5	*34*	*1*	*100*	*34 %*	*30-56*	*8D21028*	*EPA 8270C*	*04/23/08 19:19*	*DFM*	
Terphenyl-d14	*39*	*1*	*50.0*	*78 %*	*50-139*	*8D21028*	*EPA 8270C*	*04/23/08 19:19*	*DFM*	

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Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Organochlorine Pesticides by GC

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
4,4'-DDD [72-54-8] ^	0.63	U	ug/L	1	0.63	1.7	0.1	EPA 8081A	04/23/08 13:40	JHH	
4,4'-DDE [72-55-9] ^	0.93	U	ug/L	1	0.93	1.7	0.1	EPA 8081A	04/23/08 13:40	JHH	
4,4'-DDT [50-29-3] ^	0.52	U	ug/L	1	0.52	1.7	0.1	EPA 8081A	04/23/08 13:40	JHH	
Aldrin [309-00-2] ^	0.53	U	ug/L	1	0.53	1.7	0.05	EPA 8081A	04/23/08 13:40	JHH	
alpha-BHC [319-84-6] ^	0.45	U	ug/L	1	0.45	1.7	0.05	EPA 8081A	04/23/08 13:40	JHH	
beta-BHC [319-85-7] ^	0.49	U	ug/L	1	0.49	1.7	0.05	EPA 8081A	04/23/08 13:40	JHH	
Chlordane (tech) [12789-03-6] ^	1.1	U	ug/L	1	1.1	17	0.5	EPA 8081A	04/23/08 13:40	JHH	
Chlordane-alpha [5103-71-9] ^	0.58	U	ug/L	1	0.58	1.7	NE	EPA 8081A	04/23/08 13:40	JHH	
Chlordane-gamma [NA] ^	0.56	U	ug/L	1	0.56	1.7	NE	EPA 8081A	04/23/08 13:40	JHH	
delta-BHC [319-86-8] ^	0.38	U	ug/L	1	0.38	1.7	0.05	EPA 8081A	04/23/08 13:40	JHH	
Dieldrin [60-57-1] ^	0.58	U	ug/L	1	0.58	1.7	0.075	EPA 8081A	04/23/08 13:40	JHH	
Endosulfan I [959-98-8] ^	0.69	U	ug/L	1	0.69	1.7	0.1	EPA 8081A	04/23/08 13:40	JHH	
Endosulfan II [33213-65-9] ^	0.63	U	ug/L	1	0.63	1.7	0.1	EPA 8081A	04/23/08 13:40	JHH	
Endosulfan sulfate [1031-07-8] ^	0.54	U	ug/L	1	0.54	1.7	0.1	EPA 8081A	04/23/08 13:40	JHH	
Endrin [72-20-8] ^	0.50	U	ug/L	1	0.50	1.7	0.1	EPA 8081A	04/23/08 13:40	JHH	
Endrin aldehyde [7421-93-4] ^	0.83	U	ug/L	1	0.83	1.7	0.1	EPA 8081A	04/23/08 13:40	JHH	
gamma-BHC [58-89-9] ^	0.67	U	ug/L	1	0.67	1.7	0.05	EPA 8081A	04/23/08 13:40	JHH	
Heptachlor [76-44-8] ^	0.68	U	ug/L	1	0.68	1.7	0.05	EPA 8081A	04/23/08 13:40	JHH	
Heptachlor epoxide [1024-57-3] ^	0.57	U	ug/L	1	0.57	1.7	0.075	EPA 8081A	04/23/08 13:40	JHH	
Methoxychlor [72-43-5] ^	0.92	U	ug/L	1	0.92	1.7	1	EPA 8081A	04/23/08 13:40	JHH	
Toxaphene [8001-35-2] ^	10	U	ug/L	1	10	33	1.5	EPA 8081A	04/23/08 13:40	JHH	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,5,6-TCMX	*0.83*	*1*	*1.00*	*83 %*	*39-151*	*8D22002*	*EPA 8081A*	*04/23/08 13:40*	*JHH*	
Decachlorobiphenyl	*0.92*	*1*	*1.00*	*92 %*	*70-130*	*8D22002*	*EPA 8081A*	*04/23/08 13:40*	*JHH*	

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Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Polychlorinated Biphenyls by GC

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
PCB-1016/1242 [12674-11-2/53469-21-9] ^	0.19	U	ug/L	1	0.19	1.0	2	EPA 8082	04/23/08 13:40	JHH	
PCB-1221 [11104-28-2] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 13:40	JHH	
PCB-1232 [11141-16-5] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 13:40	JHH	
PCB-1248 [12672-29-6] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 13:40	JHH	
PCB-1254 [11097-69-1] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 13:40	JHH	
PCB-1260 [11096-82-5] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 13:40	JHH	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,5,6-TCMX	*0.83*	*1*	*1.00*	*83 %*	*39-151*	*8D22002*	*EPA 8082*	*04/23/08 13:40*	*JHH*	
Decachlorobiphenyl	*0.92*	*1*	*1.00*	*92 %*	*70-130*	*8D22002*	*EPA 8082*	*04/23/08 13:40*	*JHH*	

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Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/24/08 14:38	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 11:37	VLO	
Barium [7440-39-3] ^	**66.4**	J	ug/L	1	0.20	10.0	100	EPA 6010B	04/23/08 11:37	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/23/08 11:37	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/23/08 11:37	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 11:37	VLO	
Cobalt [7440-48-4] ^	**13.3**		ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 11:37	VLO	
Copper [7440-50-8] ^	**4.00**	J	ug/L	1	0.60	10.0	10	EPA 6010B	04/23/08 11:37	VLO	
Lead [7439-92-1] ^	**2.4**	J	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 11:37	VLO	
Mercury [7439-97-6] ^	**0.41**		ug/L	1	0.11	0.20	0.2	EPA 7470A	04/23/08 16:27	MPL	
Nickel [7440-02-0] ^	**7.8**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/23/08 11:37	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 11:37	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 11:37	VLO	
Thallium [7440-28-0] ^	**0.120**	J	ug/L	1	0.036	1.00	5.5	EPA 6020	04/24/08 14:38	JDH	
Tin [7440-31-5] ^	2.0	U	ug/L	1	2.0	10.0	100	EPA 6010B	04/23/08 11:37	VLO	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/23/08 11:37	VLO	
Zinc [7440-66-6] ^	**14.7**		ug/L	1	1.0	10.0	10	EPA 6010B	04/23/08 11:37	VLO	

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Description: MW-16 MS/MSD
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-01
Sampled: 04/17/08 11:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] ^	**1700**	J	ug/L	1	480	5000	NE	SM4500-Cl/E	04/23/08 14:39	PEV	
Cyanide (total) [57-12-5] ^	4.0	U	ug/L	1	4.0	5.0	10	EPA 9014	04/24/08 10:58	PEV	
Sulfide [18496-25-8]	0.10	U	mg/L	1	0.10	0.10	1	EPA 376.2	04/21/08 14:08	AJ	

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Description:	MW-16 MS/MSD	**Lab Sample ID:**	C804069-01	**Received:**	04/18/08 11:30
Matrix:	Ground Water	**Sampled:**	04/17/08 11:30	**Work Order:**	C804069
Project:	Alexander Co. Closed C&D	**Sampled By:**	Client		

Chlorinated Herbicides by GC

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.13	U	ug/L	1	0.13	0.50	2	EPA 8151A	04/25/08 06:15	RC	
2,4,5-TP (Silvex) [93-72-1] ^	0.12	U	ug/L	1	0.12	0.50	2	EPA 8151A	04/25/08 06:15	RC	
2,4-D [94-75-7] ^	0.21	U	ug/L	1	0.21	0.50	2	EPA 8151A	04/25/08 06:15	RC	
Dinoseb [88-85-7] ^	0.42	U	ug/L	1	0.42	0.50	1	EPA 8151A	04/25/08 06:15	RC	
Pentachlorophenol [87-86-5] ^	0.064	U	ug/L	1	0.064	0.50	25	EPA 8151A	04/25/08 06:15	RC	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4-DCAA	*2.1*	*1*	*2.00*	*107 %*	*77-191*	*8D22005*	*EPA 8151A*	*04/25/08 06:15*	*RC*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: MW-24
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-02
Sampled: 04/17/08 08:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	04/22/08 14:12	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
1,1-Dichloroethane [75-34-3] ^	**1.2**	J	ug/L	1	0.090	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
1,1-Dichloroethene [75-35-4] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
1,1-Dichloropropene [563-58-6] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
1,2,4-Trichlorobenzene [120-82-1] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/22/08 14:12	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	04/22/08 14:12	jkg	
1,2-Dibromoethane [106-93-4] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
1,2-Dichloroethane [107-06-2] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
1,2-Dichloropropane [78-87-5] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
1,3-Dichlorobenzene [541-73-1] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
1,3-Dichloropropane [142-28-9] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
1,4-Dichlorobenzene [106-46-7] ^	**2.5**		ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
2,2-Dichloropropane [594-20-7] ^	0.16	U	ug/L	1	0.16	1.0	15	EPA 8260B	04/22/08 14:12	jkg	
2-Butanone [78-93-3] ^	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	04/22/08 14:12	jkg	
2-Hexanone [591-78-6] ^	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	04/22/08 14:12	jkg	
3-Chloropropene [107-05-1] ^	0.20	U	ug/L	1	0.20	1.0	10	EPA 8260B	04/22/08 14:12	jkg	
4-Methyl-2-pentanone [108-10-1] ^	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	04/22/08 14:12	jkg	
Acetone [67-64-1] ^	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	04/22/08 14:12	jkg	
Acetonitrile [75-05-8] ^	1.8	U	ug/L	1	1.8	10	55	EPA 8260B	04/22/08 14:12	jkg	
Acrolein [107-02-8] ^	2.1	U	ug/L	1	2.1	10	53	EPA 8260B	04/22/08 14:12	jkg	
Acrylonitrile [107-13-1] ^	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	04/22/08 14:12	jkg	
Benzene [71-43-2] ^	**1.3**		ug/L	1	0.12	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Bromochloromethane [74-97-5] ^	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	04/22/08 14:12	jkg	
Bromodichloromethane [75-27-4] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Bromoform [75-25-2] ^	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	04/22/08 14:12	jkg	
Bromomethane [74-83-9] ^	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	04/22/08 14:12	jkg	
Carbon disulfide [75-15-0] ^	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	04/22/08 14:12	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Chlorobenzene [108-90-7] ^	**0.58**	J	ug/L	1	0.16	1.0	3	EPA 8260B	04/22/08 14:12	jkg	
Chloroethane [75-00-3] ^	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	04/22/08 14:12	jkg	
Chloroform [67-66-3] ^	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
Chloromethane [74-87-3] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Chloroprene [126-99-8] ^	0.19	U	ug/L	1	0.19	1.0	20	EPA 8260B	04/22/08 14:12	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	**7.2**		ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Dibromochloromethane [124-48-1] ^	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	04/22/08 14:12	jkg	
Dibromomethane [74-95-3] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/22/08 14:12	jkg	
Dichlorodifluoromethane [75-71-8] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
Ethyl Methacrylate [97-63-2] ^	0.17	U	ug/L	1	0.17	2.0	10	EPA 8260B	04/22/08 14:12	jkg	
Ethylbenzene [100-41-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Hexachlorobutadiene [87-68-3] ^	0.33	U	ug/L	1	0.33	1.0	10	EPA 8260B	04/22/08 14:12	jkg	

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Description: MW-24
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-02
Sampled: 04/17/08 08:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Iodomethane [74-88-4] ^	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	04/22/08 14:12	jkg	
Isobutyl alcohol [78-83-1] ^	8.4	U	ug/L	1	8.4	20	100	EPA 8260B	04/22/08 14:12	jkg	
Methacrylonitrile [126-98-7] ^	0.69	U	ug/L	1	0.69	10	100	EPA 8260B	04/22/08 14:12	jkg	
Methyl Methacrylate [80-62-6] ^	0.38	U	ug/L	1	0.38	1.0	30	EPA 8260B	04/22/08 14:12	jkg	
Methylene chloride [75-09-2] ^	0.088	U	ug/L	1	0.088	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Naphthalene [91-20-3] ^	0.25	U	ug/L	1	0.25	1.0	10	EPA 8260B	04/22/08 14:12	jkg	
Propionitrile [107-12-0] ^	1.6	U	ug/L	1	1.6	10	150	EPA 8260B	04/22/08 14:12	jkg	
Styrene [100-42-5] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Tetrachloroethene [127-18-4] ^	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Toluene [108-88-3] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	04/22/08 14:12	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	04/22/08 14:12	jkg	
Trichloroethene [79-01-6] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Trichlorofluoromethane [75-69-4] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Vinyl acetate [108-05-4] ^	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	04/22/08 14:12	jkg	
Vinyl chloride [75-01-4] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 14:12	jkg	
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/22/08 14:12	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*69-120*	*8D22009*	*EPA 8260B*	*04/22/08 14:12*	*jkg*	
Dibromofluoromethane	*43*	*1*	*50.0*	*87 %*	*61-120*	*8D22009*	*EPA 8260B*	*04/22/08 14:12*	*jkg*	
Toluene-d8	*40*	*1*	*50.0*	*81 %*	*75-99*	*8D22009*	*EPA 8260B*	*04/22/08 14:12*	*jkg*	

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Description: MW-24
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-02
Sampled: 04/17/08 08:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,2,4,5-Tetrachlorobenzene [95-94-3] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270C	04/23/08 19:46	DFM	
1,3,5-Trinitrobenzene [99-35-4] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 19:46	DFM	
1,3-Dinitrobenzene [99-65-0] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:46	DFM	
1,4-Naphthoquinone [130-15-4] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
1,4-Phenylenediamine [106-50-3] ^	4.0	U	ug/L	1	4.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
1-Naphthylamine [134-32-7] ^	2.5	U	ug/L	1	2.5	10	10	EPA 8270C	04/23/08 19:46	DFM	
2,3,4,6-Tetrachlorophenol [58-90-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
2,4,5-Trichlorophenol [95-95-4] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
2,4,6-Trichlorophenol [88-06-2] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 19:46	DFM	
2,4-Dichlorophenol [120-83-2] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270C	04/23/08 19:46	DFM	
2,4-Dimethylphenol [105-67-9] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
2,4-Dinitrophenol [51-28-5] ^	1.7	U	ug/L	1	1.7	10	50	EPA 8270C	04/23/08 19:46	DFM	
2,4-Dinitrotoluene [121-14-2] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:46	DFM	
2,6-Dichlorophenol [87-65-0] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270C	04/23/08 19:46	DFM	
2,6-Dinitrotoluene [606-20-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
2-Acetylaminofluorene [53-96-3] ^	1.3	U	ug/L	1	1.3	10	20	EPA 8270C	04/23/08 19:46	DFM	
2-Chloronaphthalene [91-58-7] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270C	04/23/08 19:46	DFM	
2-Chlorophenol [95-57-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
2-Methyl-4,6-dinitrophenol [534-52-1] ^	1.4	U	ug/L	1	1.4	10	50	EPA 8270C	04/23/08 19:46	DFM	
2-Methylnaphthalene [91-57-6] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
2-Methylphenol [95-48-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
2-Naphthylamine [91-59-8] ^	4.0	U	ug/L	1	4.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
2-Nitroaniline [88-74-4] ^	1.2	U	ug/L	1	1.2	10	50	EPA 8270C	04/23/08 19:46	DFM	
2-Nitrophenol [88-75-5] ^	1.8	U	ug/L	1	1.8	10	10	EPA 8270C	04/23/08 19:46	DFM	
3 & 4-Methylphenol	1.9	U	ug/L	1	1.9	20	10	EPA 8270C	04/23/08 19:46	DFM	
3,3'-Dichlorobenzidine [91-94-1] ^	1.8	U	ug/L	1	1.8	10	20	EPA 8270C	04/23/08 19:46	DFM	
3,3'-Dimethylbenzidine [119-93-7] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
3-Methylcholanthrene [56-49-5] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:46	DFM	
3-Nitroaniline [99-09-2] ^	1.6	U	ug/L	1	1.6	10	50	EPA 8270C	04/23/08 19:46	DFM	
4-Aminobiphenyl [92-67-1] ^	3.1	U	ug/L	1	3.1	10	20	EPA 8270C	04/23/08 19:46	DFM	
4-Bromophenyl-phenylether [101-55-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:46	DFM	
4-Chloro-3-methylphenol [59-50-7] ^	1.4	U	ug/L	1	1.4	10	20	EPA 8270C	04/23/08 19:46	DFM	
4-Chloroaniline [106-47-8] ^	1.6	U	ug/L	1	1.6	10	20	EPA 8270C	04/23/08 19:46	DFM	
4-Chlorophenyl-phenylether [7005-72-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:46	DFM	
4-Nitroaniline [100-01-6] ^	1.4	U	ug/L	1	1.4	10	20	EPA 8270C	04/23/08 19:46	DFM	
4-Nitrophenol [100-02-7] ^	1.2	U	ug/L	1	1.2	10	50	EPA 8270C	04/23/08 19:46	DFM	
5-Nitro-o-toluidine [99-55-8] ^	0.60	U	ug/L	1	0.60	10	10	EPA 8270C	04/23/08 19:46	DFM	
7,12-Dimethylbenz(a)anthracene [57-97-6] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
Acenaphthene [83-32-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Acenaphthylene [208-96-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Acetophenone [98-86-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Anthracene [120-12-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Benzo(a)anthracene [56-55-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Benzo(a)pyrene [50-32-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Benzo(b)fluoranthene [205-99-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	

