Groundwater
& Environmental Services, Inc.

2142 Priest Bridge Court • Suite 1 • Crofton, Maryland 21114 • (800) 220-3606 • FAX (410) 721-3733

June 29, 2011

Ms. Ellen Jackson
Oil Control Program
Maryland Department of the Environment
1800 Washington Blvd, Suite 620
Baltimore, MD 21230

RE: **PUMPING TEST SUMMARY/CORRECTIVE ACTION PLAN ADDENDUM**
Wally's BP (former Citgo)
19200 Middletown Road
Parkton, Maryland
MDE Case #2006-0319-BA2

Dear Ms. Jackson:

Groundwater & Environmental Services, Inc. (GES), on behalf of Carroll Independent Fuels Company (CIFC), respectfully submits this Pumping Test Summary (PTS) and Corrective Action Plan Addendum (CAPA) for the Wally's BP (former Citgo) Station located at 19200 Middletown Road in Parkton, Maryland. This PTS and CAPA are being submitted to fulfill Carroll's compliance with the Administrative Consent Order (ACO) entered into by CIFC and the Maryland Department of the Environment (MDE) on March 18, 2011.

GES appreciates the continued guidance of the MDE on this project. If you have any questions or would like additional information, please contact the undersigned at 800-220-3606, extension 3706, or Herb Meade at 410-261-5450.

Sincerely,

Steven M. Slatnick
Sr. Project Manager
Site Operations Manager

Enclosure

c: Christopher Ralston, MDE
Jenny Herman, MDE
Kevin Koepenick, Baltimore County DEPRM
Herb Meade, CIFC
Dwight Stone, Esq., Whiteford Taylor Preston (CD only)
Eric M. Rosenfeld, Esq., Law Offices of Peter G. Angelos (CD only)
Jerry Phillips, 19200 Middletown Road (CD only)
Richard Martin, 1606 Rayville Road
Charles Belt, 1608 Rayville Road
Gail Fissel, 1612 Rayville Road

PUMPING TEST SUMMARY and CORRECTIVE ACTION PLAN ADDENDUM

Wally's BP (former Citgo)
MDE Case #2006-0319-BA2
19200 Middletown Road
Parkton, Maryland 21120

Prepared for:

Carroll Independent Fuel Company
2700 Loch Raven Boulevard
Baltimore, Maryland 21218

June 29, 2011

Prepared by:

Peter Reichardt
Project Hydrogeologist

Steven M. Slatnick
Senior Project Manager

Reviewed by:

Christopher Mulry, PG
VP, Major Projects/ Principal Hydrogeologist

Groundwater & Environmental Services, Inc.

2142 Priest Bridge Ct, Suite 1
Crofton, Maryland 21114
800-220-3606 Ph
410-721-3733 Fx

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION / BACKGROUND

Groundwater & Environmental Services, Inc. (GES), on behalf of Carroll Independent Fuel Company (CIFC), has prepared this Pumping Test Summary (PTS) and Corrective Action Plan Addendum (CAPA) for the Wally's BP (former Citgo) Station located at 19200 Middletown Road in Parkton, Maryland (the Site). This PTS and CAPA are being submitted to fulfill Carroll's compliance with the Administrative Consent Order (ACO) entered into by CIFC and the Maryland Department of the Environment (MDE) on March 18, 2011. The goal of this PTS and CAPA is to present additional remedial and aquifer characterization studies conducted to enhance the conceptual site model (CSM) and overall understanding of the hydrogeology in the study area. Based on these studies, previously completed evaluations and previously documented reports, the design and installation of a long term pump and treat (P&T) groundwater remediation system is proposed for the Site to reduce dissolved phase petroleum constituents in the underlying aquifer. This CAPA should not be reviewed as a stand alone document as previously reported hydrogeologic investigations, aquifer testing, geophysics, pilot testing, CAP and other documented reports prepared by Environmental Alliance (EA) have been incorporated into the development of this CAPA. Key documents associated with this CAPA are referenced in **Section 7.0**.

CIFC is currently working with the property owner of the Site to establish access to extract impacted groundwater from below the property, design and install a P&T system, and to discharge treated effluent water to a proposed on-site infiltration gallery. Once access is established with the property owner, a CAP Implementation Plan (CAPIP) will be submitted to the MDE including but not limited to P&T remediation system design specifics, infiltration gallery design specifics and a proposed schedule for P&T remediation system installation. In addition, once approval for additional remedial implementation efforts are obtained, the MDE will be provided for their approval (under separate cover), procedures for percolation testing of the proposed on-site infiltration gallery location.

The ACO entered into by CIFC and MDE includes a Site Management Schedule agreeing to submission of this CAPA by June 29, 2011 and allowing MDE 60 days to respond with comments, and an additional 30 days for CIFC to respond to MDE comments. It is the goal and intent of CIFC to continue to proactively seek access with the Site property owner to remain on schedule with the ACO.

This PTS and CAPA documents historic investigations and findings at the Site, more recent GES aquifer studies and ongoing monitoring activities as follows:

- Chronology of Site history;
- Presentation of existing Site characterization and monitoring data;
- Site geology, hydrogeology and CSM overview;
- Recovery well step testing activities;
- Background and baseline aquifer water level well monitoring;
- Completion of a 72-hour extended duration pumping test; and
- A conceptual design for a proposed groundwater P&T remediation system.

2.0 FACILITY AND SITE AREA INFORMATION

2.1 Site and Surrounding Area Description

The Site is located at the northwest corner of the intersection of Middletown Road and Rayville Road in the Rayville section of Parkton, Baltimore County, Maryland (**Figure 1** and **Figure 2**). The Site currently houses an active BP Station with a convenience store and delicatessen, Wally's Country Store. A beauty salon is located in the north side of the same building as Wally's. West of the Wally's/beauty shop building is a building housing a bait and gunsmith shop, with an apartment on the second floor. North of both of these buildings is a large industrial building, AIM Machine Shop, used for the manufacture of precision-machined components for defense and other commercial applications. The tank field and dispenser areas at the service station are paved with concrete, and the remainder of the parking and driving surfaces are paved with asphalt. The underground storage tank (UST) system consists of one 12,000-gallon gasoline UST, one 8,000-gallon gasoline UST, and one 10,000-gallon diesel UST in a common tank field, two multi-product dispensers (MPDs) under a canopy, and two freestanding MPDs. The tanks are constructed of double-walled fiberglass-reinforced plastic (FRP) and were installed in February 2008. One 2,000-gallon diesel aboveground storage tank (AST) is also in use at the Site. A **Site Map** illustrating the major site features and buildings is included as **Figure 3**.

The Site is situated at an elevation of approximately 800 feet above mean sea level and the topography slopes toward the west, south and east with an elevation decrease of approximately 8 feet to the southeast. The site is bordered to the east by Middletown Road and to the south by Rayville Road. Residential properties are located on the opposite sides of both of these roads as well as along the western side of Rayville Road abutting the Wally's complex to the south. The Site is bordered to the west by a line of trees, and beyond it is a building housing Currey's Excavating. A farm field is located west of the machine shop, and residences are located to the northwest.

2.1.1 Sensitive Receptors

The Site is located in a High Risk Groundwater Use Area (HRGUA) served by potable supply wells. The station and the machine shop are supplied by on-site potable wells, designated PW-1, PW-2 and PW-3, located to the east and northeast of the machine shop. All residences in the area are served by private potable supply wells. The locations of area potable wells in the study area are illustrated on **Figure 2, Local Area Map**.

The nearest surface water bodies are a tributary to Frog Hollow, located approximately 1,300 feet to the west, and a tributary to Owl Branch, located approximately 1,800 feet to the east. The nearest school is located over one mile from the Site to the northwest, and the nearest day care center is located approximately one-half-mile north of the site.

2.1.2 Utilities

Although not all utilities have been field-verified, on-site below grade utilities include electric, storm sewer, and water lines running from potable wells to the Site buildings. There is no sanitary sewer service to the area; all properties utilize septic systems.

2.2 Chronology of Events

A Chronology of Key Site History, activities and events is attached as **Appendix A.**

2.3 Potable Supply Wells

The three potable wells (designated PW-1, PW-2 and PW-3) previously discussed are located on-site to supply the businesses on the property. The on-site potable supply for Wally's, which is a blended influent from potable wells PW-1 and PW-2, was first sampled on September 15, 2005, and no petroleum constituents were detected above MDE action levels. From September 2005 through December 2005, 35 area potable wells were sampled. Off-site potable well sampling was established for select wells on a quarterly or monthly basis. Currently, the three on-site potable wells and four off-site residential potable wells are sampled on a quarterly basis, and thirteen additional off-site selected residential potable wells are sampled on an annual basis. Samples from area potable wells are analyzed for full-suite Volatile Organic Compounds (VOCs), including fuel oxygenates, via USEPA Method 524.2.

In November 2005, methyl-tert butyl-ether (MTBE) was detected in the domestic wells at 1606 and 1608 Rayville Road above the MDE's action level of 20 micrograms per liter (µg/L), and granular activated carbon (GAC) point-of-entry treatment (POET) filtration systems were installed at these residences. In May 2008, MTBE was detected above the MDE's action level in the domestic well at 1612 Rayville Road, and a GAC POET system was installed at that residence. The influent, midfluent and effluent points of these POET systems are currently sampled on a monthly basis. The sampling schedule and the most recent sampling results for the area potable wells and residential POET systems were submitted to the MDE in EA's *Quarterly Update Report* dated April 12, 2011.

3.0 SITE GEOLOGY, HYDROGEOLOGY AND CONCEPTUAL SITE MODEL

The Site is situated within the Upper Section of the Piedmont Physiographic province of the eastern United States and exists within the Gunpowder Falls watershed. The local geology was once considered part of the formerly designated Wissahickon Formation as the Upper Peltic Schist. More recent investigations (Crowley 1976) have reclassified this area as part of the Prettyboy Schist Formation. The Prettyboy Schist was described by Crowley as a 'uniform, fine-grained plagioclase, chlorite, muscovite, quartz schist with magnetite and albite porphyroblasts'.

Overlying the schist bedrock is a typical Piedmont occurrence of highly-altered, in-place bedrock, commonly referred to as saprolite. The potential hydrogeological significance of a saprolitic lithology is:

- the considerable storage potential of the primary porosity of the weathered rock matrix and,
- the inherent relic structural features, preserved from the parent bedrock, which provide potential preferential pathways for fluid migration (as secondary porosity). Quartz laminates that are typically well preserved in the softer saprolite are also considered potential preferential pathways of fluid migration.