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Description: MW-24
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-02
Sampled: 04/17/08 08:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Benzo(g,h,i)perylene [191-24-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Benzo(k)fluoranthene [207-08-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Benzyl alcohol [100-51-6] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:46	DFM	
Bis(2-chloroethoxy)methane [111-91-1] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Bis(2-chloroethyl)ether [111-44-4] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
Bis(2-chloroisopropyl)ether [108-60-1] ^	2.2	U	ug/L	1	2.2	10	10	EPA 8270C	04/23/08 19:46	DFM	
Bis(2-ethylhexyl)phthalate [117-81-7] ^	1.9	U	ug/L	1	1.9	10	15	EPA 8270C	04/23/08 19:46	DFM	
Butylbenzylphthalate [85-68-7] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 19:46	DFM	
Chlorobenzilate [510-15-6] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
Chrysene [218-01-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Diallate [2303-16-4] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:46	DFM	
Dibenzo(a,h)anthracene [53-70-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Dibenzofuran [132-64-9] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:46	DFM	
Diethylphthalate [84-66-2] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:46	DFM	
Dimethoate [60-51-5] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:46	DFM	
Dimethylphthalate [131-11-3] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
Di-n-butylphthalate [84-74-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Di-n-octylphthalate [117-84-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Disulfoton [298-04-4] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Ethyl methanesulfonate [62-50-0] ^	1.1	U	ug/L	1	1.1	10	20	EPA 8270C	04/23/08 19:46	DFM	
Famphur [52-85-7] ^	1.8	U	ug/L	1	1.8	10	20	EPA 8270C	04/23/08 19:46	DFM	
Fluoranthene [206-44-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Fluorene [86-73-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Hexachlorobenzene [118-74-1] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
Hexachlorobutadiene [87-68-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Hexachlorocyclopentadiene [77-47-4] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Hexachloroethane [67-72-1] ^	2.4	U	ug/L	1	2.4	10	10	EPA 8270C	04/23/08 19:46	DFM	
Hexachloropropene [1888-71-7] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
Indeno(1,2,3-cd)pyrene [193-39-5] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Isodrin [465-73-6] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:46	DFM	
Isophorone [78-59-1] ^	1.8	U	ug/L	1	1.8	10	10	EPA 8270C	04/23/08 19:46	DFM	
Isosafrole [120-58-1] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 19:46	DFM	
Kepone [143-50-0] ^	1.5	U	ug/L	1	1.5	20	20	EPA 8270C	04/23/08 19:46	DFM	
Methapyrilene [91-80-5] ^	3.8	U	ug/L	1	3.8	10	100	EPA 8270C	04/23/08 19:46	DFM	
Methyl Methanesulfonate [66-27-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Methyl parathion [298-00-0] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:46	DFM	
Nitrobenzene [98-95-3] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:46	DFM	
N-Nitrosodiethylamine [55-18-5] ^	1.9	U	ug/L	1	1.9	10	20	EPA 8270C	04/23/08 19:46	DFM	
N-Nitrosodimethylamine [62-75-9] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:46	DFM	
N-Nitrosodi-n-butylamine [924-16-3] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
N-Nitroso-di-n-propylamine [621-64-7] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
N-Nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4]	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
N-Nitrosomethylethylamine [10595-95-6] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:46	DFM	
N-Nitrosopiperidine [100-75-4] ^	1.5	U	ug/L	1	1.5	10	20	EPA 8270C	04/23/08 19:46	DFM	
N-Nitrosopyrrolidine [930-55-2] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:46	DFM	

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Description: MW-24
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-02
Sampled: 04/17/08 08:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
O,O,O-Triethyl phosphorothioate [126-68-1] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
o-Toluidine [95-53-4] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270C	04/23/08 19:46	DFM	
Parathion [56-38-2] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:46	DFM	
p-Dimethylaminoazobenzene [60-11-7] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:46	DFM	
Pentachlorobenzene [608-93-5] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 19:46	DFM	
Pentachloronitrobenzene [82-68-8] ^	1.1	U	ug/L	1	1.1	10	20	EPA 8270C	04/23/08 19:46	DFM	
Phenacetin [62-44-2] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 19:46	DFM	
Phenanthrene [85-01-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Phenol [108-95-2] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270C	04/23/08 19:46	DFM	
Phorate [298-02-2] ^	4.1	U	ug/L	1	4.1	10	10	EPA 8270C	04/23/08 19:46	DFM	
Pronamide [23950-58-5] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Pyrene [129-00-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 19:46	DFM	
Safrole [94-59-7] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 19:46	DFM	
Thionazin [297-97-2] ^	1.2	U	ug/L	1	1.2	10	20	EPA 8270C	04/23/08 19:46	DFM	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,6-Tribromophenol	*72*	*1*	*100*	*72 %*	*40-124*	*8D21028*	*EPA 8270C*	*04/23/08 19:46*	*DFM*	
2-Fluorobiphenyl	*37*	*1*	*50.0*	*75 %*	*36-100*	*8D21028*	*EPA 8270C*	*04/23/08 19:46*	*DFM*	
2-Fluorophenol	*49*	*1*	*100*	*49 %*	*38-71*	*8D21028*	*EPA 8270C*	*04/23/08 19:46*	*DFM*	
Nitrobenzene-d5	*39*	*1*	*50.0*	*78 %*	*45-92*	*8D21028*	*EPA 8270C*	*04/23/08 19:46*	*DFM*	
Phenol-d5	*31*	*1*	*100*	*31 %*	*30-56*	*8D21028*	*EPA 8270C*	*04/23/08 19:46*	*DFM*	
Terphenyl-d14	*39*	*1*	*50.0*	*78 %*	*50-139*	*8D21028*	*EPA 8270C*	*04/23/08 19:46*	*DFM*	

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Description: MW-24
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-02
Sampled: 04/17/08 08:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Organochlorine Pesticides by GC

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
4,4'-DDD [72-54-8] ^	0.63	U	ug/L	1	0.63	1.7	0.1	EPA 8081A	04/23/08 15:15	JHH	
4,4'-DDE [72-55-9] ^	0.93	U	ug/L	1	0.93	1.7	0.1	EPA 8081A	04/23/08 15:15	JHH	
4,4'-DDT [50-29-3] ^	0.52	U	ug/L	1	0.52	1.7	0.1	EPA 8081A	04/23/08 15:15	JHH	
Aldrin [309-00-2] ^	0.53	U	ug/L	1	0.53	1.7	0.05	EPA 8081A	04/23/08 15:15	JHH	
alpha-BHC [319-84-6] ^	0.45	U	ug/L	1	0.45	1.7	0.05	EPA 8081A	04/23/08 15:15	JHH	
beta-BHC [319-85-7] ^	0.49	U	ug/L	1	0.49	1.7	0.05	EPA 8081A	04/23/08 15:15	JHH	
Chlordane (tech) [12789-03-6] ^	1.1	U	ug/L	1	1.1	17	0.5	EPA 8081A	04/23/08 15:15	JHH	
Chlordane-alpha [5103-71-9] ^	0.58	U	ug/L	1	0.58	1.7	NE	EPA 8081A	04/23/08 15:15	JHH	
Chlordane-gamma [NA] ^	0.56	U	ug/L	1	0.56	1.7	NE	EPA 8081A	04/23/08 15:15	JHH	
delta-BHC [319-86-8] ^	0.38	U	ug/L	1	0.38	1.7	0.05	EPA 8081A	04/23/08 15:15	JHH	
Dieldrin [60-57-1] ^	0.58	U	ug/L	1	0.58	1.7	0.075	EPA 8081A	04/23/08 15:15	JHH	
Endosulfan I [959-98-8] ^	0.69	U	ug/L	1	0.69	1.7	0.1	EPA 8081A	04/23/08 15:15	JHH	
Endosulfan II [33213-65-9] ^	0.63	U	ug/L	1	0.63	1.7	0.1	EPA 8081A	04/23/08 15:15	JHH	
Endosulfan sulfate [1031-07-8] ^	0.54	U	ug/L	1	0.54	1.7	0.1	EPA 8081A	04/23/08 15:15	JHH	
Endrin [72-20-8] ^	0.50	U	ug/L	1	0.50	1.7	0.1	EPA 8081A	04/23/08 15:15	JHH	
Endrin aldehyde [7421-93-4] ^	0.83	U	ug/L	1	0.83	1.7	0.1	EPA 8081A	04/23/08 15:15	JHH	
gamma-BHC [58-89-9] ^	0.67	U	ug/L	1	0.67	1.7	0.05	EPA 8081A	04/23/08 15:15	JHH	
Heptachlor [76-44-8] ^	0.68	U	ug/L	1	0.68	1.7	0.05	EPA 8081A	04/23/08 15:15	JHH	
Heptachlor epoxide [1024-57-3] ^	0.57	U	ug/L	1	0.57	1.7	0.075	EPA 8081A	04/23/08 15:15	JHH	
Methoxychlor [72-43-5] ^	0.92	U	ug/L	1	0.92	1.7	1	EPA 8081A	04/23/08 15:15	JHH	
Toxaphene [8001-35-2] ^	10	U	ug/L	1	10	33	1.5	EPA 8081A	04/23/08 15:15	JHH	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,5,6-TCMX	*0.83*	*1*	*1.00*	*83 %*	*39-151*	*8D22002*	*EPA 8081A*	*04/23/08 15:15*	*JHH*	
Decachlorobiphenyl	*0.89*	*1*	*1.00*	*89 %*	*70-130*	*8D22002*	*EPA 8081A*	*04/23/08 15:15*	*JHH*	

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Description:	MW-24	**Lab Sample ID:**	C804069-02	**Received:**	04/18/08 11:30
Matrix:	Ground Water	**Sampled:**	04/17/08 08:30	**Work Order:**	C804069
Project:	Alexander Co. Closed C&D	**Sampled By:**	Client		

Polychlorinated Biphenyls by GC

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
PCB-1016/1242 [12674-11-2/53469-21-9] ^	0.19	U	ug/L	1	0.19	1.0	2	EPA 8082	04/23/08 15:15	JHH	
PCB-1221 [11104-28-2] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:15	JHH	
PCB-1232 [11141-16-5] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:15	JHH	
PCB-1248 [12672-29-6] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:15	JHH	
PCB-1254 [11097-69-1] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:15	JHH	
PCB-1260 [11096-82-5] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:15	JHH	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,5,6-TCMX	*0.83*	*1*	*1.00*	*83 %*	*39-151*	*8D22002*	*EPA 8082*	*04/23/08 15:15*	*JHH*	
Decachlorobiphenyl	*0.89*	*1*	*1.00*	*89 %*	*70-130*	*8D22002*	*EPA 8082*	*04/23/08 15:15*	*JHH*	

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Description: MW-24
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-02
Sampled: 04/17/08 08:30
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/24/08 14:52	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:00	VLO	
Barium [7440-39-3] ^	**90.6**	J	ug/L	1	0.20	10.0	100	EPA 6010B	04/23/08 12:00	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/23/08 12:00	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/23/08 12:00	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:00	VLO	
Cobalt [7440-48-4] ^	**38.1**		ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:00	VLO	
Copper [7440-50-8] ^	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	04/23/08 12:00	VLO	
Lead [7439-92-1] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:00	VLO	
Mercury [7439-97-6] ^	**0.13**	J	ug/L	1	0.11	0.20	0.2	EPA 7470A	04/23/08 17:28	MPL	
Nickel [7440-02-0] ^	**4.5**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/23/08 12:00	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:00	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:00	VLO	
Thallium [7440-28-0] ^	0.036	U	ug/L	1	0.036	1.00	5.5	EPA 6020	04/24/08 14:52	JDH	
Tin [7440-31-5] ^	2.0	U	ug/L	1	2.0	10.0	100	EPA 6010B	04/23/08 12:00	VLO	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/23/08 12:00	VLO	
Zinc [7440-66-6] ^	**12.3**		ug/L	1	1.0	10.0	10	EPA 6010B	04/23/08 12:00	VLO	

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Cyanide (total) [57-12-5] ^	4.0	U	ug/L	1	4.0	5.0	10	EPA 9014	04/24/08 11:04	PEV	
Sulfide [18496-25-8]	0.10	U	mg/L	1	0.10	0.10	1	EPA 376.2	04/21/08 14:08	AJ	

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Description:	MW-24	**Lab Sample ID:**	C804069-02	**Received:**	04/18/08 11:30
Matrix:	Ground Water	**Sampled:**	04/17/08 08:30	**Work Order:**	C804069
Project:	Alexander Co. Closed C&D	**Sampled By:**	Client		

Chlorinated Herbicides by GC

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.13	U	ug/L	1	0.13	0.50	2	EPA 8151A	04/25/08 15:08	RC	
2,4,5-TP (Silvex) [93-72-1] ^	0.12	U	ug/L	1	0.12	0.50	2	EPA 8151A	04/25/08 15:08	RC	
2,4-D [94-75-7] ^	0.21	U	ug/L	1	0.21	0.50	2	EPA 8151A	04/25/08 15:08	RC	
Dinoseb [88-85-7] ^	0.42	U	ug/L	1	0.42	0.50	1	EPA 8151A	04/25/08 15:08	RC	
Pentachlorophenol [87-86-5] ^	0.064	U	ug/L	1	0.064	0.50	25	EPA 8151A	04/25/08 15:08	RC	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4-DCAA	*2.2*	*1*	*2.00*	*112 %*	*77-191*	*8D22005*	*EPA 8151A*	*04/25/08 15:08*	*RC*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: MW-26
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-03
Sampled: 04/17/08 10:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	04/22/08 14:41	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
1,1-Dichloroethane [75-34-3] ^	**1.6**	J	ug/L	1	0.090	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
1,1-Dichloroethene [75-35-4] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
1,1-Dichloropropene [563-58-6] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
1,2,4-Trichlorobenzene [120-82-1] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/22/08 14:41	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	04/22/08 14:41	jkg	
1,2-Dibromoethane [106-93-4] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
1,2-Dichloroethane [107-06-2] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
1,2-Dichloropropane [78-87-5] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
1,3-Dichlorobenzene [541-73-1] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
1,3-Dichloropropane [142-28-9] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
1,4-Dichlorobenzene [106-46-7] ^	**3.2**		ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
2,2-Dichloropropane [594-20-7] ^	0.16	U	ug/L	1	0.16	1.0	15	EPA 8260B	04/22/08 14:41	jkg	
2-Butanone [78-93-3] ^	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	04/22/08 14:41	jkg	
2-Hexanone [591-78-6] ^	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	04/22/08 14:41	jkg	
3-Chloropropene [107-05-1] ^	0.20	U	ug/L	1	0.20	1.0	10	EPA 8260B	04/22/08 14:41	jkg	
4-Methyl-2-pentanone [108-10-1] ^	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	04/22/08 14:41	jkg	
Acetone [67-64-1] ^	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	04/22/08 14:41	jkg	
Acetonitrile [75-05-8] ^	1.8	U	ug/L	1	1.8	10	55	EPA 8260B	04/22/08 14:41	jkg	
Acrolein [107-02-8] ^	2.1	U	ug/L	1	2.1	10	53	EPA 8260B	04/22/08 14:41	jkg	
Acrylonitrile [107-13-1] ^	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	04/22/08 14:41	jkg	
Benzene [71-43-2] ^	**1.6**		ug/L	1	0.12	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Bromochloromethane [74-97-5] ^	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	04/22/08 14:41	jkg	
Bromodichloromethane [75-27-4] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Bromoform [75-25-2] ^	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	04/22/08 14:41	jkg	
Bromomethane [74-83-9] ^	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	04/22/08 14:41	jkg	
Carbon disulfide [75-15-0] ^	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	04/22/08 14:41	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Chlorobenzene [108-90-7] ^	**0.81**	J	ug/L	1	0.16	1.0	3	EPA 8260B	04/22/08 14:41	jkg	
Chloroethane [75-00-3] ^	**1.5**	J	ug/L	1	0.40	1.0	10	EPA 8260B	04/22/08 14:41	jkg	
Chloroform [67-66-3] ^	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
Chloromethane [74-87-3] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Chloroprene [126-99-8] ^	0.19	U	ug/L	1	0.19	1.0	20	EPA 8260B	04/22/08 14:41	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	**26**		ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Dibromochloromethane [124-48-1] ^	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	04/22/08 14:41	jkg	
Dibromomethane [74-95-3] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/22/08 14:41	jkg	
Dichlorodifluoromethane [75-71-8] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
Ethyl Methacrylate [97-63-2] ^	0.17	U	ug/L	1	0.17	2.0	10	EPA 8260B	04/22/08 14:41	jkg	
Ethylbenzene [100-41-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Hexachlorobutadiene [87-68-3] ^	0.33	U	ug/L	1	0.33	1.0	10	EPA 8260B	04/22/08 14:41	jkg	

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Description: MW-26
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-03
Sampled: 04/17/08 10:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Iodomethane [74-88-4] ^	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	04/22/08 14:41	jkg	
Isobutyl alcohol [78-83-1] ^	8.4	U	ug/L	1	8.4	20	100	EPA 8260B	04/22/08 14:41	jkg	
Methacrylonitrile [126-98-7] ^	0.69	U	ug/L	1	0.69	10	100	EPA 8260B	04/22/08 14:41	jkg	
Methyl Methacrylate [80-62-6] ^	0.38	U	ug/L	1	0.38	1.0	30	EPA 8260B	04/22/08 14:41	jkg	
Methylene chloride [75-09-2] ^	0.088	U	ug/L	1	0.088	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Naphthalene [91-20-3] ^	0.25	U	ug/L	1	0.25	1.0	10	EPA 8260B	04/22/08 14:41	jkg	
Propionitrile [107-12-0] ^	1.6	U	ug/L	1	1.6	10	150	EPA 8260B	04/22/08 14:41	jkg	
Styrene [100-42-5] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Tetrachloroethene [127-18-4] ^	**0.48**	J	ug/L	1	0.25	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Toluene [108-88-3] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	04/22/08 14:41	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	04/22/08 14:41	jkg	
Trichloroethene [79-01-6] ^	**0.43**	J	ug/L	1	0.23	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Trichlorofluoromethane [75-69-4] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Vinyl acetate [108-05-4] ^	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	04/22/08 14:41	jkg	
Vinyl chloride [75-01-4] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 14:41	jkg	
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/22/08 14:41	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*69-120*	*8D22009*	*EPA 8260B*	*04/22/08 14:41*	*jkg*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*61-120*	*8D22009*	*EPA 8260B*	*04/22/08 14:41*	*jkg*	
Toluene-d8	*42*	*1*	*50.0*	*85 %*	*75-99*	*8D22009*	*EPA 8260B*	*04/22/08 14:41*	*jkg*	

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Description: MW-26
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-03
Sampled: 04/17/08 10:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,2,4,5-Tetrachlorobenzene [95-94-3] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270C	04/23/08 20:14	DFM	
1,3,5-Trinitrobenzene [99-35-4] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 20:14	DFM	
1,3-Dinitrobenzene [99-65-0] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 20:14	DFM	
1,4-Naphthoquinone [130-15-4] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
1,4-Phenylenediamine [106-50-3] ^	4.0	U	ug/L	1	4.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
1-Naphthylamine [134-32-7] ^	2.5	U	ug/L	1	2.5	10	10	EPA 8270C	04/23/08 20:14	DFM	
2,3,4,6-Tetrachlorophenol [58-90-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
2,4,5-Trichlorophenol [95-95-4] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
2,4,6-Trichlorophenol [88-06-2] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 20:14	DFM	
2,4-Dichlorophenol [120-83-2] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270C	04/23/08 20:14	DFM	
2,4-Dimethylphenol [105-67-9] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
2,4-Dinitrophenol [51-28-5] ^	1.7	U	ug/L	1	1.7	10	50	EPA 8270C	04/23/08 20:14	DFM	
2,4-Dinitrotoluene [121-14-2] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 20:14	DFM	
2,6-Dichlorophenol [87-65-0] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270C	04/23/08 20:14	DFM	
2,6-Dinitrotoluene [606-20-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
2-Acetylaminofluorene [53-96-3] ^	1.3	U	ug/L	1	1.3	10	20	EPA 8270C	04/23/08 20:14	DFM	
2-Chloronaphthalene [91-58-7] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270C	04/23/08 20:14	DFM	
2-Chlorophenol [95-57-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
2-Methyl-4,6-dinitrophenol [534-52-1] ^	1.4	U	ug/L	1	1.4	10	50	EPA 8270C	04/23/08 20:14	DFM	
2-Methylnaphthalene [91-57-6] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
2-Methylphenol [95-48-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
2-Naphthylamine [91-59-8] ^	4.0	U	ug/L	1	4.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
2-Nitroaniline [88-74-4] ^	1.2	U	ug/L	1	1.2	10	50	EPA 8270C	04/23/08 20:14	DFM	
2-Nitrophenol [88-75-5] ^	1.8	U	ug/L	1	1.8	10	10	EPA 8270C	04/23/08 20:14	DFM	
3 & 4-Methylphenol	1.9	U	ug/L	1	1.9	20	10	EPA 8270C	04/23/08 20:14	DFM	
3,3'-Dichlorobenzidine [91-94-1] ^	1.8	U	ug/L	1	1.8	10	20	EPA 8270C	04/23/08 20:14	DFM	
3,3'-Dimethylbenzidine [119-93-7] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
3-Methylcholanthrene [56-49-5] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 20:14	DFM	
3-Nitroaniline [99-09-2] ^	1.6	U	ug/L	1	1.6	10	50	EPA 8270C	04/23/08 20:14	DFM	
4-Aminobiphenyl [92-67-1] ^	3.1	U	ug/L	1	3.1	10	20	EPA 8270C	04/23/08 20:14	DFM	
4-Bromophenyl-phenylether [101-55-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 20:14	DFM	
4-Chloro-3-methylphenol [59-50-7] ^	1.4	U	ug/L	1	1.4	10	20	EPA 8270C	04/23/08 20:14	DFM	
4-Chloroaniline [106-47-8] ^	1.6	U	ug/L	1	1.6	10	20	EPA 8270C	04/23/08 20:14	DFM	
4-Chlorophenyl-phenylether [7005-72-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 20:14	DFM	
4-Nitroaniline [100-01-6] ^	1.4	U	ug/L	1	1.4	10	20	EPA 8270C	04/23/08 20:14	DFM	
4-Nitrophenol [100-02-7] ^	1.2	U	ug/L	1	1.2	10	50	EPA 8270C	04/23/08 20:14	DFM	
5-Nitro-o-toluidine [99-55-8] ^	0.60	U	ug/L	1	0.60	10	10	EPA 8270C	04/23/08 20:14	DFM	
7,12-Dimethylbenz(a)anthracene [57-97-6] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
Acenaphthene [83-32-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Acenaphthylene [208-96-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Acetophenone [98-86-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Anthracene [120-12-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Benzo(a)anthracene [56-55-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Benzo(a)pyrene [50-32-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Benzo(b)fluoranthene [205-99-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	

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Description: MW-26
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-03
Sampled: 04/17/08 10:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Benzo(g,h,i)perylene [191-24-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Benzo(k)fluoranthene [207-08-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Benzyl alcohol [100-51-6] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 20:14	DFM	
Bis(2-chloroethoxy)methane [111-91-1] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Bis(2-chloroethyl)ether [111-44-4] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
Bis(2-chloroisopropyl)ether [108-60-1] ^	2.2	U	ug/L	1	2.2	10	10	EPA 8270C	04/23/08 20:14	DFM	
Bis(2-ethylhexyl)phthalate [117-81-7] ^	1.9	U	ug/L	1	1.9	10	15	EPA 8270C	04/23/08 20:14	DFM	
Butylbenzylphthalate [85-68-7] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270C	04/23/08 20:14	DFM	
Chlorobenzilate [510-15-6] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
Chrysene [218-01-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Diallate [2303-16-4] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 20:14	DFM	
Dibenzo(a,h)anthracene [53-70-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Dibenzofuran [132-64-9] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 20:14	DFM	
Diethylphthalate [84-66-2] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 20:14	DFM	
Dimethoate [60-51-5] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 20:14	DFM	
Dimethylphthalate [131-11-3] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
Di-n-butylphthalate [84-74-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Di-n-octylphthalate [117-84-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Disulfoton [298-04-4] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Ethyl methanesulfonate [62-50-0] ^	1.1	U	ug/L	1	1.1	10	20	EPA 8270C	04/23/08 20:14	DFM	
Famphur [52-85-7] ^	1.8	U	ug/L	1	1.8	10	20	EPA 8270C	04/23/08 20:14	DFM	
Fluoranthene [206-44-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Fluorene [86-73-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Hexachlorobenzene [118-74-1] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
Hexachlorobutadiene [87-68-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Hexachlorocyclopentadiene [77-47-4] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Hexachloroethane [67-72-1] ^	2.4	U	ug/L	1	2.4	10	10	EPA 8270C	04/23/08 20:14	DFM	
Hexachloropropene [1888-71-7] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
Indeno(1,2,3-cd)pyrene [193-39-5] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Isodrin [465-73-6] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 20:14	DFM	
Isophorone [78-59-1] ^	1.8	U	ug/L	1	1.8	10	10	EPA 8270C	04/23/08 20:14	DFM	
Isosafrole [120-58-1] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270C	04/23/08 20:14	DFM	
Kepone [143-50-0] ^	1.5	U	ug/L	1	1.5	20	20	EPA 8270C	04/23/08 20:14	DFM	
Methapyrilene [91-80-5] ^	3.8	U	ug/L	1	3.8	10	100	EPA 8270C	04/23/08 20:14	DFM	
Methyl Methanesulfonate [66-27-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Methyl parathion [298-00-0] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 20:14	DFM	
Nitrobenzene [98-95-3] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 20:14	DFM	
N-Nitrosodiethylamine [55-18-5] ^	1.9	U	ug/L	1	1.9	10	20	EPA 8270C	04/23/08 20:14	DFM	
N-Nitrosodimethylamine [62-75-9] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 20:14	DFM	
N-Nitrosodi-n-butylamine [924-16-3] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
N-Nitroso-di-n-propylamine [621-64-7] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
N-Nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4]	1.1	U	ug/L	1	1.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
N-Nitrosomethylethylamine [10595-95-6] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 20:14	DFM	
N-Nitrosopiperidine [100-75-4] ^	1.5	U	ug/L	1	1.5	10	20	EPA 8270C	04/23/08 20:14	DFM	
N-Nitrosopyrrolidine [930-55-2] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 20:14	DFM	

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Description: MW-26
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-03
Sampled: 04/17/08 10:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Semivolatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
O,O,O-Triethyl phosphorothioate [126-68-1] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
o-Toluidine [95-53-4] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270C	04/23/08 20:14	DFM	
Parathion [56-38-2] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 20:14	DFM	
p-Dimethylaminoazobenzene [60-11-7] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 20:14	DFM	
Pentachlorobenzene [608-93-5] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270C	04/23/08 20:14	DFM	
Pentachloronitrobenzene [82-68-8] ^	1.1	U	ug/L	1	1.1	10	20	EPA 8270C	04/23/08 20:14	DFM	
Phenacetin [62-44-2] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270C	04/23/08 20:14	DFM	
Phenanthrene [85-01-8] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Phenol [108-95-2] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270C	04/23/08 20:14	DFM	
Phorate [298-02-2] ^	4.1	U	ug/L	1	4.1	10	10	EPA 8270C	04/23/08 20:14	DFM	
Pronamide [23950-58-5] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Pyrene [129-00-0] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270C	04/23/08 20:14	DFM	
Safrole [94-59-7] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270C	04/23/08 20:14	DFM	
Thionazin [297-97-2] ^	1.2	U	ug/L	1	1.2	10	20	EPA 8270C	04/23/08 20:14	DFM	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,6-Tribromophenol	*76*	*1*	*100*	*76 %*	*40-124*	*8D21028*	*EPA 8270C*	*04/23/08 20:14*	*DFM*	
2-Fluorobiphenyl	*37*	*1*	*50.0*	*75 %*	*36-100*	*8D21028*	*EPA 8270C*	*04/23/08 20:14*	*DFM*	
2-Fluorophenol	*46*	*1*	*100*	*46 %*	*38-71*	*8D21028*	*EPA 8270C*	*04/23/08 20:14*	*DFM*	
Nitrobenzene-d5	*39*	*1*	*50.0*	*78 %*	*45-92*	*8D21028*	*EPA 8270C*	*04/23/08 20:14*	*DFM*	
Phenol-d5	*31*	*1*	*100*	*31 %*	*30-56*	*8D21028*	*EPA 8270C*	*04/23/08 20:14*	*DFM*	
Terphenyl-d14	*38*	*1*	*50.0*	*75 %*	*50-139*	*8D21028*	*EPA 8270C*	*04/23/08 20:14*	*DFM*	

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Description: MW-26
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-03
Sampled: 04/17/08 10:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Organochlorine Pesticides by GC