Beneath the saprolite and approaching the competent bedrock horizon, there typically exists within Piedmont lithologies, a transitioning, weathered bedrock interval that grades sharply (or subtly) into the bedrock interface. The weathered rock zone is characterized by a mixture of saprolitic silt matrix and rock fragments derived from in-place groundwater alteration of the underlying bedrock. It is also considered

that the ratio of horizontal hydraulic conductivity (Kh) to vertical hydraulic conductivity (Kv) increases as waters percolating through the overburden and saprolite are directed parallel to the less permeable surface of the bedrock until suitably accepting fracture networks can allow the waters into the fractured rock aquifer system. A cross section transect line and geologic cross section depicting the general subsurface lithology are attached as **Figure 4** and **Figure 5**, respectively.

A CSM proposed by EA in the document titled *Hydrogeologic Investigation Update Report and Work Plan Transmittal* dated February 6, 2007 presents the unconsolidated overburden and saprolite layer thicknesses between 12 to 24 feet and 4 to 14 feet, respectively. The on-site depth to bedrock was reported in this document to exist between approximately 18 feet below grade surface (bgs) (MW-5) to 36 feet bgs (MW-4). On-site depth to water measurements collected June 6, 2010 range from 29.73 feet bgs (MW-17B) to 45.73 feet bgs (MW-15). It is presumed that the lithologic thicknesses and occurrences of bedrock at depth were determined through on-site well installation events prior to February 2007.

A further review of the attached **Table 1** from correspondence titled *Monitoring Well MW-15 Geophysical Testing Report & Recommendations* (August 20, 2010), notes off-site depth-to-rock values ranging from 24 feet bgs (MW-6) to 48 feet bgs (MW-8A/B). It is also presented in the July 15, 2010 *Quarterly Update Report* that groundwater water was observed below the saprolite but existed in the weathered, fractured bedrock interval for wells summarized in the report which included MW-15 through MW-18B and RW-1 through RW-3.

Between 2006 and 2009, EA provided oversight of two (2) down-hole geophysical events and one (1) packer assembly testing event to delineate the occurrence and extent of transmissive hydraulic structural features found within the bedrock aquifer. On August 20, 2010 a report titled *Monitoring Well MW-15 Geophysical Testing Report & Recommendations* was submitted to the MDE. This report summarized the most recent geophysical investigation performed for well MW-15 and also provided a statistical compilation from the two prior down hole geophysical investigations which included three (3) potable use wells (1606 Rayville Road, 1608 Rayville Road, 1612 Rayville Road) and 6 (six) observation wells (MW-7A, MW-7B, MW-8A, MW-9A and MW-9B.) The down-hole geophysical summary provided in the August 20, 2010 report provided the following tabulation of structural features:

Historic Down-hole Geophysical Feature Summary

Planar Features	Dip (degrees)	Dip Direction (degrees)	Strike/Dip
Foliations (52 total)	26	286	N16E/26NW
Fractures (102 total)	34	282	N12E/34NW

Thus, this averaged range of strike (N12E to N16E) will be referenced through the remainder of this report as the "principle strike" direction for planar features associated with bedrock aquifer underlying the Site.

The August 2010 report also presents the following conclusions regarding the bedrock formation underlying the Site:

- A greater density of interpreted water-bearing fractures was noted between approximately 43 to 66 feet bgs. The density of interpreted water bearing fractures decreases with depth.
- A secondary subset of shallow, water bearing fractures was noted with a northwest-southeast strike direction.

- Down-hole geophysical characterizations of the 1606, 1608 and 1612 Rayville Road potable wells confirmed similar construction specifications to existing recovery wells.
- Packer intervals over 70 feet bgs could neither accept injected water nor sufficiently recharge once pumped.

With these considerations, groundwater wells for the Study Area have been installed as either:

- Shallow bedrock wells (designated with "A" in well ID) with open boreholes extending through the shallow bedrock zone (typically <40.5 feet bgs) or as,
- Deep Bedrock Wells (designated with "B" in well ID) with open boreholes extending through the deeper bedrock (typically >70 feet bgs but <120 feet bgs).

The exceptions to this installation strategy are the proposed recovery wells RW-1, RW2, RW- 3 and MW-15 which are constructed as open-hole intervals from 40 feet bgs to 120 feet bgs. These wells cross the two defined shallow and deep bedrock zones providing similar well construction to the impacted potable wells at 1606, 1608 and 1612 Rayville Road.

Occurrence of Groundwater

Historical depths to groundwater within the Study Area typically range from 29.7 feet bgs (MW-17B, June 2010) to 84.88 feet bgs (MW-7B, November 2006). Historic groundwater elevation contour maps for both shallow and deep wells have generally demonstrated a predominant groundwater flow path from the northeast to the southwest, generally parallel to Rayville Road. This flowpath emanates from a localized groundwater mound that appears in the center to northeast corner of the Site, near the station canopy and the Wally's building. This mounding is possibly attributable to a shallow depth to bedrock noted for observation wells placed in the vicinity.

Calculations from the February 2011 shallow groundwater elevation dataset demonstrate a hydraulic gradient of 0.045 feet per foot between MW-10A and MW-18A. The deep well calculations from the same event demonstrate a hydraulic gradient of 0.052 feet per foot between MW-10B and MW-18B.

3.1 Groundwater Quality Summary

Groundwater samples have been collected on a quarterly basis from on- and off-site monitoring wells since September 2005. The major contaminants of concern (COCs) at the Site are benzene, MTBE, total petroleum hydrocarbons (TPH) - gasoline range organics (GRO), TPH - diesel range organics (DRO) and several oxygenate additive related chemicals including tert butyl alcohol (TBA), diisopropyl ether (DIPE) and tert-amyl methyl ether (TAME.)

Benzene has historically been detected above the MDE Groundwater Cleanup Standard for Type I and II Aquifers (MDE GW Standard) of 5 µg/L in monitoring wells MW-3, MW-4, MW-5, MW-7A, MW-10B, MW-14A, MW-14B, MW-15, MW-16A, MW-16B, MW-17B and MW-18B, and in recovery well RW-2. The highest historic concentrations of benzene were typically detected in monitoring wells MW-3 (110 µg/L on September 12, 2005) and MW-5 (210 µg/L on December 1, 2005 and January 20, 2006). These concentrations have decreased over time; the benzene concentration in monitoring well MW-3 has been below the laboratory method detection limit (MDL) during the two most recent groundwater sampling events. The highest concentrations of benzene detected within the past 12 months were observed in monitoring wells MW-14B (88.8 µg/L on February 17, 2011), MW-18B (73.5 µg/L on August 17, 2010),

MW-16B (35.0 on August 17, 2010), MW-16A (29.0 µg/L on November 23, 2010), and MW-15 (28.2 µg/L on February 17, 2011).

MTBE has been detected above the MDE GW Standard of 20 µg/L in 20 out of the 32 on- and off-site monitoring and recovery wells. The highest concentrations of MTBE have historically been detected in monitoring wells MW-3 (81,000 µg/L on November 7, 2007) and MW-7A (18,000 µg/L on February 22, 2008). Within the past 12 months, the highest concentrations of MTBE have been detected in recovery well RW-2 (14,500 µg/L on August 19, 2010), and monitoring wells MW-18B (13,000 µg/L on August 17, 2010) and MW-7A (11,100 µg/L on November 24, 2010).

TPH-GRO has been detected above the MDE GW Standard of 47 µg/L in 23 of the 32 on- and off-site monitoring and recovery wells. The highest concentrations of TPH-GRO have historically been detected in monitoring wells MW-3 (89,000 µg/L on February 21, 2008), MW-5 (31,000 µg/L on September 20, 2006), and MW-7A (23,000 µg/L on February 22, 2008). During the past 12 months, the highest concentrations of TPH-GRO have been detected in monitoring wells MW-3 (3,050 µg/L on August 17, 2010), MW-5 (2,290 µg/L on November 22, 2010), MW-10A (1,580 µg/L on November 23, 2010), and MW-18B (1,310 µg/L on August 17, 2010).

TPH-DRO has been detected above the MDE GW Standard of 47 µg/L in 30 of the 32 on- and off-site monitoring and recovery wells. The highest concentrations of TPH-DRO have historically been detected in monitoring wells MW-5 (49,000 µg/L on September 20, 2006) and MW-1 (12,000 µg/L on November 7, 2007). The highest concentrations of TPH-DRO detected within the last 12 months were observed in monitoring wells MW-5 (2,740 µg/L on November 22, 2010), MW-14B (1,070 µg/L on November 23, 2010) and MW-3 (978 µg/L on August 17, 2010).

4.0 ADDITIONAL AQUIFER CHARACTERIZATION

4.1 Objectives and Methodology

4.1.1 Objectives

A series of pumping tests was completed to support the preparation of this CAPA per requirements stipulated in the March 18, 2011 MDE ACO issued for the case. The purpose of the pumping tests was to determine groundwater flow characteristics within the Study Area and use such data to propose and design an effective groundwater remediation technology to mitigate the further migration of the noted COCs determined for the Site which include dissolved benzene and MTBE. It was therefore proposed in the *Pumping Test Work Plan* dated January 11, 2011 that a 72-hour groundwater pump test would be performed utilizing recovery wells RW-1, RW-2 and RW-3. The work plan also proposed that a "step test" would be performed on each of the planned pumping wells prior to the 72-hour pump test in order to establish suitable and sustainable pumping rates for each pumping test well. The *Pumping Test Work Plan* is attached as **Appendix B**.

An addendum to the *Pumping Test Work Plan* was submitted by GES on January 14, 2011 which proposed an infiltration test phase to occur during the concluding hours of the 72-hour pump test. The wells selected for infiltration testing included MW-8A and MW-8B. The infiltration test was proposed in order to evaluate the possibility of discharging treated groundwater (from a future groundwater remediation system) back to the subsurface groundwater system.