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
4,4'-DDD [72-54-8] ^	0.63	U	ug/L	1	0.63	1.7	0.1	EPA 8081A	04/23/08 15:40	JHH	
4,4'-DDE [72-55-9] ^	0.93	U	ug/L	1	0.93	1.7	0.1	EPA 8081A	04/23/08 15:40	JHH	
4,4'-DDT [50-29-3] ^	0.52	U	ug/L	1	0.52	1.7	0.1	EPA 8081A	04/23/08 15:40	JHH	
Aldrin [309-00-2] ^	0.53	U	ug/L	1	0.53	1.7	0.05	EPA 8081A	04/23/08 15:40	JHH	
alpha-BHC [319-84-6] ^	0.45	U	ug/L	1	0.45	1.7	0.05	EPA 8081A	04/23/08 15:40	JHH	
beta-BHC [319-85-7] ^	0.49	U	ug/L	1	0.49	1.7	0.05	EPA 8081A	04/23/08 15:40	JHH	
Chlordane (tech) [12789-03-6] ^	1.1	U	ug/L	1	1.1	17	0.5	EPA 8081A	04/23/08 15:40	JHH	
Chlordane-alpha [5103-71-9] ^	0.58	U	ug/L	1	0.58	1.7	NE	EPA 8081A	04/23/08 15:40	JHH	
Chlordane-gamma [NA] ^	0.56	U	ug/L	1	0.56	1.7	NE	EPA 8081A	04/23/08 15:40	JHH	
delta-BHC [319-86-8] ^	0.38	U	ug/L	1	0.38	1.7	0.05	EPA 8081A	04/23/08 15:40	JHH	
Dieldrin [60-57-1] ^	0.58	U	ug/L	1	0.58	1.7	0.075	EPA 8081A	04/23/08 15:40	JHH	
Endosulfan I [959-98-8] ^	0.69	U	ug/L	1	0.69	1.7	0.1	EPA 8081A	04/23/08 15:40	JHH	
Endosulfan II [33213-65-9] ^	0.63	U	ug/L	1	0.63	1.7	0.1	EPA 8081A	04/23/08 15:40	JHH	
Endosulfan sulfate [1031-07-8] ^	0.54	U	ug/L	1	0.54	1.7	0.1	EPA 8081A	04/23/08 15:40	JHH	
Endrin [72-20-8] ^	0.50	U	ug/L	1	0.50	1.7	0.1	EPA 8081A	04/23/08 15:40	JHH	
Endrin aldehyde [7421-93-4] ^	0.83	U	ug/L	1	0.83	1.7	0.1	EPA 8081A	04/23/08 15:40	JHH	
gamma-BHC [58-89-9] ^	0.67	U	ug/L	1	0.67	1.7	0.05	EPA 8081A	04/23/08 15:40	JHH	
Heptachlor [76-44-8] ^	0.68	U	ug/L	1	0.68	1.7	0.05	EPA 8081A	04/23/08 15:40	JHH	
Heptachlor epoxide [1024-57-3] ^	0.57	U	ug/L	1	0.57	1.7	0.075	EPA 8081A	04/23/08 15:40	JHH	
Methoxychlor [72-43-5] ^	0.92	U	ug/L	1	0.92	1.7	1	EPA 8081A	04/23/08 15:40	JHH	
Toxaphene [8001-35-2] ^	10	U	ug/L	1	10	33	1.5	EPA 8081A	04/23/08 15:40	JHH	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,5,6-TCMX	*0.80*	*1*	*1.00*	*80 %*	*39-151*	*8D22002*	*EPA 8081A*	*04/23/08 15:40*	*JHH*	
Decachlorobiphenyl	*0.70*	*1*	*1.00*	*70 %*	*70-130*	*8D22002*	*EPA 8081A*	*04/23/08 15:40*	*JHH*	

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Description: MW-26
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-03
Sampled: 04/17/08 10:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Polychlorinated Biphenyls by GC

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
PCB-1016/1242 [12674-11-2/53469-21-9] ^	0.19	U	ug/L	1	0.19	1.0	2	EPA 8082	04/23/08 15:40	JHH	
PCB-1221 [11104-28-2] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:40	JHH	
PCB-1232 [11141-16-5] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:40	JHH	
PCB-1248 [12672-29-6] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:40	JHH	
PCB-1254 [11097-69-1] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:40	JHH	
PCB-1260 [11096-82-5] ^	0.21	U	ug/L	1	0.21	1.0	NE	EPA 8082	04/23/08 15:40	JHH	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,5,6-TCMX	*0.80*	*1*	*1.00*	*80 %*	*39-151*	*8D22002*	*EPA 8082*	*04/23/08 15:40*	*JHH*	
Decachlorobiphenyl	*0.70*	*1*	*1.00*	*70 %*	*70-130*	*8D22002*	*EPA 8082*	*04/23/08 15:40*	*JHH*	

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Description: MW-26
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-03
Sampled: 04/17/08 10:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/24/08 14:55	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:07	VLO	
Barium [7440-39-3] ^	**105**		ug/L	1	0.20	10.0	100	EPA 6010B	04/23/08 12:07	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/23/08 12:07	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/23/08 12:07	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:07	VLO	
Cobalt [7440-48-4] ^	**85.2**		ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:07	VLO	
Copper [7440-50-8] ^	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	04/23/08 12:07	VLO	
Lead [7439-92-1] ^	**2.7**	J	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:07	VLO	
Mercury [7439-97-6] ^	0.11	U	ug/L	1	0.11	0.20	0.2	EPA 7470A	04/23/08 17:31	MPL	
Nickel [7440-02-0] ^	**20.7**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/23/08 12:07	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:07	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:07	VLO	
Thallium [7440-28-0] ^	**0.114**	J	ug/L	1	0.036	1.00	5.5	EPA 6020	04/24/08 14:55	JDH	
Tin [7440-31-5] ^	2.0	U	ug/L	1	2.0	10.0	100	EPA 6010B	04/23/08 12:07	VLO	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/23/08 12:07	VLO	
Zinc [7440-66-6] ^	**38.4**		ug/L	1	1.0	10.0	10	EPA 6010B	04/23/08 12:07	VLO	

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Cyanide (total) [57-12-5] ^	4.0	U	ug/L	1	4.0	5.0	10	EPA 9014	04/24/08 11:06	PEV	
Sulfide [18496-25-8]	0.50	U	mg/L	1	0.50	0.50	1	EPA 376.2	04/21/08 14:08	AJ	

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Description:	MW-26	**Lab Sample ID:**	C804069-03	**Received:**	04/18/08 11:30
Matrix:	Ground Water	**Sampled:**	04/17/08 10:00	**Work Order:**	C804069
Project:	Alexander Co. Closed C&D	**Sampled By:**	Client		

Chlorinated Herbicides by GC

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.13	U	ug/L	1	0.13	0.50	2	EPA 8151A	04/25/08 15:40	RC	
2,4,5-TP (Silvex) [93-72-1] ^	0.12	U	ug/L	1	0.12	0.50	2	EPA 8151A	04/25/08 15:40	RC	
2,4-D [94-75-7] ^	0.21	U	ug/L	1	0.21	0.50	2	EPA 8151A	04/25/08 15:40	RC	
Dinoseb [88-85-7] ^	0.42	U	ug/L	1	0.42	0.50	1	EPA 8151A	04/25/08 15:40	RC	
Pentachlorophenol [87-86-5] ^	0.064	U	ug/L	1	0.064	0.50	25	EPA 8151A	04/25/08 15:40	RC	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4-DCAA	*2.9*	*1*	*2.00*	*144 %*	*77-191*	*8D22005*	*EPA 8151A*	*04/25/08 15:40*	*RC*	

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Description: MW-11
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-04
Sampled: 04/17/08 12:10
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/24/08 14:57	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:14	VLO	
Barium [7440-39-3] ^	**116**		ug/L	1	0.20	10.0	100	EPA 6010B	04/23/08 12:14	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/23/08 12:14	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/23/08 12:14	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:14	VLO	
Cobalt [7440-48-4] ^	**113**		ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:14	VLO	
Copper [7440-50-8] ^	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	04/23/08 12:14	VLO	
Lead [7439-92-1] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:14	VLO	
Nickel [7440-02-0] ^	**14.6**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/23/08 12:14	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:14	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:14	VLO	
Thallium [7440-28-0] ^	**0.195**	J	ug/L	1	0.036	1.00	5.5	EPA 6020	04/24/08 14:57	JDH	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/23/08 12:14	VLO	
Zinc [7440-66-6] ^	**32.7**		ug/L	1	1.0	10.0	10	EPA 6010B	04/23/08 12:14	VLO	

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Description: MW-11
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-04
Sampled: 04/17/08 12:10
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals (Dissolved) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/28/08 11:49	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 14:46	VLO	
Barium [7440-39-3] ^	**115**	B	ug/L	1	0.20	10.0	100	EPA 6010B	04/28/08 14:46	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/28/08 14:46	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/28/08 14:46	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 14:46	VLO	
Cobalt [7440-48-4] ^	**105**		ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 14:46	VLO	
Copper [7440-50-8] ^	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	04/28/08 14:46	VLO	
Lead [7439-92-1] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 14:46	VLO	
Nickel [7440-02-0] ^	**14.9**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/28/08 14:46	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 14:46	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 14:46	VLO	
Thallium [7440-28-0] ^	**0.302**	J	ug/L	1	0.036	1.00	5.5	EPA 6020	04/28/08 11:49	JDH	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/28/08 14:46	VLO	
Zinc [7440-66-6] ^	**31.0**	B	ug/L	1	1.0	10.0	10	EPA 6010B	04/28/08 14:46	VLO	

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Description: MW-5
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-05
Sampled: 04/17/08 13:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/24/08 15:09	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:21	VLO	
Barium [7440-39-3] ^	**108**		ug/L	1	0.20	10.0	100	EPA 6010B	04/23/08 12:21	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/23/08 12:21	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/23/08 12:21	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:21	VLO	
Cobalt [7440-48-4] ^	**12.4**		ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:21	VLO	
Copper [7440-50-8] ^	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	04/23/08 12:21	VLO	
Lead [7439-92-1] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:21	VLO	
Nickel [7440-02-0] ^	2.0	U	ug/L	1	2.0	10.0	50	EPA 6010B	04/23/08 12:21	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:21	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:21	VLO	
Thallium [7440-28-0] ^	0.036	U	ug/L	1	0.036	1.00	5.5	EPA 6020	04/24/08 15:09	JDH	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/23/08 12:21	VLO	
Zinc [7440-66-6] ^	**1.7**	J	ug/L	1	1.0	10.0	10	EPA 6010B	04/23/08 12:21	VLO	

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Description: MW-5
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-05
Sampled: 04/17/08 13:00
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals (Dissolved) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/28/08 11:41	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:07	VLO	
Barium [7440-39-3] ^	**98.1**	JB	ug/L	1	0.20	10.0	100	EPA 6010B	04/28/08 15:07	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/28/08 15:07	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/28/08 15:07	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:07	VLO	
Cobalt [7440-48-4] ^	**9.3**	J	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:07	VLO	
Copper [7440-50-8] ^	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	04/28/08 15:07	VLO	
Lead [7439-92-1] ^	**2.3**	J	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:07	VLO	
Nickel [7440-02-0] ^	2.0	U	ug/L	1	2.0	10.0	50	EPA 6010B	04/28/08 15:07	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:07	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:07	VLO	
Thallium [7440-28-0] ^	0.036	U	ug/L	1	0.036	1.00	5.5	EPA 6020	04/28/08 11:41	JDH	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/28/08 15:07	VLO	
Zinc [7440-66-6] ^	**2.6**	JB	ug/L	1	1.0	10.0	10	EPA 6010B	04/28/08 15:07	VLO	

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Description: MW-1B
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-06
Sampled: 04/17/08 13:40
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/24/08 15:11	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:28	VLO	
Barium [7440-39-3] ^	**89.6**	J	ug/L	1	0.20	10.0	100	EPA 6010B	04/23/08 12:28	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/23/08 12:28	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/23/08 12:28	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:28	VLO	
Cobalt [7440-48-4] ^	**58.0**		ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:28	VLO	
Copper [7440-50-8] ^	**1.00**	J	ug/L	1	0.60	10.0	10	EPA 6010B	04/23/08 12:28	VLO	
Lead [7439-92-1] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:28	VLO	
Nickel [7440-02-0] ^	**6.8**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/23/08 12:28	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:28	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:28	VLO	
Thallium [7440-28-0] ^	**0.060**	J	ug/L	1	0.036	1.00	5.5	EPA 6020	04/24/08 15:11	JDH	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/23/08 12:28	VLO	
Zinc [7440-66-6] ^	**16.1**		ug/L	1	1.0	10.0	10	EPA 6010B	04/23/08 12:28	VLO	

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Description: MW-1B
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-06
Sampled: 04/17/08 13:40
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals (Dissolved) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/28/08 11:52	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:30	VLO	
Barium [7440-39-3] ^	**85.5**	JB	ug/L	1	0.20	10.0	100	EPA 6010B	04/28/08 15:30	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/28/08 15:30	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/28/08 15:30	VLO	
Chromium [7440-47-3] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:30	VLO	
Cobalt [7440-48-4] ^	**54.9**		ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:30	VLO	
Copper [7440-50-8] ^	**1.40**	J	ug/L	1	0.60	10.0	10	EPA 6010B	04/28/08 15:30	VLO	
Lead [7439-92-1] ^	**2.3**	J	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:30	VLO	
Nickel [7440-02-0] ^	**7.8**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/28/08 15:30	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:30	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:30	VLO	
Thallium [7440-28-0] ^	**0.121**	J	ug/L	1	0.036	1.00	5.5	EPA 6020	04/28/08 11:52	JDH	
Vanadium [7440-62-2] ^	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	04/28/08 15:30	VLO	
Zinc [7440-66-6] ^	**16.6**	B	ug/L	1	1.0	10.0	10	EPA 6010B	04/28/08 15:30	VLO	

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Description: MW-19
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-07
Sampled: 04/17/08 14:40
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/24/08 15:14	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:51	VLO	
Barium [7440-39-3] ^	**78.1**	J	ug/L	1	0.20	10.0	100	EPA 6010B	04/23/08 12:51	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/23/08 12:51	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/23/08 12:51	VLO	
Chromium [7440-47-3] ^	**11.4**		ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:51	VLO	
Cobalt [7440-48-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:51	VLO	
Copper [7440-50-8] ^	**22.3**		ug/L	1	0.60	10.0	10	EPA 6010B	04/23/08 12:51	VLO	
Lead [7439-92-1] ^	**4.5**	J	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:51	VLO	
Nickel [7440-02-0] ^	**9.5**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/23/08 12:51	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:51	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/23/08 12:51	VLO	
Thallium [7440-28-0] ^	**0.043**	J	ug/L	1	0.036	1.00	5.5	EPA 6020	04/24/08 15:14	JDH	
Vanadium [7440-62-2] ^	**13.0**	J	ug/L	1	1.0	10.0	25	EPA 6010B	04/23/08 12:51	VLO	
Zinc [7440-66-6] ^	**26.2**		ug/L	1	1.0	10.0	10	EPA 6010B	04/23/08 12:51	VLO	

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Description: MW-19
Matrix: Ground Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-07
Sampled: 04/17/08 14:40
Sampled By: Client

Received: 04/18/08 11:30
Work Order: C804069

Metals (Dissolved) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	04/28/08 11:54	JDH	
Arsenic [7440-38-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:37	VLO	
Barium [7440-39-3] ^	**67.2**	JB	ug/L	1	0.20	10.0	100	EPA 6010B	04/28/08 15:37	VLO	
Beryllium [7440-41-7] ^	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	04/28/08 15:37	VLO	
Cadmium [7440-43-9] ^	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	04/28/08 15:37	VLO	
Chromium [7440-47-3] ^	**20.3**		ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:37	VLO	
Cobalt [7440-48-4] ^	**2.0**	J	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:37	VLO	
Copper [7440-50-8] ^	**15.7**		ug/L	1	0.60	10.0	10	EPA 6010B	04/28/08 15:37	VLO	
Lead [7439-92-1] ^	**4.8**	J	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:37	VLO	
Nickel [7440-02-0] ^	**21.3**	J	ug/L	1	2.0	10.0	50	EPA 6010B	04/28/08 15:37	VLO	
Selenium [7782-49-2] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:37	VLO	
Silver [7440-22-4] ^	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	04/28/08 15:37	VLO	
Thallium [7440-28-0] ^	**0.073**	J	ug/L	1	0.036	1.00	5.5	EPA 6020	04/28/08 11:54	JDH	
Vanadium [7440-62-2] ^	**12.1**	J	ug/L	1	1.0	10.0	25	EPA 6010B	04/28/08 15:37	VLO	
Zinc [7440-66-6] ^	**15.3**	B	ug/L	1	1.0	10.0	10	EPA 6010B	04/28/08 15:37	VLO	

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Description: TB
Matrix: Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-10
Sampled: 04/17/08 00:00
Sampled By:

Received: 04/18/08 11:30
Work Order: C804069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	04/22/08 21:29	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
1,1-Dichloroethane [75-34-3] ^	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
1,1-Dichloroethene [75-35-4] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
1,1-Dichloropropene [563-58-6] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
1,2,4-Trichlorobenzene [120-82-1] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/22/08 21:29	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	04/22/08 21:29	jkg	
1,2-Dibromoethane [106-93-4] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
1,2-Dichloroethane [107-06-2] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
1,2-Dichloropropane [78-87-5] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
1,3-Dichlorobenzene [541-73-1] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
1,3-Dichloropropane [142-28-9] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
2,2-Dichloropropane [594-20-7] ^	0.16	U	ug/L	1	0.16	1.0	15	EPA 8260B	04/22/08 21:29	jkg	
2-Butanone [78-93-3] ^	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	04/22/08 21:29	jkg	
2-Hexanone [591-78-6] ^	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	04/22/08 21:29	jkg	
3-Chloropropene [107-05-1] ^	0.20	U	ug/L	1	0.20	1.0	10	EPA 8260B	04/22/08 21:29	jkg	
4-Methyl-2-pentanone [108-10-1] ^	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	04/22/08 21:29	jkg	
Acetone [67-64-1] ^	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	04/22/08 21:29	jkg	
Acetonitrile [75-05-8] ^	1.8	U	ug/L	1	1.8	10	55	EPA 8260B	04/22/08 21:29	jkg	
Acrolein [107-02-8] ^	2.1	U	ug/L	1	2.1	10	53	EPA 8260B	04/22/08 21:29	jkg	
Acrylonitrile [107-13-1] ^	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	04/22/08 21:29	jkg	
Benzene [71-43-2] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Bromochloromethane [74-97-5] ^	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	04/22/08 21:29	jkg	
Bromodichloromethane [75-27-4] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Bromoform [75-25-2] ^	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	04/22/08 21:29	jkg	
Bromomethane [74-83-9] ^	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	04/22/08 21:29	jkg	
Carbon disulfide [75-15-0] ^	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	04/22/08 21:29	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Chlorobenzene [108-90-7] ^	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	04/22/08 21:29	jkg	
Chloroethane [75-00-3] ^	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	04/22/08 21:29	jkg	
Chloroform [67-66-3] ^	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
Chloromethane [74-87-3] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Chloroprene [126-99-8] ^	0.19	U	ug/L	1	0.19	1.0	20	EPA 8260B	04/22/08 21:29	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Dibromochloromethane [124-48-1] ^	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	04/22/08 21:29	jkg	
Dibromomethane [74-95-3] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	04/22/08 21:29	jkg	
Dichlorodifluoromethane [75-71-8] ^	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
Ethyl Methacrylate [97-63-2] ^	0.17	U	ug/L	1	0.17	2.0	10	EPA 8260B	04/22/08 21:29	jkg	
Ethylbenzene [100-41-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Hexachlorobutadiene [87-68-3] ^	0.33	U	ug/L	1	0.33	1.0	10	EPA 8260B	04/22/08 21:29	jkg	

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Description: TB
Matrix: Water
Project: Alexander Co. Closed C&D

Lab Sample ID: C804069-10
Sampled: 04/17/08 00:00
Sampled By:

Received: 04/18/08 11:30
Work Order: C804069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Iodomethane [74-88-4] ^	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	04/22/08 21:29	jkg	
Isobutyl alcohol [78-83-1] ^	8.4	U	ug/L	1	8.4	20	100	EPA 8260B	04/22/08 21:29	jkg	
Methacrylonitrile [126-98-7] ^	0.69	U	ug/L	1	0.69	10	100	EPA 8260B	04/22/08 21:29	jkg	
Methyl Methacrylate [80-62-6] ^	0.38	U	ug/L	1	0.38	1.0	30	EPA 8260B	04/22/08 21:29	jkg	
Methylene chloride [75-09-2] ^	0.088	U	ug/L	1	0.088	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Naphthalene [91-20-3] ^	0.25	U	ug/L	1	0.25	1.0	10	EPA 8260B	04/22/08 21:29	jkg	
Propionitrile [107-12-0] ^	1.6	U	ug/L	1	1.6	10	150	EPA 8260B	04/22/08 21:29	jkg	
Styrene [100-42-5] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Tetrachloroethene [127-18-4] ^	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Toluene [108-88-3] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	04/22/08 21:29	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	04/22/08 21:29	jkg	
Trichloroethene [79-01-6] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Trichlorofluoromethane [75-69-4] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Vinyl acetate [108-05-4] ^	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	04/22/08 21:29	jkg	
Vinyl chloride [75-01-4] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	04/22/08 21:29	jkg	
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	04/22/08 21:29	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*69-120*	*8D22026*	*EPA 8260B*	*04/22/08 21:29*	*jkg*	
Dibromofluoromethane	*43*	*1*	*50.0*	*86 %*	*61-120*	*8D22026*	*EPA 8260B*	*04/22/08 21:29*	*jkg*	
Toluene-d8	*41*	*1*	*50.0*	*81 %*	*75-99*	*8D22026*	*EPA 8260B*	*04/22/08 21:29*	*jkg*	

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 8D22009 - EPA 5030B_MS

Blank (8D22009-BLK1) Prepared: 04/21/2008 09:52 Analyzed: 04/22/2008 06:27

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	0.14	U	1.0	ug/L							
Chloromethane	0.18	U	1.0	ug/L							
Vinyl chloride	0.15	U	1.0	ug/L							
Bromomethane	0.21	U	1.0	ug/L							
Chloroethane	0.40	U	1.0	ug/L							
Trichlorofluoromethane	0.16	U	1.0	ug/L							
Acrolein	2.1	U	10	ug/L							
1,1-Dichloroethene	0.14	U	1.0	ug/L							
Acetone	0.90	U	5.0	ug/L							
Iodomethane	0.23	U	2.0	ug/L							
Carbon disulfide	0.12	U	5.0	ug/L							
Acetonitrile	1.8	U	10	ug/L							
3-Chloropropene	0.20	U	1.0	ug/L							
Methylene chloride	**1.3**		1.0	ug/L							
Acrylonitrile	2.0	U	5.0	ug/L							
trans-1,2-Dichloroethene	0.10	U	1.0	ug/L							
1,1-Dichloroethane	0.090	U	1.0	ug/L							
Vinyl acetate	0.19	U	2.0	ug/L							
Chloroprene	0.19	U	1.0	ug/L							
2-Butanone	0.56	U	5.0	ug/L							
cis-1,2-Dichloroethene	0.14	U	1.0	ug/L							
2,2-Dichloropropane	0.16	U	1.0	ug/L							
Propionitrile	1.6	U	10	ug/L							
Methacrylonitrile	0.69	U	10	ug/L							
Bromochloromethane	0.19	U	1.0	ug/L							
Chloroform	0.16	U	1.0	ug/L							
1,1,1-Trichloroethane	0.24	U	1.0	ug/L							
1,1-Dichloropropene	0.13	U	1.0	ug/L							
Isobutyl alcohol	8.4	U	20	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
1,2-Dichloroethane	0.36	U	1.0	ug/L							
Benzene	0.12	U	1.0	ug/L							
Trichloroethene	0.23	U	1.0	ug/L							
1,2-Dichloropropane	0.18	U	1.0	ug/L							
Methyl Methacrylate	0.38	U	1.0	ug/L							
Dibromomethane	0.14	U	1.0	ug/L							
Bromodichloromethane	0.19	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.16	U	1.0	ug/L							
4-Methyl-2-pentanone	0.36	U	5.0	ug/L							
Toluene	0.15	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.18	U	1.0	ug/L							
Ethyl Methacrylate	0.17	U	2.0	ug/L							
1,1,2-Trichloroethane	0.24	U	1.0	ug/L							
1,3-Dichloropropane	0.18	U	1.0	ug/L							
Tetrachloroethene	0.25	U	1.0	ug/L							
2-Hexanone	0.24	U	5.0	ug/L							
Dibromochloromethane	0.18	U	1.0	ug/L							
1,2-Dibromoethane	0.19	U	1.0	ug/L							
Chlorobenzene	0.16	U	1.0	ug/L							

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 8D22009 - EPA 5030B_MS

Blank (8D22009-BLK1) Continued Prepared: 04/21/2008 09:52 Analyzed: 04/22/2008 06:27

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.16	U	1.0	ug/L							
Ethylbenzene	0.17	U	1.0	ug/L							
Styrene	0.12	U	1.0	ug/L							
Bromoform	0.36	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.27	U	1.0	ug/L							
1,2,3-Trichloropropane	0.32	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.60	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,4-Dichlorobenzene	0.15	U	1.0	ug/L							
1,2-Dichlorobenzene	0.17	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.19	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
Hexachlorobutadiene	0.33	U	1.0	ug/L							
Naphthalene	0.25	U	1.0	ug/L							
Xylenes (Total)	0.21	U	1.0	ug/L							
Surrogate: Dibromofluoromethane	*43*			*ug/L*	*50.0*		*86*	*61-120*			
Surrogate: Toluene-d8	*41*			*ug/L*	*50.0*		*81*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*69-120*			

LCS (8D22009-BS1) Prepared: 04/21/2008 09:52 Analyzed: 04/22/2008 06:56

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	24		1.0	ug/L	20.0		120	71-121			
Benzene	22		1.0	ug/L	20.0		112	77-128			
Trichloroethene	19		1.0	ug/L	20.0		96	79-120			
Toluene	18		1.0	ug/L	20.0		92	77-120			
Chlorobenzene	19		1.0	ug/L	20.0		93	78-120			
Surrogate: Dibromofluoromethane	*43*			*ug/L*	*50.0*		*86*	*61-120*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*84*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*69-120*			

Matrix Spike (8D22009-MS1) Prepared: 04/21/2008 09:52 Analyzed: 04/22/2008 07:25

Source: C804201-07

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	23		1.0	ug/L	20.0	0.20 U	114	71-121			
Benzene	22		1.0	ug/L	20.0	0.20 U	112	77-128			
Trichloroethene	19		1.0	ug/L	20.0	0.25 U	96	79-120			
Toluene	19		1.0	ug/L	20.0	0.20 U	95	77-120			
Chlorobenzene	19		1.0	ug/L	20.0	0.27 U	94	78-120			
Surrogate: Dibromofluoromethane	*43*			*ug/L*	*50.0*		*87*	*61-120*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*84*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*77*	*69-120*			

Matrix Spike Dup (8D22009-MSD1) Prepared: 04/21/2008 09:52 Analyzed: 04/22/2008 07:54

Source: C804201-07

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 8D22009 - EPA 5030B_MS

Matrix Spike Dup (8D22009-MSD1) Continued Prepared: 04/21/2008 09:52 Analyzed: 04/22/2008 07:54

Source: C804201-07

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	23		1.0	ug/L	20.0	0.20 U	113	71-121	0.8	27	
Benzene	22		1.0	ug/L	20.0	0.20 U	111	77-128	0.9	27	
Trichloroethene	19		1.0	ug/L	20.0	0.25 U	94	79-120	2	27	
Toluene	18		1.0	ug/L	20.0	0.20 U	92	77-120	4	23	
Chlorobenzene	19		1.0	ug/L	20.0	0.27 U	95	78-120	0.5	25	
Surrogate: Dibromofluoromethane	*43*			*ug/L*	*50.0*		*87*	*61-120*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*84*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*38*			*ug/L*	*50.0*		*76*	*69-120*			

Batch 8D22026 - EPA 5030B_MS

Blank (8D22026-BLK1) Prepared: 04/22/2008 12:57 Analyzed: 04/22/2008 18:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	0.14	U	1.0	ug/L							
Chloromethane	0.18	U	1.0	ug/L							
Vinyl chloride	0.15	U	1.0	ug/L							
Bromomethane	0.21	U	1.0	ug/L							
Chloroethane	0.40	U	1.0	ug/L							
Trichlorofluoromethane	0.16	U	1.0	ug/L							
Acrolein	2.1	U	10	ug/L							
1,1-Dichloroethene	0.14	U	1.0	ug/L							
Acetone	0.90	U	5.0	ug/L							
Iodomethane	0.23	U	2.0	ug/L							
Carbon disulfide	0.12	U	5.0	ug/L							
Acetonitrile	1.8	U	10	ug/L							
3-Chloropropene	0.20	U	1.0	ug/L							
Methylene chloride	0.088	U	1.0	ug/L							
Acrylonitrile	2.0	U	5.0	ug/L							
trans-1,2-Dichloroethene	0.10	U	1.0	ug/L							
1,1-Dichloroethane	0.090	U	1.0	ug/L							
Vinyl acetate	0.19	U	2.0	ug/L							
Chloroprene	0.19	U	1.0	ug/L							
2-Butanone	0.56	U	5.0	ug/L							
cis-1,2-Dichloroethene	0.14	U	1.0	ug/L							
2,2-Dichloropropane	0.16	U	1.0	ug/L							
Propionitrile	1.6	U	10	ug/L							
Methacrylonitrile	0.69	U	10	ug/L							
Bromochloromethane	0.19	U	1.0	ug/L							
Chloroform	0.16	U	1.0	ug/L							
1,1,1-Trichloroethane	0.24	U	1.0	ug/L							
1,1-Dichloropropene	0.13	U	1.0	ug/L							
Isobutyl alcohol	8.4	U	20	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
1,2-Dichloroethane	0.36	U	1.0	ug/L							
Benzene	0.12	U	1.0	ug/L							
Trichloroethene	0.23	U	1.0	ug/L							

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Volatile Organic Compounds by GCMS - Quality Control

Batch 8D22026 - EPA 5030B_MS

Blank (8D22026-BLK1) Continued Prepared: 04/22/2008 12:57 Analyzed: 04/22/2008 18:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloropropane	0.18	U	1.0	ug/L							
Methyl Methacrylate	0.38	U	1.0	ug/L							
Dibromomethane	0.14	U	1.0	ug/L							
Bromodichloromethane	0.19	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.16	U	1.0	ug/L							
4-Methyl-2-pentanone	0.36	U	5.0	ug/L							
Toluene	0.15	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.18	U	1.0	ug/L							
Ethyl Methacrylate	0.17	U	2.0	ug/L							
1,1,2-Trichloroethane	0.24	U	1.0	ug/L							
1,3-Dichloropropane	0.18	U	1.0	ug/L							
Tetrachloroethene	0.25	U	1.0	ug/L							
2-Hexanone	0.24	U	5.0	ug/L							
Dibromochloromethane	0.18	U	1.0	ug/L							
1,2-Dibromoethane	0.19	U	1.0	ug/L							
Chlorobenzene	0.16	U	1.0	ug/L							
1,1,1,2-Tetrachloroethane	0.16	U	1.0	ug/L							
Ethylbenzene	0.17	U	1.0	ug/L							
Styrene	0.12	U	1.0	ug/L							
Bromoform	0.36	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.27	U	1.0	ug/L							
1,2,3-Trichloropropane	0.32	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.60	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,4-Dichlorobenzene	0.15	U	1.0	ug/L							
1,2-Dichlorobenzene	0.17	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.19	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
Hexachlorobutadiene	0.33	U	1.0	ug/L							
Naphthalene	0.25	U	1.0	ug/L							
Xylenes (Total)	0.21	U	1.0	ug/L							
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*61-120*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*84*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*69-120*			