All elements of the proposed step test, 72-hour pump test and infiltration test were accepted with conditions after a series of correspondence between the MDE and GES which culminated in a MDE acceptance letter received March 8, 2011. The final approved elements of the 72-hour pump test at the Wally's Citgo location were agreed upon as follows:

- Installation of groundwater pressure transducers in twenty-six (26) of thirty-five (35) monitoring and potable wells to be utilized for observation of water level fluctuation prior to, during and following (recovery) the 72-hour pump test.
- Conduct a short-term recovery well step drawdown test performed on RW-1, RW-2 and RW-3 at least two days prior to the initiation of the 72-hour pump test.
- Groundwater collected during the step tests to be stored in "frac tank" and tested on rapid analytical turnaround prior to pump test discharge activities to verify acceptable removal of COCs.
- Conduct an extended duration, 72-hour pump test in which recovery wells RW-1 and RW-3 are activated 24 and 48 hours, respectively, from the start of pumping at RW-2.
- All recovery well water flows to be measured by use of dedicated analog and/or digital flow meters/totalizers.
- Collected groundwater from pumping activities to be stored in an on-site, large capacity "frac tank" to be treated via GAC filtration and discharged at grade on an adjacent agricultural lot.
- Daily water quality samples to be collected from each recovery well prior and during the 72-hour pump test and analyzed for full suite VOCs with oxygenates including MTBE via EPA Method 8260 and TPH-GRO and TPH-DRO via EPA Method 8015.
- After a period of recovery from the 72-hour pump test, water quality samples to be collected from all three recovery wells and the three potable wells at 1606, 1608 and 1612 Rayville Road.
- A series of water treatment verification samples to be collected from the influent, mid-GAC unit and effluent sample points during the initial, mid and concluding intervals of the 72-hour pump test.
- Nine (9) of the total thirty-five (35) observation wells in the Study Area network to be manually gauged at increments no less than every 4 hours during the 72-hour pump test. Periodic manual gauging measurements will be collected from each recovery well and all project Study Area observation wells during this timeframe to validate the transducer data and record the aquifer level in observation wells without transducers.
- Potable wells at the 1606, 1608 and 1612 Rayville Road residences will also have electronic pressure transducers set to record groundwater levels both prior to and during the 72-hour pump test. The electronic monitoring of water levels in these wells would occur for an extended period of time prior to the 72-hour pump test in order to evaluate water well usage and the potential susceptibility of water depletion during the sustained yield tests.
- A contingency plan to abort the 72-hour pump test or to provide drinking water supply to any of the monitored potable well homes was established prior to the test. In this plan, progressively-tiered "warning" levels were determined for the 1606, 1608 and 1612 Rayville Road potable wells with the levels posted to each staffer responsible for monitoring water levels during a given shift. A chain-of-communication was established within this contingency plan to best assure both uninterrupted water supply to the three monitored potable wells and performance of an effective long-term, sustained yield pumping test.
- Conduct a groundwater infiltration test eight (8) hours before the conclusion of the 72-hour pump test in wells MW-8A and MW-8B.

- Water used during infiltration test (as injectant) to be tested for full suite VOCs with oxygenates via EPA Method 524.2 and confirmed against drinking water standards prior to infiltration activities.
- At the conclusion of the 72 hour test, pumping from the recovery wells will be terminated with the ensuing the aquifer recharge to be both manually and electronically monitored until 90% of recovery is achieved relative to pre-test conditions.
- A timeline of activities for all testing phases associated with the step, long-term sustained yield and infiltration tests to be performed at the Site to be provided to the MDE.

The following sections will provide a chronological summary of the specific testing activities outlined above.

4.1.2 Baseline Preparation and Data Collection Procedures

Transducer Installation

GES pump test activities began on April 11, 2011, when four In-Situ LevelTroll pressure transducers were installed and activated in the 1606, 1608, and 1612 Rayville Road potable wells and MW-18B. Totalizer values from the POET systems were also recorded as a baseline water usage reference. The day prior, the potable wells were sampled for the quarterly monitoring requirement by EA. The transducers installed in the potable wells were thoroughly cleaned and decontaminated with a 10% bleach solution prior to insertion. The transducers for potable wells at 1608 Rayville Road and 1612 Rayville Road were able to be set below the pump assembly, with the transducer for the 1606 Rayville Road only able to be set midway down the casing due to encountered obstructions. The transducer for monitoring well MW-18B was also installed and initialized on April 11, 2011.

From April 18 to April 20, 2011, eighteen (18) transducers were installed and activated among observation wells within the Study Area. In addition, dedicated 3-inch single-speed electric submersible pumps (Grundfos Redi-Flow™ 3) were installed in each of the recovery wells. The transducer for each planned pumping well (RW-1, RW-2, RW-3) was secured between two to three feet above the pump intake and activated subsequent to pump deployment. A check valve was installed between each pump and corresponding discharge hose. The pumps were suspended with a nylon rope tether with the discharge hose routed through a gate valve for flow control. From the gate valve, flow from each pumping well moved through a pair of dedicated, in-series digital and analog flow meters. This series of redundant flow meters was configured to assure constant flow rate measurements throughout the testing period. After the flow meters, the discharge hoses were routed into the top of the "frac tank" for storage prior to treatment.

Due to field equipment error, the three remaining transducers planned for the pump test were installed and activated on April 22, 2011 (MW-5, MW-5B and MW-10B). In addition, the data log for the MW-3 transducer is only available from April 25, 2011 to the conclusion of the test on March 2, 2011. The error with the MW-3 transducer occurred due to improper operation of the interface device during downloading procedures. However, manual water levels were taken from MW-3 during this missing transducer data period.

All transducers were set to record either every 30-seconds or every 60-seconds depending on their proximity to the pumping wells. A table listing all wells utilized for groundwater tests conducted during this period is presented as **Table 1 - Monitored Well Listing and Specifications.**

Potable Well Water Level and Usage Background Monitoring

As noted previously, twenty-two (22) groundwater transducers were actively collecting background groundwater water level measurements prior to the start of step test activities on April 20, 2011 and the 72-hour pump test beginning April 25, 2011. During the background data collection period, the three residential potable wells located at 1606, 1608 and 1612 Rayville Road were monitored for typical water usage and well response. A review conducted on the background water level hydrographs for these potable wells concluded that the wells all provided more than adequate storage in regard to their typical usage and would likely not be affected by the planned 72-hour pump test project. However, a contingency plan which required regular inspection and evaluation of water levels at each of these potable wells during the 72-hour pump test was created and sent to the MDE. The plan demonstrated the maximum drawdown levels obtained during background data collection use and established "not to exceed" depths of induced drawdown for each potable well as they were monitored through the planned 72-hour pump test.

Manual Gauging

During initial pre-test activities it was noted that select observation wells may be susceptible to surface water influence during rain events. Therefore these identified wells, including RW-1, RW-3, MW-1, MW-3 and MW-5, were retro-fitted with inner-casing sleeves that extended above grade via a matched diameter PVC pipe connected with a rubber "Fernco" coupling and secured watertight with hose clamps. All manually gauged water levels collected from wells with inner-casing extensions were corrected in regard to the added length.

The manual gauging program determined for the pump test consisted of measurement "rounds" collected every 3 to 4 hours (average) with exceptions to select wells that were gauged at a lesser frequency (6-8 hours) during late-evening to early-morning pump test work shifts. These "gauging exceptions" to the monitoring well list were evaluated each day of the active pump test, with a Work Plan Modification Notification emailed to the MDE for each daily adjustment. The manual gauging rounds began the morning of April 25, 2011 before pumping at RW-2 was initiated and ended in the afternoon of April 28, 2011 when pumping for all wells (RW-1, RW-2 and RW-3) had ceased.

4.1.3 Groundwater Treatment, Storage and Discharge

As proposed in the January 2011 *Pump Test Work Plan* and associated correspondence, a temporary groundwater storage and discharge system was built exclusively for pumping test activities conducted at the Site. The system consisted of one 21,000-gallon open-top "frac tank" to hold the untreated pumped water, an in-line series of two 200-pound liquid granular activated carbon (LGAC) filtration vessels to treat the water and one 600-foot run of 1.6-inch (inner diameter) lay-flat hose which carried treated groundwater to a surface discharge point located within an agricultural field adjacent and side-gradient to the Site.

Under an agreement with the MDE, the effective treatment of groundwater through this system was to be verified before any discharge to the agricultural field was allowed to occur. Therefore, on April 20, 2011 GES performed step-test activities with a modified configuration of the treatment system that allowed for the storage of treated groundwater in a 300-gallon polyethylene tank. Groundwater samples were collected from the post-treatment side (effluent) from the LGAC treatment system and the sample sets were submitted to the contracted lab, Pace Laboratories, on a 24-hour turnaround time for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX), MTBE, tert-butyl alcohol (TBA) via EPA Method

8260 and TPH-GRO via EPA Method 8015. The lab results from the April 20, 2011 system effluent collection confirmed the temporary water treatment system was adequately removing COCs to non-detect levels. These results were subsequently forwarded to the MDE with notification that all remaining groundwater treated for the remainder of pump testing activities would be discharged as proposed.

4.2 Recovery Well Step Testing

4.2.1 Objectives

As proposed in the *Pump Test Work Plan* for the project, a step-drawdown or "step test" was performed on each of the planned pumping wells (RW-1, RW-2 and RW-3) prior to the 72-hour pump test. The step tests were performed to ascertain a suitable pumping rate that each well would be able to sustain during the 72-hour pumping test phase of the project. The step tests were performed on April 23, 2011 in the following order: RW-2, RW-1 and RW-3. A brief summary of step testing activities for each well is presented below:

Table 2 – Summary of Step Testing

Recovery Well	Successive Steps (gallons per minute)	Duration of Step (minutes)	Maximum Drawdown (feet)
RW-2 (159 minute total duration)	2.0	46	0.8
	2.5	14	1.1
	3.5	37	3.9
	5.0	52	19.5
	3.0	10	6.5 (stable)
RW-1 (286 minute total duration)	2.5	39	23.1
	2.0	15	31.5
	1.0	127	20.7 (recharge)
	1.25	22	22.1 (stable)
	1.0	83	21.8 (stable)
RW-3 (125 minute total duration)	1.0	14	0.11
	1.5	16	0.18
	2.0	16	0.30
	2.5	18	0.45
	3.5	17	0.70
	5.0	21	1.10
	5.5 (max)	23	1.48

4.2.2 Step Testing Analysis

The step test performed at RW-2 lasted a total of 2 hours and 39 minutes. A total of five steps were performed. The maximum drawdown, which occurred during the 5.0 gallon-per-minute (gpm) step, was 19.5 feet from static level. A total of 759 gallons was pumped from RW-2 during the step test procedures. Based on an evaluation of a drawdown hydrograph created from the RW-2 step test data, the selected long-term pump test rate chosen for RW-2 was **2.75 gpm**. The step test hydrograph created from the RW-2 step test activities is presented in **Appendix C**.