LCS (8D22026-BS1) Prepared: 04/22/2008 12:57 Analyzed: 04/22/2008 19:03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	22		1.0	ug/L	20.0		110	71-121			
Benzene	21		1.0	ug/L	20.0		106	77-128			
Trichloroethene	17		1.0	ug/L	20.0		87	79-120			
Toluene	18		1.0	ug/L	20.0		88	77-120			
Chlorobenzene	18		1.0	ug/L	20.0		90	78-120			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*91*	*61-120*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*86*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*41*			*ug/L*	*50.0*		*82*	*69-120*			

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Volatile Organic Compounds by GCMS - Quality Control

Batch 8D22026 - EPA 5030B_MS

Matrix Spike (8D22026-MS1) Prepared: 04/22/2008 12:57 Analyzed: 04/22/2008 19:32

Source: C803671-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	28		1.0	ug/L	20.0	0.20 U	138	71-121			QM-07
Benzene	24		1.0	ug/L	20.0	0.20 U	122	77-128			
Trichloroethene	21		1.0	ug/L	20.0	0.25 U	105	79-120			
Toluene	20		1.0	ug/L	20.0	0.20 U	102	77-120			
Chlorobenzene	20		1.0	ug/L	20.0	0.27 U	101	78-120			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*91*	*61-120*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*85*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*69-120*			

Matrix Spike Dup (8D22026-MSD1) Prepared: 04/22/2008 12:57 Analyzed: 04/22/2008 20:01

Source: C803671-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	25		1.0	ug/L	20.0	0.20 U	126	71-121	9	27	QM-07
Benzene	23		1.0	ug/L	20.0	0.20 U	116	77-128	5	27	
Trichloroethene	19		1.0	ug/L	20.0	0.25 U	97	79-120	8	27	
Toluene	19		1.0	ug/L	20.0	0.20 U	96	77-120	6	23	
Chlorobenzene	19		1.0	ug/L	20.0	0.27 U	96	78-120	6	25	
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*61-120*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*89*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*41*			*ug/L*	*50.0*		*82*	*69-120*			

Batch 8D23026 - EPA 5030B_MS

Blank (8D23026-BLK1) Prepared: 04/23/2008 13:42 Analyzed: 04/24/2008 01:43

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	0.14	U	1.0	ug/L							
Chloromethane	0.18	U	1.0	ug/L							
Vinyl chloride	0.15	U	1.0	ug/L							
Bromomethane	0.21	U	1.0	ug/L							
Chloroethane	0.40	U	1.0	ug/L							
Trichlorofluoromethane	0.16	U	1.0	ug/L							
Acrolein	2.1	U	10	ug/L							
1,1-Dichloroethene	0.14	U	1.0	ug/L							
Acetone	0.90	U	5.0	ug/L							
Iodomethane	0.23	U	2.0	ug/L							
Carbon disulfide	0.12	U	5.0	ug/L							
Acetonitrile	1.8	U	10	ug/L							
3-Chloropropene	0.20	U	1.0	ug/L							
Methylene chloride	0.088	U	1.0	ug/L							
Acrylonitrile	2.0	U	5.0	ug/L							
trans-1,2-Dichloroethene	0.10	U	1.0	ug/L							
1,1-Dichloroethane	0.090	U	1.0	ug/L							
Vinyl acetate	0.19	U	2.0	ug/L							
Chloroprene	0.19	U	1.0	ug/L							

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Volatile Organic Compounds by GCMS - Quality Control

Batch 8D23026 - EPA 5030B_MS

Blank (8D23026-BLK1) Continued Prepared: 04/23/2008 13:42 Analyzed: 04/24/2008 01:43

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Butanone	0.56	U	5.0	ug/L							
cis-1,2-Dichloroethene	0.14	U	1.0	ug/L							
2,2-Dichloropropane	0.16	U	1.0	ug/L							
Propionitrile	1.6	U	10	ug/L							
Methacrylonitrile	0.69	U	10	ug/L							
Bromochloromethane	0.19	U	1.0	ug/L							
Chloroform	0.16	U	1.0	ug/L							
1,1,1-Trichloroethane	0.24	U	1.0	ug/L							
1,1-Dichloropropene	0.13	U	1.0	ug/L							
Isobutyl alcohol	8.4	U	20	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
1,2-Dichloroethane	0.36	U	1.0	ug/L							
Benzene	0.12	U	1.0	ug/L							
Trichloroethene	0.23	U	1.0	ug/L							
1,2-Dichloropropane	0.18	U	1.0	ug/L							
Methyl Methacrylate	0.38	U	1.0	ug/L							
Dibromomethane	0.14	U	1.0	ug/L							
Bromodichloromethane	0.19	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.16	U	1.0	ug/L							
4-Methyl-2-pentanone	0.36	U	5.0	ug/L							
Toluene	0.15	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.18	U	1.0	ug/L							
Ethyl Methacrylate	0.17	U	2.0	ug/L							
1,1,2-Trichloroethane	0.24	U	1.0	ug/L							
1,3-Dichloropropane	0.18	U	1.0	ug/L							
Tetrachloroethene	0.25	U	1.0	ug/L							
2-Hexanone	0.24	U	5.0	ug/L							
Dibromochloromethane	0.18	U	1.0	ug/L							
1,2-Dibromoethane	0.19	U	1.0	ug/L							
Chlorobenzene	0.16	U	1.0	ug/L							
1,1,1,2-Tetrachloroethane	0.16	U	1.0	ug/L							
Ethylbenzene	0.17	U	1.0	ug/L							
Styrene	0.12	U	1.0	ug/L							
Bromoform	0.36	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.27	U	1.0	ug/L							
1,2,3-Trichloropropane	0.32	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.60	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,4-Dichlorobenzene	0.15	U	1.0	ug/L							
1,2-Dichlorobenzene	0.17	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.19	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
Hexachlorobutadiene	0.33	U	1.0	ug/L							
Naphthalene	0.25	U	1.0	ug/L							
Xylenes (Total)	0.21	U	1.0	ug/L							
Surrogate: Dibromofluoromethane	*41*			*ug/L*	*50.0*		*82*	*61-120*			
Surrogate: Toluene-d8	*41*			*ug/L*	*50.0*		*82*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*69-120*			

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Volatile Organic Compounds by GCMS - Quality Control

Batch 8D23026 - EPA 5030B_MS

LCS (8D23026-BS1) Prepared: 04/23/2008 13:42 Analyzed: 04/24/2008 02:12

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	24		1.0	ug/L	20.0		121	71-121			
Benzene	24		1.0	ug/L	20.0		119	77-128			
Trichloroethene	19		1.0	ug/L	20.0		94	79-120			
Toluene	19		1.0	ug/L	20.0		94	77-120			
Chlorobenzene	19		1.0	ug/L	20.0		94	78-120			
Surrogate: Dibromofluoromethane	*41*			*ug/L*	*50.0*		*83*	*61-120*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*86*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*79*	*69-120*			

Matrix Spike (8D23026-MS1) Prepared: 04/23/2008 13:42 Analyzed: 04/24/2008 02:42

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	27		1.0	ug/L	20.0	0.20 U	137	71-121			QM-07
Benzene	29		1.0	ug/L	20.0	3.6	126	77-128			
Trichloroethene	24		1.0	ug/L	20.0	3.6	100	79-120			
Toluene	20		1.0	ug/L	20.0	0.20 U	99	77-120			
Chlorobenzene	20		1.0	ug/L	20.0	0.27 U	102	78-120			
Surrogate: Dibromofluoromethane	*43*			*ug/L*	*50.0*		*86*	*61-120*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*86*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*38*			*ug/L*	*50.0*		*76*	*69-120*			

Matrix Spike Dup (8D23026-MSD1) Prepared: 04/23/2008 13:42 Analyzed: 04/24/2008 03:11

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	28		1.0	ug/L	20.0	0.20 U	138	71-121	0.5	27	QM-07
Benzene	30		1.0	ug/L	20.0	3.6	132	77-128	4	27	QM-07
Trichloroethene	24		1.0	ug/L	20.0	3.6	101	79-120	1	27	
Toluene	20		1.0	ug/L	20.0	0.20 U	101	77-120	2	23	
Chlorobenzene	20		1.0	ug/L	20.0	0.27 U	99	78-120	3	25	
Surrogate: Dibromofluoromethane	*43*			*ug/L*	*50.0*		*87*	*61-120*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*89*	*75-99*			
Surrogate: 4-Bromofluorobenzene	*38*			*ug/L*	*50.0*		*76*	*69-120*			

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 8D21028 - EPA 3510C_MS

Blank (8D21028-BLK1) Prepared: 04/21/2008 17:30 Analyzed: 04/23/2008 17:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2,4,5-Tetrachlorobenzene	1.7	U	10	ug/L							
1,3-Dinitrobenzene	1.0	U	10	ug/L							
1,3,5-Trinitrobenzene	1.4	U	10	ug/L							
1,4-Naphthoquinone	3.0	U	10	ug/L							
1,4-Phenylenediamine	4.0	U	10	ug/L							

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Semivolatile Organic Compounds by GCMS - Quality Control

Batch 8D21028 - EPA 3510C_MS

Blank (8D21028-BLK1) Continued Prepared: 04/21/2008 17:30 Analyzed: 04/23/2008 17:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1-Naphthylamine	2.5	U	10	ug/L							
2,3,4,6-Tetrachlorophenol	1.0	U	10	ug/L							
2,4,5-Trichlorophenol	1.1	U	10	ug/L							
2,4,6-Trichlorophenol	1.4	U	10	ug/L							
2,4-Dichlorophenol	1.6	U	10	ug/L							
2,4-Dimethylphenol	3.0	U	10	ug/L							
2,4-Dinitrophenol	1.7	U	10	ug/L							
2,4-Dinitrotoluene	1.2	U	10	ug/L							
2,6-Dichlorophenol	1.7	U	10	ug/L							
2,6-Dinitrotoluene	1.0	U	10	ug/L							
2-Acetylaminofluorene	1.3	U	10	ug/L							
2-Chloronaphthalene	1.6	U	10	ug/L							
2-Chlorophenol	2.0	U	10	ug/L							
2-Methylnaphthalene	2.0	U	10	ug/L							
2-Methylphenol	2.0	U	10	ug/L							
2-Naphthylamine	4.0	U	10	ug/L							
2-Nitroaniline	1.2	U	10	ug/L							
2-Nitrophenol	1.8	U	10	ug/L							
3,3'-Dimethylbenzidine	3.0	U	10	ug/L							
3,3'-Dichlorobenzidine	1.8	U	10	ug/L							
3 & 4-Methylphenol	1.9	U	20	ug/L							
3-Methylcholanthrene	1.3	U	10	ug/L							
3-Nitroaniline	1.6	U	10	ug/L							
2-Methyl-4,6-dinitrophenol	1.4	U	10	ug/L							
4-Aminobiphenyl	3.1	U	10	ug/L							
4-Bromophenyl-phenylether	1.2	U	10	ug/L							
4-Chloro-3-methylphenol	1.4	U	10	ug/L							
4-Chloroaniline	1.6	U	10	ug/L							
4-Chlorophenyl-phenylether	1.2	U	10	ug/L							
4-Nitroaniline	1.4	U	10	ug/L							
4-Nitrophenol	1.2	U	10	ug/L							
5-Nitro-o-toluidine	0.60	U	10	ug/L							
7,12-Dimethylbenz(a)anthracene	1.1	U	10	ug/L							
Acenaphthene	2.0	U	10	ug/L							
Acenaphthylene	2.0	U	10	ug/L							
Acetophenone	2.0	U	10	ug/L							
Anthracene	2.0	U	10	ug/L							
Benzo(a)anthracene	2.0	U	10	ug/L							
Benzo(a)pyrene	2.0	U	10	ug/L							
Benzo(b)fluoranthene	2.0	U	10	ug/L							
Benzo(g,h,i)perylene	2.0	U	10	ug/L							
Benzo(k)fluoranthene	2.0	U	10	ug/L							
Benzyl alcohol	1.0	U	10	ug/L							
Bis(2-chloroethoxy)methane	2.0	U	10	ug/L							
Bis(2-chloroethyl)ether	2.1	U	10	ug/L							
Bis(2-chloroisopropyl)ether	2.2	U	10	ug/L							
Bis(2-ethylhexyl)phthalate	1.9	U	10	ug/L							
Butylbenzylphthalate	1.4	U	10	ug/L							
Chlorobenzilate	1.1	U	10	ug/L							

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 8D21028 - EPA 3510C_MS

Blank (8D21028-BLK1) Continued Prepared: 04/21/2008 17:30 Analyzed: 04/23/2008 17:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chrysene	2.0	U	10	ug/L							
Diallate	1.3	U	10	ug/L							
Dibenzo(a,h)anthracene	2.0	U	10	ug/L							
Dibenzofuran	1.3	U	10	ug/L							
Diethylphthalate	1.3	U	10	ug/L							
Dimethoate	1.0	U	10	ug/L							
Dimethylphthalate	1.1	U	10	ug/L							
Di-n-butylphthalate	1.0	U	10	ug/L							
Di-n-octylphthalate	2.0	U	10	ug/L							
Disulfoton	1.0	U	10	ug/L							
Ethyl methanesulfonate	1.1	U	10	ug/L							
Famphur	1.8	U	10	ug/L							
Fluoranthene	2.0	U	10	ug/L							
Fluorene	2.0	U	10	ug/L							
Hexachlorobenzene	1.1	U	10	ug/L							
Hexachlorobutadiene	2.0	U	10	ug/L							
Hexachlorocyclopentadiene	2.0	U	10	ug/L							
Hexachloroethane	2.4	U	10	ug/L							
Hexachloropropene	1.1	U	10	ug/L							
Indeno(1,2,3-cd)pyrene	2.0	U	10	ug/L							
Isodrin	1.0	U	10	ug/L							
Isophorone	1.8	U	10	ug/L							
Isosafrole	1.3	U	10	ug/L							
Kepone	1.5	U	20	ug/L							
Methapyrilene	3.8	U	10	ug/L							
Methyl Methanesulfonate	2.0	U	10	ug/L							
Methyl parathion	1.2	U	10	ug/L							
Nitrobenzene	1.9	U	10	ug/L							
N-Nitrosodiethylamine	1.9	U	10	ug/L							
N-Nitrosodimethylamine	1.9	U	10	ug/L							
N-Nitrosodi-n-butylamine	1.0	U	10	ug/L							
N-Nitroso-di-n-propylamine	2.1	U	10	ug/L							
N-Nitrosomethylethylamine	1.9	U	10	ug/L							
N-Nitrosopiperidine	1.5	U	10	ug/L							
N-Nitrosopyrrolidine	1.9	U	10	ug/L							
O,O,O-Triethyl phosphorothioate	2.0	U	10	ug/L							
o-Toluidine	1.5	U	10	ug/L							
Parathion	1.2	U	10	ug/L							
p-Dimethylaminoazobenzene	1.2	U	10	ug/L							
Pentachlorobenzene	1.2	U	10	ug/L							
Pentachloronitrobenzene	1.1	U	10	ug/L							
Phenacetin	1.0	U	10	ug/L							
Phenanthrene	2.0	U	10	ug/L							
Phenol	1.5	U	10	ug/L							
Phorate	4.1	U	10	ug/L							
Pronamide	1.0	U	10	ug/L							
Pyrene	2.0	U	10	ug/L							
Safrole	1.9	U	10	ug/L							
Thionazin	1.2	U	10	ug/L							

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Semivolatile Organic Compounds by GCMS - Quality Control

Batch 8D21028 - EPA 3510C_MS

Blank (8D21028-BLK1) Continued Prepared: 04/21/2008 17:30 Analyzed: 04/23/2008 17:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
N-Nitrosodiphenylamine/Diphenylamine	1.1	U	10	ug/L							
Surrogate: 2-Fluorophenol	*51*			*ug/L*	*100*		*51*	*38-71*			
Surrogate: Phenol-d5	*36*			*ug/L*	*100*		*36*	*30-56*			
Surrogate: Nitrobenzene-d5	*39*			*ug/L*	*50.0*		*78*	*45-92*			
Surrogate: 2-Fluorobiphenyl	*36*			*ug/L*	*50.0*		*72*	*36-100*			
Surrogate: 2,4,6-Tribromophenol	*76*			*ug/L*	*100*		*76*	*40-124*			
Surrogate: Terphenyl-d14	*38*			*ug/L*	*50.0*		*75*	*50-139*			

LCS (8D21028-BS1) Prepared: 04/21/2008 17:30 Analyzed: 04/23/2008 17:57

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4-Dinitrotoluene	38		10	ug/L	50.0		76	52-115			
2-Chlorophenol	35		10	ug/L	50.0		69	51-89			
4-Chloro-3-methylphenol	38		10	ug/L	50.0		76	56-103			
4-Nitrophenol	19		10	ug/L	50.0		38	28-86			
Acenaphthene	37		10	ug/L	50.0		73	38-100			
N-Nitroso-di-n-propylamine	42		10	ug/L	50.0		85	51-91			
Phenol	17		10	ug/L	50.0		34	33-58			
Pyrene	42		10	ug/L	50.0		84	61-135			
Surrogate: 2-Fluorophenol	*50*			*ug/L*	*100*		*50*	*38-71*			
Surrogate: Phenol-d5	*35*			*ug/L*	*100*		*35*	*30-56*			
Surrogate: Nitrobenzene-d5	*40*			*ug/L*	*50.0*		*80*	*45-92*			
Surrogate: 2-Fluorobiphenyl	*39*			*ug/L*	*50.0*		*78*	*36-100*			
Surrogate: 2,4,6-Tribromophenol	*69*			*ug/L*	*100*		*69*	*40-124*			
Surrogate: Terphenyl-d14	*40*			*ug/L*	*50.0*		*80*	*50-139*			

Matrix Spike (8D21028-MS1) Prepared: 04/21/2008 17:30 Analyzed: 04/23/2008 18:24

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4-Dinitrotoluene	40		10	ug/L	50.0	1.2 U	80	52-115			
2-Chlorophenol	36		10	ug/L	50.0	2.0 U	72	51-89			
4-Chloro-3-methylphenol	40		10	ug/L	50.0	1.4 U	80	56-103			
4-Nitrophenol	23		10	ug/L	50.0	1.2 U	46	28-86			
Acenaphthene	38		10	ug/L	50.0	2.0 U	77	38-100			
N-Nitroso-di-n-propylamine	44		10	ug/L	50.0	2.1 U	88	51-91			
Phenol	18		10	ug/L	50.0	1.5 U	35	33-58			
Pyrene	42		10	ug/L	50.0	2.0 U	84	61-135			
Surrogate: 2-Fluorophenol	*39*			*ug/L*	*100*		*39*	*38-71*			
Surrogate: Phenol-d5	*35*			*ug/L*	*100*		*35*	*30-56*			
Surrogate: Nitrobenzene-d5	*39*			*ug/L*	*50.0*		*79*	*45-92*			
Surrogate: 2-Fluorobiphenyl	*39*			*ug/L*	*50.0*		*79*	*36-100*			
Surrogate: 2,4,6-Tribromophenol	*75*			*ug/L*	*100*		*75*	*40-124*			
Surrogate: Terphenyl-d14	*41*			*ug/L*	*50.0*		*81*	*50-139*			

Matrix Spike Dup (8D21028-MSD1) Prepared: 04/21/2008 17:30 Analyzed: 04/23/2008 18:52

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 8D21028 - EPA 3510C_MS

Matrix Spike Dup (8D21028-MSD1) Continued Prepared: 04/21/2008 17:30 Analyzed: 04/23/2008 18:52

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4-Dinitrotoluene	34		10	ug/L	50.0	1.2 U	68	52-115	15	15	
2-Chlorophenol	32		10	ug/L	50.0	2.0 U	65	51-89	10	22	
4-Chloro-3-methylphenol	35		10	ug/L	50.0	1.4 U	71	56-103	13	28	
4-Nitrophenol	20		10	ug/L	50.0	1.2 U	39	28-86	14	16	
Acenaphthene	33		10	ug/L	50.0	2.0 U	66	38-100	16	27	
N-Nitroso-di-n-propylamine	39		10	ug/L	50.0	2.1 U	77	51-91	13	16	
Phenol	16		10	ug/L	50.0	1.5 U	32	33-58	9	20	QM-07
Pyrene	37		10	ug/L	50.0	2.0 U	73	61-135	14	20	
Surrogate: 2-Fluorophenol	*45*			*ug/L*	*100*		*45*	*38-71*			
Surrogate: Phenol-d5	*32*			*ug/L*	*100*		*32*	*30-56*			
Surrogate: Nitrobenzene-d5	*34*			*ug/L*	*50.0*		*69*	*45-92*			
Surrogate: 2-Fluorobiphenyl	*33*			*ug/L*	*50.0*		*67*	*36-100*			
Surrogate: 2,4,6-Tribromophenol	*64*			*ug/L*	*100*		*64*	*40-124*			
Surrogate: Terphenyl-d14	*36*			*ug/L*	*50.0*		*71*	*50-139*			

Organochlorine Pesticides by GC - Quality Control

Batch 8D22002 - EPA 3510C

Blank (8D22002-BLK1) Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 10:52

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
alpha-BHC	0.0010	U	0.050	ug/L							
beta-BHC	0.0030	U	0.050	ug/L							
gamma-BHC	0.0020	U	0.050	ug/L							
delta-BHC	0.0020	U	0.050	ug/L							
Heptachlor	0.0030	U	0.050	ug/L							
Aldrin	0.0030	U	0.050	ug/L							
Heptachlor epoxide	0.0040	U	0.050	ug/L							
Chlordane-gamma	0.0050	U	0.050	ug/L							
Chlordane-alpha	0.0090	U	0.050	ug/L							
4,4'-DDE	0.0060	U	0.050	ug/L							
Endosulfan I	0.0040	U	0.050	ug/L							
Dieldrin	0.0060	U	0.050	ug/L							
Endrin	0.0040	U	0.050	ug/L							
4,4'-DDD	0.0050	U	0.050	ug/L							
Endosulfan II	0.0040	U	0.050	ug/L							
4,4'-DDT	0.0050	U	0.050	ug/L							
Endrin aldehyde	0.0040	U	0.050	ug/L							
Methoxychlor	0.0060	U	0.050	ug/L							
Endosulfan sulfate	0.0040	U	0.050	ug/L							
Chlordane (tech)	0.020	U	0.50	ug/L							
Toxaphene	0.67	U	1.0	ug/L							
Surrogate: 2,4,5,6-TCMX	*0.80*			*ug/L*	*1.00*		*80*	*39-151*			
Surrogate: Decachlorobiphenyl	*0.88*			*ug/L*	*1.00*		*88*	*70-130*			

LCS (8D22002-BS1) Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 11:16

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Organochlorine Pesticides by GC - Quality Control

Batch 8D22002 - EPA 3510C

LCS (8D22002-BS1) Continued Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 11:16

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
gamma-BHC	0.69		0.050	ug/L	1.00		69	50-150			
Heptachlor	0.66		0.050	ug/L	1.00		66	50-150			
Aldrin	0.61		0.050	ug/L	1.00		61	50-150			
Dieldrin	0.69		0.050	ug/L	1.00		69	50-150			
Endrin	0.58		0.050	ug/L	1.00		58	50-150			
4,4'-DDT	0.68		0.050	ug/L	1.00		68	50-150			
Surrogate: 2,4,5,6-TCMX	*0.76*			*ug/L*	*1.00*		*76*	*39-151*			
Surrogate: Decachlorobiphenyl	*0.80*			*ug/L*	*1.00*		*80*	*70-130*			

Matrix Spike (8D22002-MS1) Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 11:40

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
gamma-BHC	0.71		0.050	ug/L	1.00	0.0020 U	71	48-118			
Heptachlor	0.71		0.050	ug/L	1.00	0.0030 U	71	42-163			
Aldrin	0.67		0.050	ug/L	1.00	0.0030 U	67	41-154			
Dieldrin	0.71		0.050	ug/L	1.00	0.0060 U	71	41-154			
Endrin	0.65		0.050	ug/L	1.00	0.0040 U	65	38-183			
4,4'-DDT	0.72		0.050	ug/L	1.00	0.0050 U	72	53-143			
Surrogate: 2,4,5,6-TCMX	*0.83*			*ug/L*	*1.00*		*83*	*39-151*			
Surrogate: Decachlorobiphenyl	*0.94*			*ug/L*	*1.00*		*94*	*70-130*			

Matrix Spike Dup (8D22002-MSD1) Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 12:04

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
gamma-BHC	0.74		0.050	ug/L	1.00	0.0020 U	74	48-118	3	21	
Heptachlor	0.72		0.050	ug/L	1.00	0.0030 U	72	42-163	1	25	
Aldrin	0.69		0.050	ug/L	1.00	0.0030 U	69	41-154	2	22	
Dieldrin	0.72		0.050	ug/L	1.00	0.0060 U	72	41-154	1	22	
Endrin	0.65		0.050	ug/L	1.00	0.0040 U	65	38-183	0.9	26	
4,4'-DDT	0.72		0.050	ug/L	1.00	0.0050 U	72	53-143	1	24	
Surrogate: 2,4,5,6-TCMX	*0.82*			*ug/L*	*1.00*		*82*	*39-151*			
Surrogate: Decachlorobiphenyl	*0.74*			*ug/L*	*1.00*		*74*	*70-130*			

Polychlorinated Biphenyls by GC - Quality Control

Batch 8D22002 - EPA 3510C

Blank (8D22002-BLK1) Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 10:52

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1016/1242	0.19	U	1.0	ug/L							
PCB-1221	0.21	U	1.0	ug/L							
PCB-1232	0.21	U	1.0	ug/L							
PCB-1248	0.21	U	1.0	ug/L							
PCB-1254	0.21	U	1.0	ug/L							

QUALITY CONTROL

Polychlorinated Biphenyls by GC - Quality Control

Batch 8D22002 - EPA 3510C

Blank (8D22002-BLK1) Continued Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 10:52

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1260	0.21	U	1.0	ug/L							
Surrogate: 2,4,5,6-TCMX	*0.80*			*ug/L*	*1.00*		*80*	*39-151*			
Surrogate: Decachlorobiphenyl	*0.88*			*ug/L*	*1.00*		*88*	*70-130*			

LCS (8D22002-BS2) Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 12:28

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1016/1242	9.4		1.0	ug/L	10.0		94	50-150			
PCB-1260	7.4		1.0	ug/L	10.0		74	50-150			
Surrogate: 2,4,5,6-TCMX	*0.73*			*ug/L*	*1.00*		*73*	*39-151*			
Surrogate: Decachlorobiphenyl	*0.72*			*ug/L*	*1.00*		*72*	*70-130*			

Matrix Spike (8D22002-MS2) Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 12:52

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1016/1242	9.4		1.0	ug/L	10.0	0.19 U	94	43-135			
PCB-1260	7.7		1.0	ug/L	10.0	0.21 U	77	46-142			
Surrogate: 2,4,5,6-TCMX	*0.77*			*ug/L*	*1.00*		*77*	*39-151*			
Surrogate: Decachlorobiphenyl	*0.94*			*ug/L*	*1.00*		*94*	*70-130*			

Matrix Spike Dup (8D22002-MSD2) Prepared: 04/22/2008 07:26 Analyzed: 04/23/2008 13:16

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1016/1242	9.6		1.0	ug/L	10.0	0.19 U	96	43-135	2	23	
PCB-1260	7.7		1.0	ug/L	10.0	0.21 U	77	46-142	0	31	
Surrogate: 2,4,5,6-TCMX	*0.76*			*ug/L*	*1.00*		*76*	*39-151*			
Surrogate: Decachlorobiphenyl	*0.91*			*ug/L*	*1.00*		*91*	*70-130*			

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 8D21002 - EPA 3005A

Blank (8D21002-BLK1) Prepared: 04/21/2008 07:27 Analyzed: 04/23/2008 11:21

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.0	U	10.0	ug/L							
Barium	0.20	U	10.0	ug/L							
Beryllium	0.70	U	1.00	ug/L							
Cadmium	0.50	U	1.00	ug/L							
Chromium	2.0	U	10.0	ug/L							
Cobalt	2.0	U	10.0	ug/L							
Copper	0.60	U	10.0	ug/L							
Lead	2.0	U	10.0	ug/L							
Nickel	2.0	U	10.0	ug/L							
Selenium	2.0	U	10.0	ug/L							

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Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 8D21002 - EPA 3005A

Blank (8D21002-BLK1) Continued Prepared: 04/21/2008 07:27 Analyzed: 04/23/2008 11:21

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	2.0	U	10.0	ug/L							
Tin	**2.6**	**J**	10.0	ug/L							
Vanadium	1.0	U	10.0	ug/L							
Zinc	1.0	U	10.0	ug/L							

LCS (8D21002-BS1) Prepared: 04/21/2008 07:27 Analyzed: 04/23/2008 11:28

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	518		10.0	ug/L	500		104	82-117			
Barium	518		10.0	ug/L	500		104	72-125			
Beryllium	261		1.00	ug/L	250		105	75-121			
Cadmium	266		1.00	ug/L	250		107	72-120			
Chromium	503		10.0	ug/L	500		101	78-119			
Cobalt	499		10.0	ug/L	500		100	76-117			
Copper	252		10.0	ug/L	250		101	80-117			
Lead	510		10.0	ug/L	500		102	72-121			
Nickel	519		10.0	ug/L	500		104	78-116			
Selenium	526		10.0	ug/L	500		105	82-127			
Silver	47.5		10.0	ug/L	50.0		95	80-128			
Tin	488	B	10.0	ug/L	500		98	83-117			
Vanadium	241		10.0	ug/L	250		96	78-117			
Zinc	512		10.0	ug/L	500		102	80-120			

Matrix Spike (8D21002-MS1) Prepared: 04/21/2008 07:27 Analyzed: 04/23/2008 11:44

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	506		10.0	ug/L	500	2.0 U	101	64-126			
Barium	583		10.0	ug/L	500	66.4	103	74-119			
Beryllium	261		1.00	ug/L	250	0.70 U	105	70-131			
Cadmium	262		1.00	ug/L	250	0.50 U	105	68-121			
Chromium	502		10.0	ug/L	500	2.0 U	100	73-120			
Cobalt	510		10.0	ug/L	500	13.3	99	76-120			
Copper	256		10.0	ug/L	250	4.00	101	75-123			
Lead	505		10.0	ug/L	500	2.4	101	68-126			
Nickel	520		10.0	ug/L	500	7.8	102	64-126			
Selenium	524		10.0	ug/L	500	2.0 U	105	65-129			
Silver	48.5		10.0	ug/L	50.0	2.0 U	97	69-121			
Tin	485	B	10.0	ug/L	500	2.0 U	97	81-124			
Vanadium	238		10.0	ug/L	250	1.0 U	95	71-130			
Zinc	518		10.0	ug/L	500	14.7	101	63-131			