The step test performed at RW-1 lasted a total of 4 hours and 46 minutes. A total of five steps were performed. The maximum drawdown, which occurred during the 2.0 gpm step, was 31.5 feet from static level. A total of 340 gallons was pumped from RW-1 during the step test procedures. Based on an evaluation of a drawdown hydrograph created from the RW-1 step test data, the selected long-term pump test rate chosen for RW-1 was **1.0 gpm**. The step test hydrograph created from the RW-1 step test activities is presented in **Appendix C**.

The step test performed at RW-3 lasted a total of 2 hours and 3 minutes. A total of seven steps were performed. The maximum drawdown which occurred during the 5.5 gpm step was 1.48 feet from static level. A total of 407 gallons was pumped from RW-3 during the step test procedures. Based on an evaluation of a drawdown hydrograph created from the RW-3 step test data, the selected long-term pump test rate chosen for RW-3 was **5.0 gpm**. The step test hydrograph created from the RW-3 step test activities is presented in **Appendix C**.

It influent groundwater samples for RW-2 and RW-1 and a combined post-treatment effluent sample were collected during the step testing procedures and submitted to Accutest on a 24-hour turnaround request. Analytical results of the step test groundwater sampling are included in **Table 3.**

4.3 Background Water Level Monitoring

Between the conclusion of the step test (April 20, 2011) and the beginning of the 72-hour pump test, a total of eighteen (18) observation well transducers and three potable well transducers were active and recording water level measurements in 30-second and 60-second intervals, respectively. While no weather station equipment was set up on-site during pump test activities, an Oregon Scientific Model WMR-968 weather station (identified as "KMDPARKT3"), with active data logging records spanning the time of the background data collection period, was found to exist within 2.4 miles of the Site. Barometric pressure data used for this report was made available from this weather station through the website weatherunderground.com.

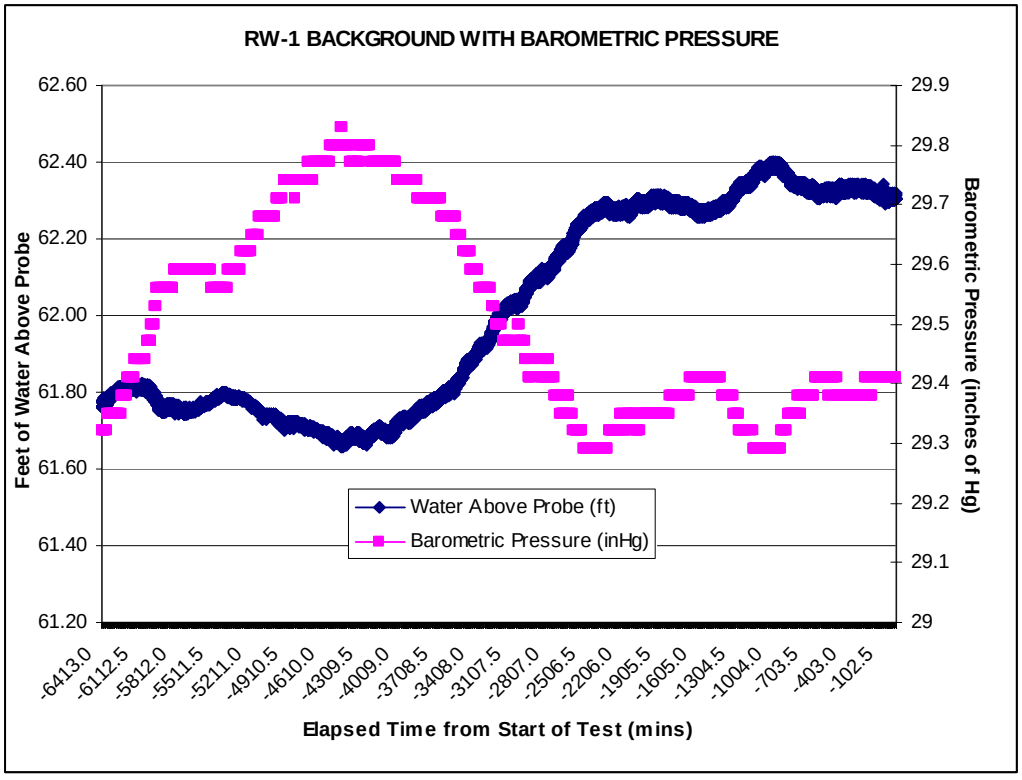
A graphical summary of the eighteen (18) active transducers for the background period from elapsed time -6360 to -33 minutes (106 total hours) has been presented in **Appendix D**. A few noteworthy trends are evident upon view of the background period:

- A uniquely shaped recharging slope occurs for the majority of the shallow wells during the background period. The shallow well recharge shape demonstrates a natural recharge condition and barometric response. Data plots for the recovery wells (RW-1, RW-2 and RW-3) and the potable wells (1606, 1608 and 1612 Rayville) also correlate to the shallow well recharge profile.
- A number of deeper wells, including MW-10B, MW-11B and MW-18B, mimic the shallow well recharge trend through the background monitoring period although the shape is more muted.

- The majority of deep wells demonstrate a straight slope recharge through the background period although the rate of average recharge calculated for the shallow and deep wells sets (separately) is consistent for the two groups at 0.007 feet/hour.
- Deep well MW-7B is the only well to demonstrate declining head through the background period at a slope of 0.004 feet/hour.
- Deep wells MW-10B and MW-17B experience significant instances of drawdown and recovery during the background monitoring period. The instances of drawdown and recovery for these wells do not appear to correlate to a shared moment in time. A similar observation was made of MW-10B in the July 30, 2007 *Pump Testing Report* submitted by EA. It was suggested by EA in this report that certain wells on-site may show periodic influence of nearby pumping wells.

The following graph illustrates the common "shape" of recharge found among numerous wells during background monitoring prior to the 72-hour pump test. For comparison, barometric pressure values from this time period, as obtained from the KMDPARKT3 weather station, are also plotted in the graph.

Table 4 – Background Water Column Variability versus Barometric Pressure



It can be noted that an inverse relationship exists between the "common" background recharge shape and the barometric pressure graph over time. Thus, the water level trends gathered during the background monitoring period support past pre-pumping test observations (EA 2007) that both shallow and select deep wells are noticeably affected by barometric pressure fluctuations. The remaining deep wells monitored in this period appear more isolated from barometric influences with select deep wells (MW-10B and MW-17B) demonstrating potential influence from nearby pumping wells. Deep well MW-7B appears isolated (as an open hole) from companion wells in the study area well network.

4.4 72-Hour Extended Duration Pumping Test

4.4.1 Overview

A *Pumping Test Work Plan*, submitted January 11, 2011, was prepared in response to the MDE *Work Plan Approval Letter* dated December 17, 2010. This revised *Pumping Test Work Plan* addressed MDE concerns and presented modifications to a previously submitted *Additional Monitoring Well Installation Work Plan* dated August 31, 2010, and the *Infiltration Pilot Test Work Plan* dated October 14, 2010. The *Pumping Test Work Plan* also outlined requirements to conduct pumping tests at recovery wells RW-1, RW-2, and RW-3.

Primarily, the objectives of the long-term pumping test were to:

- determine the effectiveness of capturing the existing COC plume with the proposed groundwater P&T remediation system or minimally, intercepting future migration of COCs emanating from the Site,
- assess the effect of the proposed P&T remediation system on local potable well water supplies and adjust the design of the P&T system accordingly, and
- conduct an infiltration test during the last 8 hours of the long-term 72-hour pump test to assess the viability of reintroducing treated groundwater back into the shallow groundwater system.

The schedule of the 72-hour pump test was based on the plan to pump the recovery wells in a cumulative succession; i.e. the RW-2 test would initiate first, with RW-1 brought on-line approximately 24 hours later and RW-3 starting approximately 24 hours after RW-1. The following table presents an overall summary of the general long-term pumping test schedule, rates and total withdraw:

Table 5 – Long-Term 72-Hour Pump Test Summary

Pumping Well	Start of Test	End of Test	Duration of Test	Total Drawdown	Total Withdraw from Well	Average Pumping Rate
RW-2	04/25/11, 10:53 am	04/28/11, 2:57 pm	4,565 minutes	50.1 feet	11,528 gallons	2.5 gallons-per-minute (averaged over 76 hours)
RW-1	04/26/11, 11:10 am	04/28/11, 2:57 pm	3,107 minutes	24.9 feet	3,059 gallons	1.0 gpm (averaged over 51.8 hours)
RW-3	04/27/11, 11:17 am	04/28/11, 2:57 pm	1,660 minutes	44.2 feet	8,118 gallons	4.9 gpm (averaged over 19.3 hours)

4.4.2 Field Data Collection and Pump Operation

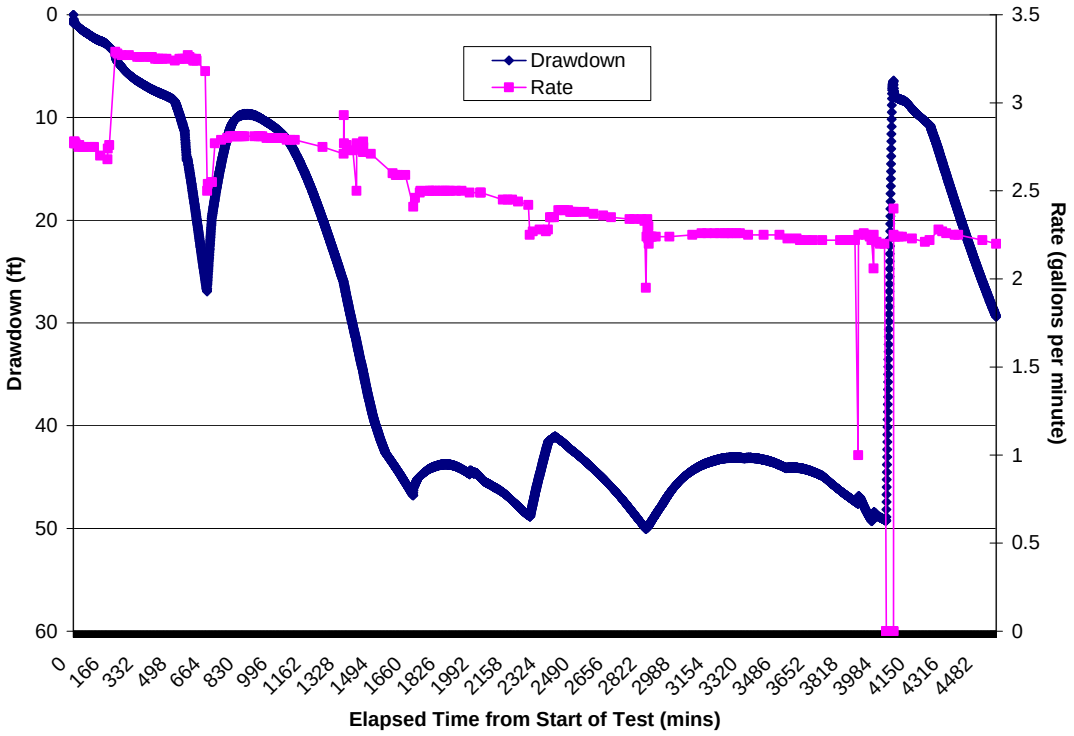
Thirty-three (33) observation and recovery wells were manually gauged using hand-held groundwater interface probes throughout the pump test period. The manual groundwater level measurements were also supplemented with electronic transducers installed and active within twenty-six (26) of the thirty-five (35) total wells. Most of the transducers had been active and recording water level data since April 20, 2011, with the exception of wells MW-5, MW-5B and MW-10B, whose transducers were initiated on April 22, 2011. The three residential wells for 1606, 1608 and 1612 Rayville Road were monitored through the test