Matrix Spike Dup (8D21002-MSD1) Prepared: 04/21/2008 07:27 Analyzed: 04/23/2008 11:51

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	517		10.0	ug/L	500	2.0 U	103	64-126	2	12	

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 8D21002 - EPA 3005A

Matrix Spike Dup (8D21002-MSD1) Continued Prepared: 04/21/2008 07:27 Analyzed: 04/23/2008 11:51

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Barium	595		10.0	ug/L	500	66.4	106	74-119	2	11	
Beryllium	266		1.00	ug/L	250	0.70 U	106	70-131	2	21	
Cadmium	267		1.00	ug/L	250	0.50 U	107	68-121	2	12	
Chromium	510		10.0	ug/L	500	2.0 U	102	73-120	2	10	
Cobalt	521		10.0	ug/L	500	13.3	101	76-120	2	17	
Copper	260		10.0	ug/L	250	4.00	102	75-123	1	16	
Lead	514		10.0	ug/L	500	2.4	102	68-126	2	19	
Nickel	530		10.0	ug/L	500	7.8	104	64-126	2	12	
Selenium	530		10.0	ug/L	500	2.0 U	106	65-129	1	10	
Silver	47.9		10.0	ug/L	50.0	2.0 U	96	69-121	1	12	
Tin	495	B	10.0	ug/L	500	2.0 U	99	81-124	2	18	
Vanadium	242		10.0	ug/L	250	1.0 U	97	71-130	2	16	
Zinc	533		10.0	ug/L	500	14.7	104	63-131	3	24	

Batch 8D21003 - EPA 3005A

Blank (8D21003-BLK1) Prepared: 04/21/2008 07:34 Analyzed: 04/24/2008 14:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.68	U	2.00	ug/L							
Thallium	0.036	U	1.00	ug/L							

LCS (8D21003-BS1) Prepared: 04/21/2008 07:34 Analyzed: 04/24/2008 14:35

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	28.1		2.00	ug/L	25.0		112	85-115			
Thallium	28.6		1.00	ug/L	25.0		114	85-115			

Matrix Spike (8D21003-MS1) Prepared: 04/21/2008 07:34 Analyzed: 04/24/2008 14:41

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	27.6		2.00	ug/L	25.0	0.68 U	110	85-115			
Thallium	28.9		1.00	ug/L	25.0	0.120	115	85-115			

Matrix Spike Dup (8D21003-MSD1) Prepared: 04/21/2008 07:34 Analyzed: 04/24/2008 14:44

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	24.9		2.00	ug/L	25.0	0.68 U	100	85-115	10	20	
Thallium	26.6		1.00	ug/L	25.0	0.120	106	85-115	8	20	

Batch 8D22007 - EPA 7470A

Blank (8D22007-BLK1) Prepared: 04/22/2008 09:33 Analyzed: 04/23/2008 16:20

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QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 8D22007 - EPA 7470A

Blank (8D22007-BLK1) Continued Prepared: 04/22/2008 09:33 Analyzed: 04/23/2008 16:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.11	U	0.20	ug/L							

LCS (8D22007-BS1) Prepared: 04/22/2008 09:33 Analyzed: 04/23/2008 16:23

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.96		0.20	ug/L	5.00		99	87-123			

Matrix Spike (8D22007-MS1) Prepared: 04/22/2008 09:33 Analyzed: 04/23/2008 16:30

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.75		0.20	ug/L	5.00	0.41	87	63-132			

Matrix Spike Dup (8D22007-MSD1) Prepared: 04/22/2008 09:33 Analyzed: 04/23/2008 16:34

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.98		0.20	ug/L	5.00	0.41	91	63-132	5	10	

Post Spike (8D22007-PS1) Prepared: 04/22/2008 09:33 Analyzed: 04/23/2008 16:43

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.55		0.20	ug/L	5.00	0.41	103	0-200			

Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Batch 8D24002 - EPA 3005A

Blank (8D24002-BLK1) Prepared: 04/24/2008 07:14 Analyzed: 04/28/2008 14:32

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.0	U	10.0	ug/L							
Barium	**0.50**	**J**	10.0	ug/L							
Beryllium	0.70	U	1.00	ug/L							
Cadmium	0.50	U	1.00	ug/L							
Chromium	2.0	U	10.0	ug/L							
Cobalt	2.0	U	10.0	ug/L							
Copper	0.60	U	10.0	ug/L							
Lead	2.0	U	10.0	ug/L							
Nickel	2.0	U	10.0	ug/L							
Selenium	2.0	U	10.0	ug/L							
Silver	2.0	U	10.0	ug/L							
Vanadium	1.0	U	10.0	ug/L							
Zinc	**1.0**	**J**	10.0	ug/L							

LCS (8D24002-BS1) Prepared: 04/24/2008 07:14 Analyzed: 04/28/2008 14:39

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QUALITY CONTROL

Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Batch 8D24002 - EPA 3005A

LCS (8D24002-BS1) Continued Prepared: 04/24/2008 07:14 Analyzed: 04/28/2008 14:39

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	488		10.0	ug/L	500		98	82-117			
Barium	516	B	10.0	ug/L	500		103	72-125			
Beryllium	252		1.00	ug/L	250		101	75-121			
Cadmium	256		1.00	ug/L	250		103	72-120			
Chromium	490		10.0	ug/L	500		98	78-119			
Cobalt	484		10.0	ug/L	500		97	76-117			
Copper	247		10.0	ug/L	250		99	80-117			
Lead	487		10.0	ug/L	500		97	72-121			
Nickel	505		10.0	ug/L	500		101	78-116			
Selenium	505		10.0	ug/L	500		101	82-127			
Silver	46.0		10.0	ug/L	50.0		92	80-128			
Vanadium	235		10.0	ug/L	250		94	78-117			
Zinc	497	B	10.0	ug/L	500		99	80-120			

Matrix Spike (8D24002-MS1) Prepared: 04/24/2008 07:14 Analyzed: 04/28/2008 14:53

Source: C804069-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	487		10.0	ug/L	500	2.0 U	97	64-126			
Barium	631	B	10.0	ug/L	500	115	103	74-119			
Beryllium	252		1.00	ug/L	250	0.70 U	101	70-131			
Cadmium	250		1.00	ug/L	250	0.50 U	100	68-121			
Chromium	466		10.0	ug/L	500	2.0 U	93	73-120			
Cobalt	584		10.0	ug/L	500	105	96	76-120			
Copper	236		10.0	ug/L	250	0.60 U	94	75-123			
Lead	479		10.0	ug/L	500	2.0 U	96	68-126			
Nickel	514		10.0	ug/L	500	14.9	100	64-126			
Selenium	496		10.0	ug/L	500	2.0 U	99	65-129			
Silver	46.1		10.0	ug/L	50.0	2.0 U	92	69-121			
Vanadium	168		10.0	ug/L	250	1.0 U	67	71-130			QM-07
Zinc	516	B	10.0	ug/L	500	31.0	97	63-131			

Matrix Spike Dup (8D24002-MSD1) Prepared: 04/24/2008 07:14 Analyzed: 04/28/2008 15:00

Source: C804069-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	480		10.0	ug/L	500	2.0 U	96	64-126	1	12	
Barium	626	B	10.0	ug/L	500	115	102	74-119	0.9	11	
Beryllium	250		1.00	ug/L	250	0.70 U	100	70-131	0.8	21	
Cadmium	248		1.00	ug/L	250	0.50 U	99	68-121	1	12	
Chromium	462		10.0	ug/L	500	2.0 U	92	73-120	0.8	10	
Cobalt	580		10.0	ug/L	500	105	95	76-120	0.6	17	
Copper	235		10.0	ug/L	250	0.60 U	94	75-123	0.2	16	
Lead	473		10.0	ug/L	500	2.0 U	95	68-126	1	19	
Nickel	507		10.0	ug/L	500	14.9	98	64-126	1	12	
Selenium	491		10.0	ug/L	500	2.0 U	98	65-129	1	10	
Silver	46.5		10.0	ug/L	50.0	2.0 U	93	69-121	0.9	12	
Vanadium	167		10.0	ug/L	250	1.0 U	67	71-130	0.7	16	QM-07

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QUALITY CONTROL

Metals (Dissolved) by EPA 6000/7000 Series Methods - Quality Control

Batch 8D24002 - EPA 3005A

Matrix Spike Dup (8D24002-MSD1) Continued Prepared: 04/24/2008 07:14 Analyzed: 04/28/2008 15:00

Source: C804069-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Zinc	511	B	10.0	ug/L	500	31.0	96	63-131	0.9	24	

Batch 8D24003 - EPA 3005A

Blank (8D24003-BLK1) Prepared: 04/24/2008 07:17 Analyzed: 04/28/2008 11:35

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.68	U	2.00	ug/L							
Thallium	0.036	U	1.00	ug/L							

LCS (8D24003-BS1) Prepared: 04/24/2008 07:17 Analyzed: 04/28/2008 11:38

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	26.4		2.00	ug/L	25.0		106	85-115			
Thallium	26.6		1.00	ug/L	25.0		106	85-115			

Matrix Spike (8D24003-MS1) Prepared: 04/24/2008 07:17 Analyzed: 04/28/2008 11:43

Source: C804069-05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	26.9		2.00	ug/L	25.0	0.68 U	107	85-115			
Thallium	26.4		1.00	ug/L	25.0	0.036 U	106	85-115			

Matrix Spike Dup (8D24003-MSD1) Prepared: 04/24/2008 07:17 Analyzed: 04/28/2008 11:46

Source: C804069-05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	26.6		2.00	ug/L	25.0	0.68 U	106	85-115	1	20	
Thallium	26.6		1.00	ug/L	25.0	0.036 U	106	85-115	0.6	20	

Classical Chemistry Parameters - Quality Control

Batch 8D21004 - NO PREP

Blank (8D21004-BLK1) Prepared: 04/21/2008 10:47 Analyzed: 04/22/2008 10:09

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	4.0	U	5.0	ug/L							

Blank (8D21004-BLK2) Prepared: 04/21/2008 15:38 Analyzed: 04/22/2008 10:11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	4.0	U	5.0	ug/L							

LCS (8D21004-BS1) Prepared: 04/21/2008 10:47 Analyzed: 04/22/2008 10:13

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 8D21004 - NO PREP

LCS (8D21004-BS1) Continued Prepared: 04/21/2008 10:47 Analyzed: 04/22/2008 10:13

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	150		5.0	ug/L	150		98	85-115			

Matrix Spike (8D21004-MS1) Prepared: 04/21/2008 15:38 Analyzed: 04/22/2008 10:36

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	72		5.0	ug/L	150	4.0 U	48	85-115			QM-13

Matrix Spike Dup (8D21004-MSD1) Prepared: 04/21/2008 15:38 Analyzed: 04/22/2008 10:38

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	100		5.0	ug/L	150	4.0 U	66	85-115	33	20	QM-13

Batch 8D22027 - NO PREP

Blank (8D22027-BLK1) Prepared: 04/22/2008 14:03 Analyzed: 04/24/2008 10:54

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	4.0	U	5.0	ug/L							

LCS (8D22027-BS1) Prepared: 04/22/2008 14:03 Analyzed: 04/24/2008 10:56

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	150		5.0	ug/L	150		100	85-115			

Matrix Spike (8D22027-MS1) Prepared: 04/22/2008 14:03 Analyzed: 04/24/2008 11:00

Source: C804069-01RE1

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	84		5.0	ug/L	150	4.0 U	56	85-115			QM-14

Matrix Spike Dup (8D22027-MSD1) Prepared: 04/22/2008 14:03 Analyzed: 04/24/2008 11:02

Source: C804069-01RE1

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	61		5.0	ug/L	150	4.0 U	41	85-115	32	20	QM-14

Batch 8D23004 - NO PREP

Blank (8D23004-BLK1) Prepared & Analyzed: 04/21/2008 14:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	0.10	U	0.10	mg/L							

LCS (8D23004-BS1) Prepared & Analyzed: 04/21/2008 14:08

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QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 8D23004 - NO PREP

LCS (8D23004-BS1) Continued Prepared & Analyzed: 04/21/2008 14:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	0.39		0.10	mg/L	0.401		98	80-120			

LCS Dup (8D23004-BSD1) Prepared & Analyzed: 04/21/2008 14:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	0.40		0.10	mg/L	0.401		100	80-120	3	200	

Duplicate (8D23004-DUP1) Prepared & Analyzed: 04/21/2008 14:08

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	0.10	U	0.10	mg/L		0.10 U				200	

Batch 8D23015 - NO PREP

Blank (8D23015-BLK1) Prepared: 04/23/2008 11:03 Analyzed: 04/23/2008 14:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	480	U	5000	ug/L							

LCS (8D23015-BS1) Prepared: 04/23/2008 11:03 Analyzed: 04/23/2008 14:30

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	100		5.0	mg/L	100		104	80-120			

Matrix Spike (8D23015-MS1) Prepared: 04/23/2008 11:03 Analyzed: 04/23/2008 14:39

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	110		5.0	mg/L	100	1.7	104	80-120			

Matrix Spike Dup (8D23015-MSD1) Prepared: 04/23/2008 11:03 Analyzed: 04/23/2008 14:40

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	100		5.0	mg/L	100	1.7	99	80-120	4	25	

QUALITY CONTROL

Chlorinated Herbicides by GC - Quality Control

Batch 8D22005 - EPA 3510C

Blank (8D22005-BLK1) Prepared: 04/22/2008 11:14 Analyzed: 04/25/2008 04:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4-D	0.12	U	0.50	ug/L							
Pentachlorophenol	0.13	U	0.50	ug/L							

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QUALITY CONTROL

Chlorinated Herbicides by GC - Quality Control

Batch 8D22005 - EPA 3510C

Blank (8D22005-BLK1) Continued Prepared: 04/22/2008 11:14 Analyzed: 04/25/2008 04:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-TP (Silvex)	0.11	U	0.50	ug/L							
2,4,5-T	0.11	U	0.50	ug/L							
Dinoseb	0.23	U	0.50	ug/L							
Surrogate: 2,4-DCAA	*2.1*			*ug/L*	*2.00*		*104*	*77-191*			

LCS (8D22005-BS1) Prepared: 04/22/2008 11:14 Analyzed: 04/25/2008 04:38

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4-D	2.1		0.50	ug/L	2.00		105	85-140			
2,4,5-TP (Silvex)	2.7		0.50	ug/L	2.00		136	74-177			
Surrogate: 2,4-DCAA	*2.4*			*ug/L*	*2.00*		*122*	*77-191*			

Matrix Spike (8D22005-MS1) Prepared: 04/22/2008 11:14 Analyzed: 04/25/2008 05:10

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4-D	2.3		0.50	ug/L	2.00	0.21 U	113	85-140			
2,4,5-TP (Silvex)	2.9		0.50	ug/L	2.00	0.12 U	144	74-177			
Surrogate: 2,4-DCAA	*2.9*			*ug/L*	*2.00*		*144*	*77-191*			

Matrix Spike Dup (8D22005-MSD1) Prepared: 04/22/2008 11:14 Analyzed: 04/25/2008 05:43

Source: C804069-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4-D	2.1		0.50	ug/L	2.00	0.21 U	107	85-140	5	18	
2,4,5-TP (Silvex)	2.8		0.50	ug/L	2.00	0.12 U	141	74-177	2	10	
Surrogate: 2,4-DCAA	*2.8*			*ug/L*	*2.00*		*139*	*77-191*			

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FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-13	Suspected matrix effects
QM-14	Confirmed matrix effects
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, the impact on data quality is minimal.