period with electronic transducers, without manual gauging, to minimize intrusion into their respective active potable water sources. The frequency of manual gauging rounds was approximately every 4 hours through the duration of the 72-hour test period. Deviations of gauging frequency for specific wells during select manual gauging rounds were reported to the MDE as field efficiencies dictated. The transducers were programmed to collect water levels measurements either every 30 or 60 seconds depending on the respective monitoring wells proximity to the pumping wells.

RW-2 Pump Operation Summary

On April 25, 2011 a 72-hour groundwater pump test was initiated at proposed recovery well RW-2. Recovery well RW-2 is a six-inch diameter steel-cased and open borehole well that was constructed May 19, 2010 and extends to a depth of 120 feet bgs. The open borehole interval for this well extends from 40.5 to 120 feet bgs. The pump intake for the RW-2 test was placed at approximately 104 feet bgs. Static depth to water for RW-2, at the time immediately prior to the start of pumping (April 25, 2011), was 41.0 feet bgs or approximately 63 total feet of water column available for pump testing. Groundwater pumped from RW-2 during the test was routed through a flow totalizer placed adjacent to the wellhead, and then transferred via hose to a 21,000-gallon holding tank. The flow rate was determined and recorded at regular intervals using two (in-line and redundant) flow meter/totalizer devices.

Figure 6 – Drawdown and Rate during RW-2 Pumping Phase



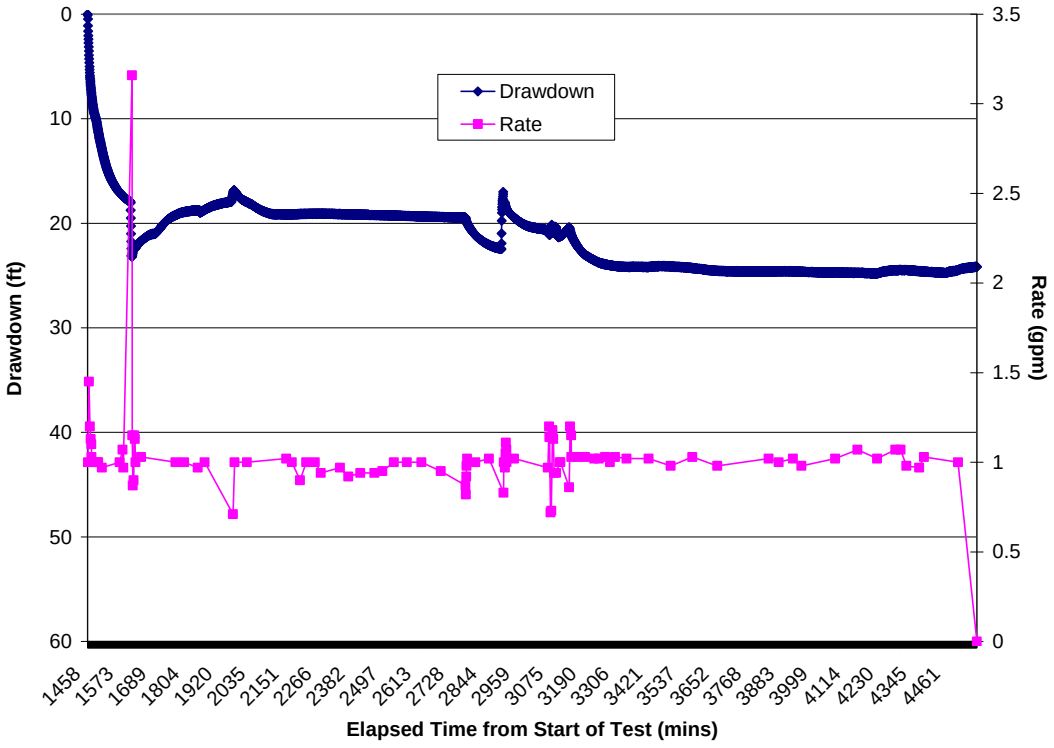
As presented in **Table 5** and **Figure 6**, RW-2 pumping test was conducted for 4,565 minutes (76 hours) with pumping a total of 11,528 gallons of groundwater. The flow rate was initialized at 2.75 gpm, as selected from the April 20, 2011 step test, but was adjusted in approximately five steps (2.75, 3.25, 2.75, 2.5 and 2.25 gpm) during the long-term test as pumping levels approached maximum allowable conditions. At the elapsed time of 4,020 minutes, the breaker for the RW-2 pump was tripped resulting in

a downtime of 36.5 minutes. During this shut-off period, RW-2 recharged 42.8 feet in column height before the pumping was restored. Pumping was resumed at 2.25 gpm and continued at this rate for the next 507 minutes through the conclusion of the test. Through the final recovery period, RW-2 recharged 26.5 feet in column height (90%) over 159 minutes.

RW-1 Pump Operation Summary

On April 26, 2011, the second phase of the long-term pumping test was initiated with the start of pumping at proposed recovery well RW-1. Recovery well RW-1 is a six-inch diameter steel-cased and open borehole well which was constructed May 20, 2010 and extends to a depth of 120 feet bgs. The open borehole interval for this well extends from 40.5 to 120 feet bgs. The pump intake for the RW-1 test was placed at approximately 99 feet bgs. Static depth to water for RW-1, at the time immediately prior to the start of pumping (April 26, 2011), was 39.5 feet bgs, or approximately 59.5 total feet of water column available for pump testing. Groundwater pumped from RW-1 during the test was routed through redundant flow totalizers and then transferred to the 21,000-gallon holding tank in the same configuration as pumping wells RW-2 and RW-3. Flow rates were recorded at regular intervals throughout the pumping test for RW-1 and are included in the Pump Test Data Tabulations as **Appendix E.**

Figure 7 – Drawdown and Rate during RW-1 Pumping Phase



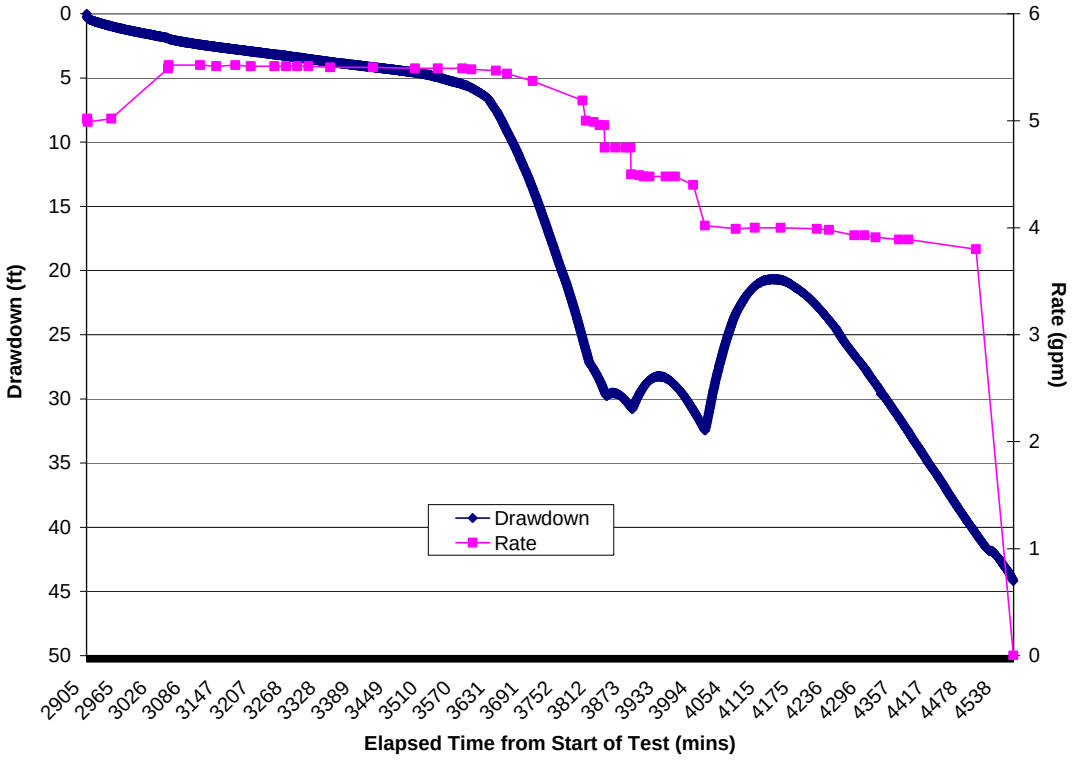
As presented in **Table 5** and **Figure 7**, the RW-1 pumping test was conducted for 3,059 minutes (51 hours) within the 76-hour total test period, with a pumping total of 3,059 gallons of groundwater and a relatively constant flow rate averaging 1.0 gpm. The flow rate was initialized at 1.0 gpm as determined from the April 20, 2011 step test and remained at approximately 1.0 gpm for the duration of the long-term test. At elapsed time 1,608 minutes, the flow valve was inadvertently bumped and flow climbed to 3.16 gpm. This instance lasted approximately 5 minutes before the rate was corrected back to 1.0 gpm. Several

instances of rate fluctuation (0.7 to 1.2 gpm) occurred between elapsed time 2,777 to 3,143 minutes but the well ultimately remained stable in both rate and drawdown through the end of the long-term test with the applied 1.0 gpm rate During the final recovery period, RW-2 recharged 21.7 feet in column height (90%) in approximately 84 minutes.

RW-3 Pump Operation Summary

On April 27, 2011, the third and final phase of the long-term pumping test was initiated with the start of pumping at recovery well RW-3. Recovery well RW-3 is a six-inch diameter steel-cased and open borehole well which was constructed May 20, 2010 and extends to a depth of 120 feet bgs. The open borehole interval for this well extends from 40.5 to 120 feet bgs. The pump intake for the RW-3 test was placed at approximately 92 feet bgs. Static depth to water for RW-3, at the time immediately prior to the start of pumping (April 27, 2011), was 41.3 feet bgs, or approximately 51 total feet of water column available for pump testing. Groundwater pumped from RW-3 during the test was routed through redundant flow totalizers and then transferred to the 21,000-gallon holding tank in the same configuration as pumping wells RW-1 and RW-2. Flow rates were recorded at regular intervals throughout the pumping test for RW-3 and are included in the Pump Test Data Tabulations as **Appendix E.**

Figure 8 – Drawdown and Rate during RW-3 Pumping Phase



As presented in **Table 5** and **Figure 8**, the RW-3 pumping test was conducted for 1,660 minutes (27.7 hours) within the 76-hour total test period, with a pumping total of 8,118 gallons of groundwater. The flow rate for RW-3 was initialized at 5.0 gpm, as determined from the April 20, 2011 step test, but was adjusted in approximately six steps (5.0, 5.5, 5.0, 4.75, 4.5 and 4.0 gpm) during the long-term test as storage available to the well began to rapidly deplete near elapsed time 3,608 minutes. Through the course

of several successive rate reduction steps, the well never reached a state of pumping equilibrium and reached a drawdown of 44 feet at the conclusion of pumping test Through the final recovery period, RW-3 recharged 39.8 feet in column height (90%) in approximately 63 minutes.

4.4.3 Observation Well Response

As discussed previously in this report, a combination of transducer and manual gauging data was collected from all thirty-three (33) monitoring and recovery wells and three (3) residential potable wells during the long-term pump test project. All observation well data were tabulated and plotted as hydrographs in order to evaluate drawdown influence from each of the pumping well stages. The tabulated data sets for all observation wells monitored during the long-term pump test are presented in **Appendix E**. Hydrograph plots for all pumping and observation wells during the pumping test are presented in **Appendix F**. The following table summarizes observed drawdown values for select observation wells that demonstrated influence from a pumping well during the long-term pumping test:

Table 6 – Observation Well Drawdown Summary

Observation Well	Screen Interval Zone	Maximum Drawdown (feet below static level)	Influencing Recovery Well	Distance From Influencing Recovery Well (feet)	Measurement Method
MW-7A	Shallow	7.23	RW-2	16	Transducer
MW-18A	Shallow	2.26	RW-2	56	Transducer
MW-18B	Deep	1.69	RW-2	51	Transducer
1606 Rayville Rd	Deep	1.27	RW-2	130	Transducer
MW-1	Shallow	2.23	RW-1	76	Transducer
MW-4	Shallow	0.88	RW-1	12	Transducer
MW-10B	Deep	0.46	RW-1	34	Transducer
MW-10A	Shallow	0.36	RW-1	23	Transducer
MW-3	Shallow	0.31	RW-1	73	Manual & Transducer
MW-14A	Shallow	6.45	RW-3	36	Transducer
MW-17A	Shallow	2.49	RW-3	169	Transducer
MW-17B	Deep	2.02	RW-3	176	Transducer
MW-8A	Shallow	0.20 (nominal)	RW-3	101	Transducer

Note that a severe, short-duration thunderstorm occurred during the third stage of the pumping test beginning near elapsed time 4,022 minutes. During this rain event, certain transducer wells including MW-4, MW-7A, MW-10B, and MW-14B experienced surface water infiltration. This infiltration is demonstrated in the affected wells' drawdown hydrographs (**Appendix F**).

During the review of drawdown hydrographs, it was noted that instances of "shared influence" were not discernible among any of the affected observation wells during the three pumping phases of the test. In other words, select well sets that demonstrated influence were localized around a particular pumping well (RW-1, RW-2 or RW-3) during that particular pumping phase of the test. This was seen during the RW-2 pumping phase as wells upgradient to RW-2, such as the RW-1, MW-4 and MW-10A/B clusters, did not

demonstrate any noticeable drawdown within 24 hours of RW-2 pumping before the second RW-1 pumping phase was initiated.

A maximum drawdown contour map for all affected observation wells is presented as **Figure 9.** Note that for the maximum drawdown contour map, shallow and deep well drawdown values are plotted together as it has been established in previous studies (EA 2007, 2010) that a varying capability of vertical communication exists between the shallow and deep zones of the fractured bedrock aquifer within the Study Area.

Upon review of **Figure 9,** a northeast to southwest elongation is noted among wells in close proximity to the pumping wells. It is also evident that drawdown influence diminishes abruptly in the upgradient direction of influence from each of the pumping wells.

In both the July 2007 *Pumping Test Report* and the August 20, 2010 *Monitoring Well MW-15 Geophysical Testing Report & Recommendations* correspondence submitted by EA, it was determined that the most viable flow paths for groundwater in the Study Area are generally limited to the principle strike (northeast/southwest) and to a lesser extent, the perpendicular or "normal" strike (northwest/ southeast) directions of structural bedrock features at the Site. These observations are also supported by the shape of drawdown ellipses around each of the specific pumping wells achieved during the April 2011 72-hour pump test.

RW-2 Pumping Phase

During the RW-2 pumping test phase (elapsed time 0 to 4,565 minutes [end]), the shallow bedrock well MW-7A demonstrated 7.23 feet of drawdown response while the adjacent, but deeper open interval well MW-7B exhibited no evident response. This lack of response in MW-7B can be noted up to elapsed time 4,011 minutes when rainwater from a weather event infiltrated from the surface. In contrast, the well cluster for MW-18A and MW-18B, which is 75 feet downgradient and southwest from the RW-2/MW-7A/MW-7B clusters, exhibited maximum drawdown responses of 2.26 and 1.69 feet, respectively. In addition, the active residential potable well for 1606 Rayville Road, which is 143 feet south-southwest of the RW-2/MW-7A/B cluster, appears to have demonstrated approximately 1.3 feet of drawdown response during the RW-2 test. Collectively, these responses may define a southwest "plunging hydraulic feature" that intersects RW-2 and MW-7A high within their respective boreholes, but remains cased off within well MW-7B. Audible evidence of water "cascading" was noted during both the RW-2 step test on April 20, 2011 and the early stages of the RW-2 phase of the 72-hour pump test. The water level at the time of RW-2 step test cascading observation was first noted was 47 feet bgs or deeper.

Further evidence of this hydraulic connection can be observed in MTBE concentration data collected by EA in February 2011. The following table demonstrates the correlation between drawdown influence during the RW-2 pumping phase and MTBE concentrations derived from the EA February 2011 sampling event:

Table 7 –Drawdown Versus Historic MTBE Concentration for RW-2 and Associated Observation Wells

Well	Drawdown during RW-2 pumping phase (feet)	MTBE Concentration February 2011 (µg/L)
RW-2 (pumping)	50.1	10,400
MW-7A	7.23	10,500
MW-18A	2.26	10,300
MW-18B	1.69	8,100
1606 Rayville Road	1.27	10,300

Downgradient and on strike observations wells with characteristically high MTBE (February 2011) such as MW-15, MW-16A/B and 1608 Rayville Road, are likely hydraulically connected to RW-2, but are too distant to be influenced by RW-2 pumping at the tested rate or duration.

Surrounding observation wells which share a side or upgradient hydraulic relationship to RW-2, but which did not demonstrate influence during the RW-2 pumping phase, are noted with MTBE concentrations from the February 2011 groundwater sampling event at values several orders of magnitude less than RW-2. For reference, a copy of the EA *Upper and Lower Bedrock Groundwater Concentration Map -February 2011*, which includes the addition of potable well concentrations sampled February 14, 2011, is provided as **Figure 10.**

As previously discussed, no influences were noted for observation wells upgradient (or side gradient) during the RW-2 pumping phase to the point in time (at elapsed time 1,457 minutes) when upgradient pumping well RW-1 became active. More specifically, neither RW-1 nor any of the localized wells within the immediate area of this pumping well (MW-4, MW-10A/B, MW-3) demonstrated any influences from the pumping of RW-2. This indicates that the southwest "plunging hydraulic feature" connecting RW-2, MW-7A, MW-18A/B and 1606 Rayville Road may "surface" short of the on-strike localized well cluster near RW-2. A cross section detailing the potential horizontal and vertical relationships between observation wells in proximity to RW-2 is presented as **Figure 5.**

RW-1 Pumping Phase

During the RW-1 pumping test phase (beginning at elapsed time 1,457 minutes), the upgradient and on-strike shallow bedrock well MW-1 demonstrated 2.23 feet of drawdown response. MW-1 is 76 feet northeast of RW-1. The shallow observation well MW-4, which is adjacent to RW-1 by 12 feet to the southeast, was noted with 0.88 feet of maximum drawdown during the test. The well MW-10A (shallow) and MW-10B (deep) cluster, which are located approximately 30 feet north-northwest from RW-1, were noted with 0.46 feet and 0.36 feet of maximum drawdown, respectively. Finally, observation well MW-3, located 73 feet to the north-northeast, demonstrated approximately 0.3 feet of drawdown.

The observation wells demonstrating response during the RW-1 phase of the test show a more localized area of influence than the RW-2 group with a more limited length of influence along the principle direction of strike (northeast-southwest). However, the RW-1 pumping phase demonstrates more side gradient hydraulic connectivity among observation wells that relate normal (perpendicular) to the northeast-southwest strike feature. For review, both shallow and deep bedrock groundwater contour maps plotting static values before the start of the pumping test (April 25, 2011) are presented as **Figure 11 and**

Figure 12, respectively. In addition, a top of rock elevation contour map is presented as **Figure 13**. Upon comparison of the two maps, it can be observed that a local bedrock high and, correspondingly, a mounding of shallow groundwater surface, exists between the MW-5/5B area of the site, and extends southwesterly toward the RW-1 area of the site. This mounding phenomenon supports the observation of limited response along the principle direction of strike for both the RW-2 and RW-1 pump phases as the shallow zone mounding acts as an upgradient hydrologic barrier to downgradient pumping.

RW-1 and its associated peripheral observation wells are closer (than RW-2) to this shallow mounding feature where a side-gradient anisotropy predominates flow in comparison to flow along principle direction of strike. In addition, the previously postulated southwesterly "plunging hydraulic connection" feature, which may also be related to the top of bedrock morphology may also rise above the water table elevation near RW02 and change the groundwater flow dynamic between RW-2 and RW-1. Groundwater elevation contour maps plotted from the third phase of the pumping test where all pumping wells (RW-2, RW-1 and RW-3) were active (April 28, 2011) are presented as **Figure 14 and Figure 15,** respectively**.** The following table presents the drawdown influence developed among select observation wells during the RW-1 pumping phase and their associated MTBE concentrations derived from the EA February 2011 sampling event:

Table 8 –Drawdown Versus Historic MTBE Concentration for RW-1 and Associated Observation Wells

Well	Drawdown during RW-1 pumping phase (feet)	MTBE Concentration February 2011 (µg/L)
RW-1 (pumping)	24.9	171
MW-1	2.23	6.95
MW-4	0.88	37.7
MW-10B	0.46	461
MW-10A	0.36	1,530
MW-3	0.31	2,100

The correlation between observation wells denoting response during the RW-2 pumping stage and the February 2011 MTBE concentrations is less evident than the correlation made from the RW-2 pumping phase. It is inferred that RW-1 is not positioned as opportunistically along a productive hydraulic feature, or within hydraulic influence of a MTBE source relative to RW-2; this is further supported by a 2:1 sustained yield ratio between RW-2 and RW-1.

RW-3 Pumping Phase

During the final pumping stage for the project (beginning at elapsed time 1,457 minutes), the upgradient and on-strike shallow bedrock well MW-14A demonstrated 6.45 feet of drawdown response. (The associated deep well MW-14B, demonstrated no discernible drawdown influence.) The MW-14A/B cluster is approximately 35 feet east-northeast of RW-3. The observation well MW-8A, which is side gradient to RW-3, potentially demonstrates a nominal 0.20 feet of influence, however the water level in MW-8A prior to RW-3 pumping stage was highly variable and therefore a drawdown determination at this well is suspect. (See drawdown plot for MW-8A in **Appendix F**.) The on-strike and downgradient cluster MW-17A and MW-17B demonstrated 2.49 feet and 2.02 feet of influence, respectively. The MW-17A/B cluster is approximately 172 feet southwest of RW-3.

The observation wells demonstrating response during the RW-3 phase of the test show a similar linear response alignment to the principal strike direction (northeast/southwest), as was observed during the RW-2 pumping stage. The questionable influence noted to the side gradient well MW-8A denotes a potential perpendicular influence to principle strike as found predominately among affected observation wells during the RW-1 pumping phase. The following table presents the drawdown influence developed among select observation wells during the RW-1 pumping phase and their associated MTBE concentrations derived from the EA February 2011 sampling event:

Table 9 –Drawdown versus Historic MTBE Concentration for RW-3 and Associated Observation Wells

Well	Drawdown during RW-3 pumping phase (feet)	MTBE Concentration February 2011 (µg/L)
RW-3 (pumping)	44.2	1.17
MW-14A	6.45	3.56
MW-17A	2.49	1.19
MW-17B	2.02	21.4
MW-8A	0.20	1.46

The correlation between observation wells denoting response during the RW-3 pumping stage, and the February 2011 MTBE concentrations for these wells, demonstrate good influence and a shared MTBE concentration "signature". However, these shared MTBE concentration values are relatively low (1.17 - 3.56 µg/L), with a minor exception of the deep well MW-17B (at 21.4 µg/L). It is inferred that RW-3 is positioned along a viable northeast/southwest striking hydraulic feature but the MTBE concentrations along this flowpath border the northwestern terminus of delineated impact at the site.

A further consideration regards the flow rate for RW-3 during its corresponding pumping phase. The rate for RW-3 was initiated at over 5.5 gpm but was reduced at multiple intervals to account for its dramatically declining head over the approximately 27.6 hour pumping period. This indicates a limited storage capacity for the hydraulic features intersecting the RW-3 borehole.

4.4.4 Infiltration Test

The *Pump Test Work Plan* submitted January 11, 2011 and the *Pumping Test Work Plan – Adendum#1 – Infiltration Testing* submitted on January 14, 2011 detail the infiltration test scheduled for the last 8 hours of the long-term 72-hour pump test. The main objective of the test was to evaluate if the water bearing interval located between 40 and 60 feet bgs has sufficient capacity to accept treated groundwater that would be produced during operation of a P&T system at the site. Reinjection would serve as an alternative to discharging treated groundwater into an off-site storm drain. Also of interest was the viability of reintroducing treated groundwater back into the shallow groundwater system to restore storage removed during P&T remediation activities and to address concerns about aquifer depletion or adverse water quantity impacts resulting from sustained water withdrawal without replacement.

Infiltration testing was conducted on April 28, 2011 on side gradient wells MW-8A and MW-8B. The work plan submitted to the MDE proposed infiltration on only monitoring well MW-8A, but a verbal request to the MDE representative on-site was granted to perform infiltration testing on MW-8B, in addition to MW-8A, in order to test the deeper water bearing zone between 73.5 and 100 feet bgs.

Infiltration testing began at monitoring well MW-8A, and then was initiated on monitoring well MW-8B once the infiltration flow rate at MW-8A was stabilized.

The infiltration test during the last 8 hours of the pump test involved the infiltration of clean water into monitoring wells MW-8A and MW-8B during withdrawal of groundwater from the recovery wells. The injection rate was to be equal to, or less than, the extraction rate during testing and controlled using gate valves and in-line flow meters. The clean water was infiltrated by gravity from a tanker containing potable water. Prior to infiltration, a sample of the potable water was sent for laboratory analysis, and the results are included in **Appendix G – Laboratory Results**.

Infiltration into MW-8A

Monitoring well MW-8A is an open bedrock monitoring well constructed of 6-inch steel, with an open borehole interval between 40 and 65 feet bgs. Initial depth to water in the infiltration well was 38.71 feet.

At 8:06 AM on April 28, 2011, infiltration into monitoring well MW-8A began at approximately 6.0 gpm. After observing an almost immediate increase in water level to approximately 33.81 feet bgs, the infiltration flow rate was reduced to approximately 4.0 gpm. Over the course of approximately 20 minutes, the depth to water in monitoring well MW-8A steadily rose to approximately 14.5 feet bgs, during which the infiltration flow rate was lowered in three steps to 1.5 gpm. The infiltration flow rate remained at 1.5 gpm for approximately 32 minutes, and the water column in the infiltration well gradually rose to 9.00 feet bgs. At 9:15 AM the infiltration flow rate was reduced to 1.25 gpm. At 10:16 AM, the water level had reached 4.34 feet bgs and the infiltration flow rate was reduced to 1.01 gpm. From 10:16 AM to 2:35 PM, the flow rate gradually tapered off from 1.01 gpm to 0.83 gpm without valve adjustment. During this time, the water column in the infiltration well reached a peak of 3.61 feet bgs, and then dropped to 3.92 feet bgs. The infiltration flow rate at which the water column was relatively stable was between 0.85 and 0.92 gpm.

An infiltration flow rate of between 0.85 and 0.92 gpm is assumed to be the rate that the water bearing zone between 40 and 65 feet bgs in the vicinity of monitoring well MW-8A will continuously accept. A total of approximately 516 gallons was infiltrated into monitoring well MW-8A during the 6 hour and 29 minutes of testing. Distinguishable water level changes in surrounding observation wells due to infiltration testing were not observed. Testing results suggest that the capacity of the water bearing zone in the vicinity of the test well is inadequate for infiltration during continuous operation of a P&T system through a well as constructed similar to the test well used. Further analysis of the infiltration test data was, therefore, not completed.

Infiltration into MW-8B

Monitoring well MW-8B is an open bedrock well constructed of 6-inch steel, with an open borehole interval between 73.5 and 100 feet bgs. Initial depth to water in the infiltration well was 37.78 feet. At 10:25 AM on April 28, 2011, infiltration into monitoring well MW-8B began at 3.0 gpm. After observing a rise in the water level in the infiltration well of more than 11 feet after 7 minutes, the flow rate was reduced to 1.3 gpm. The water level continued to rise at a significant rate during infiltration at flow rates between 0.72 and 1.3 gpm. At 11:08 AM (43 minutes into the infiltration test on MW-8B), the water level in MW-8B had risen to 1.81 feet below grade and infiltration into the well ceased. A total of 55.8 gallons of water had been infiltrated into monitoring well MW-8B.

Following the infiltration test, the water level in monitoring well MW-8B was monitored for return to static conditions, but the drop in water level was very gradual. After approximately 4 hours, the water level had dropped from a high of 1.81 feet bgs to 2.18 feet bgs. After 4 days, the water level had dropped to 9.00 feet bgs, which is approximately 28.78 feet above the initial water level.

The capacity of the water bearing zone between 73.5 and 100 feet bgs in the vicinity of monitoring well MW-8B lacks sufficient capacity to be considered for infiltration during continuous operation of a P&T system through a well as constructed similar to the test well used.

4.4.5 Recovery

Continuous water-level recovery data was collected from wells installed with transducers from the end of pump testing on April 28, 2011 until March 2, 2011. The last two rounds of manual gauging occurred on April 29, 2011 and the morning of May 2, 2011. All transducers installed in observation, recovery and potable wells utilized for the long-term pump test project were deactivated and removed on May 2, 2011. The recovery curves are included in the complete hydrographs for all transducer installed wells in **Appendix F**. The drawdown and recovery hydrographs for the manually gauged wells are included with **Appendix I**.

4.4.6 Groundwater Sample Collection

Per the *Revised Pump Test Work Plan*, groundwater samples were collected from each active pumping well (RW-1, RW-2 and RW-3) during the step test and during the three pumping phases of the long-term pump test. Each sample set for a given phase of the test was analyzed by a certified laboratory for full suite VOCs via EPA Method 8260 and TPH-GRO via EPA Method 8015B. A round of field parameters including pH, dissolved oxygen, specific conductivity, oxygen reduction potential and temperature were also collected during the May 2, 2011 sampling period. An analytical summary of the pumping well samples is shown below.

Table 10 – Pump Test Groundwater Analytical Summary

Pumping Well	Date & Time	Time Elapsed from Start of Test (mins.)	Drawdown at Time of Sample Collection (feet)	Benzene (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	TPH-GRO (ug/L)	TPH-DRO (ug/L)
RW-2	4/20/2011 11:15 am *	-7,178	7.12	Non Detect (<2)	Non Detect (<10)	5,910	1,040	Not Sampled
	4/25/2011 11:05 am	+12.0	0.90	Non Detect (<2)	Non Detect (<10)	6,110	1,070	Non Detect (<150)
	4/26/2011 11:29 am	+1,476	38.59	2.76	<10.76	10,200	1,120	Non Detect (<150)
	4/27/2011 11:39 am	+2,926	47.24	2.92	<10.92	9,210	1,070	154
RW-1	4/20/2011 14:05 am *	-7,007	22.45	Non Detect (<2)	Non Detect (<10)	12.9	Non Detect (<100)	Not Sampled
	4/26/2011 11:27 am	+1,474	8.25	Non Detect (<2)	Non Detect (<10)	81.3	Non Detect (<100)	Non Detect (<150)

Pumping Well	Date & Time	Time Elapsed from Start of Test (mins.)	Drawdown at Time of Sample Collection (feet)	Benzene (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	TPH-GRO (ug/L)	TPH-DRO (ug/L)
RW-1 (cont.)	4/27/2011 11:48 am	+2,935	19.12	Non Detect (<2)	Non Detect (<10)	325	187	Non Detect (<150)
RW-3	4/25/2011 10:40 am	-13.0	0.14	Non Detect (<2)	Non Detect (<10)	Non Detect (<2)	Non Detect (<100)	Not Sampled
	4/27/2011 11:36 am	+2,923	0.65	Non Detect (<2)	Non Detect (<10)	Non Detect (<2)	Non Detect (<100)	Non Detect (<150)

*denotes sample collected during active step testing activities

In general, the concentrations of the COCs increased through the RW-2 and RW-1 phases of the pumping test by a combination of two factors:

- the availability of water volume to dilute static concentrations diminishes with water column depletion and;
- the continuation of pumping expands the reach of capture within an associated pumping well's specific hydraulic storage connections.

4.4.7 Waste Generation and Disposal

During the long-term pump test, approximately 24,262 gallons of extracted groundwater was generated and temporarily stored in a 21,000-gallon open-top steel holding tank located in the vicinity of pumping well RW-2. Beginning April 25, 2011 and continuing through the pump testing period, the stored groundwater was treated through the two in-line 200-pound LGAC filtration units and discharged to an agricultural field, approximately 600 feet west, southwest of RW-2. The average rate of discharge through this period was 5.5 gpm. By late afternoon on April 28, 2011, all 24,262 gallons of total extracted groundwater generated during both the step and long-term pumping test activities had been discharged. On May 2, 2011, the empty 21,000-gallon holding tank was removed from the Site. Also on May 2, 2011, the carbon LGACs were removed by a waste handling contractor.

4.4.8 Pump Test Data Evaluation

Time-Drawdown Test

Although final pumping rates for RW-2, RW-1 and RW-3 varied moderately from their initial starting rates, workable hydraulic parameter estimates were able to be derived during corresponding aquifer solution analyses. As discussed previously in this report, an evaluation of hydrographs was made for each observation well's corresponding manually-gauged or electronically-logged dataset. From this graphical review, the following wells were selected for an aquifer solution analysis:

Transducer datasets: 1606 Rayville Road, MW-1, MW-4, MW-7A, MW-8A, MW-10A, MW-10B, MW-14A, MW-17A, MW-17B, MW-18A and MW-18B.

Manually Gauged Datasets:

The following bullet summarizes the conditions for certain wells that disqualified select wells for hydrologic solution analysis:

- The drawdown data for observation well MW-8A was inconclusive due to variable conditions throughout the test period.

Hydrographs for all observation and pumping wells monitored during the long-term pumping test are presented in either **Appendix F (for** Transducer Wells) **or Appendix I** (for Manually Gauged Wells).

All monitoring wells determined to demonstrate influence during either the RW-2, RW-1 or RW-3 pumping stages pumping test were analyzed with Aqtesolv 4.5 software using "best fit" curves derived from either the Theis (1935), the Cooper-Jacob (1946) and/or the Neuman (1976) solutions for both drawdown and recovery. The drawdown and recovery curves were combined for each analysis.

The Theis solution was derived to provide a solution for unsteady flow to a fully penetrating well in an unconfined aquifer. Corrections to the Theis solution can be made to accommodate unconfined water systems and the effects of partially penetrating wells. These corrections are implemented in the Aqtesolv 4.5 software. From the Theis solution method, hydraulic parameter estimates of aquifer transmissivity (T) and storativity (S) can be determined. If aquifer thickness is known, then hydraulic conductivity (K) can be determined using the following equation

$$K = T/b$$

where K is hydraulic conductivity, T is transmissivity, and b is aquifer saturated thickness.

The Cooper-Jacob method was derived to provide a solution for nonleaky confined aquifers using a straight-line plot of drawdown data against logarithm time from the start of pumping. Values for S and T can be obtained through use of the Cooper-Jacob solution. Corrections to the Cooper-Jacob solution can be made to accommodate the partial dewatering of water table or unconfined water systems. These corrections are also implemented in the Aqtesolv 4.5 software.

The Neuman method was derived for an unconfined aquifer system as it addresses dewatering of the water table (reduction of the saturated thickness and delayed yield) by both vertical and horizontal flow components. The Neuman method utilizes a log-log plot of drawdown versus time to determine the transmissivity (T), Storativity (S), Specific Yield (Sy) and hydraulic conductivity anisotropy ratio (ß) of the aquifer.

A summary of transmissivity, storativity and hydraulic conductivity values determined from the solution(s) providing best fit for each of the observation wells demonstrating influence are presented in **Table 11** and summarized below.

Table 12 – Pump Test Solution Summary

Observation Well	Associated Pumping Well	Saturated Thickness (feet)	Transmissivity (ft^2/day)	Hydraulic Conductivity (feet/day)	Storativity	Solution Method
1606 Rayville	RW-2	79.0	48.7	0.62	0.0015	T,C,N
MW-18B	RW-2	79.0	40.7	0.52	0.0125	T,C,N
MW-18A	RW-2	79.0	39.5	0.50	0.0094	T,C,N
MW-7A	RW-2	79.0	29.5	0.37	0.0022	T,C,N
MW-10A	RW-1	84.5	103.0	1.22	0.0932	T,C,N
MW-10B	RW-1	84.5	77.0	0.91	0.0309	T,C
MW-4	RW-1	84.5	55.5	0.66	0.1107	T,C
MW-1	RW-1	84.5	29.3	0.35	0.0005	T,C
MW-17A	RW-3	84.5	30.7	0.36	0.0013	T,C
MW-14A	RW-3	84.5	29.7	0.35	0.0052	T,C
MW-17B	RW-3	90.6	23.8	0.26	0.0017	T,C
	Average	**83.1**	**46.1**	**0.56**	**0.0245**	

T = Theis C= Cooper-Jacob N=Neuman

In summary, the transmissivity and the corresponding hydraulic conductivity solutions reveal relatively consistent flow values among all evaluated observation wells data sets. However, the values for MW-10A and MW-10B, which represent the highest transmissivity (and corresponding hydraulic conductivity) values obtained in the test are suspect due to relatively poor fit to either the applied Theis and Cooper-Jacobs solutions. The corresponding Aqtesolv solution plots for each of these wells are included as **Appendix H**.

5.0 CORRECTIVE ACTION

The media of concern at the Site is groundwater within the bedrock aquifer. MTBE, benzene, TPH and other gasoline oxygenates are the primary COCs present in groundwater. The potable groundwater in this residential area is a sensitive receptor and the driver for site remediation. Activated carbon POET systems have been installed at three residences as noted previously. The historic sampling data indicates the POET systems are functioning properly and are able to provide water that meets MDE standards to the properties served.

5.1 Remedial Technology Screening

Various dissolved-phase remediation technologies were screened to determine the most appropriate method to remediate the dissolved-phase hydrocarbon compounds that are present in the subsurface. Remedial technologies selected for consideration were based on the results of the site characterization activities completed to date. Based on these evaluations, discussions presented herein and the remedial

evaluations conducted by EA, groundwater P&T has been selected as the best remedial approach to reduce dissolved COCs in the groundwater.

5.2 Conceptual Design of Groundwater Remediation System

A multiple pumping-well groundwater extraction system has been installed in the study area. Based upon known horizontal and vertical chemical delineation, the extraction wells were placed: (1) in a spatial configuration covering the known width of the delineated plume, and (2) in a screened interval which will target the shallow and deep bedrock zones where the COCs have been determined to be most highly concentrated.

Based on the characterization of groundwater flow from the extended duration pumping test, the known delineated COC plume dimensions and the predominance of water bearing fractures existing above 60 feet bgs, two extraction wells are proposed for the study area with the potential to add additional recovery wells as discussed below:

- RW-2 at a proposed rate of 2.0-gpm; and
- RW-1 at a proposed rate of 1.0-gpm

In addition, the potable wells at 1606 and/or 1608 Rayville Road are also being evaluated to determine the practicality of using the existing wells as recovery wells. Should these existing potable wells be converted to use as groundwater extraction wells for remediation purposes, agreements with the homeowners would have to be put in place to allow for replacement of these wells and connection access for remediation needs. Replacement potable supply wells would be sited farther west on the properties to move off of the principal strike orientation relative to MTBE source areas (RW-2). The potable wells would be replaced for each residence with new wells outside of the known delineated COC plume, but within their respective bounty of each private property. This modification and upgrade to the remediation system would occur after the P&T system is activated in RW-1 and RW-2, subsequent approval and agreement from the property owners, Baltimore County, and the MDE.

It is also proposed that the treated groundwater from the P&T system will be discharged by means of an on-site infiltration gallery as previously discussed. The procedures and details for infiltration gallery testing, design and installation will be submitted under separate cover and is contingent upon property owner approval.

A map of the proposed recovery well network is provided as **Figure 16** to this report.

6.0 CONCLUSIONS AND RECOMENDATIONS

Investigative activities generally began at the Site when monitoring wells were installed in 2005 to comply with MDE Emergency Regulations concerning UST systems in HRGUA. Since that time various hydrogeologic investigations, remedial actions, remedial assessments, potable well samplings and POET installations have been conducted and documented in numerous reports submitted to the MDE. Based on these in-depth evaluations, in addition to recent extended duration pumping tests, it has been demonstrated that groundwater extraction is a viable technology to mitigate migration of COCs at the Site and to remediate impacted groundwater. Conclusions and recommendations of this PTS and CAPA, built upon previous work and the recent RW-1 through RW-3 pump testing include:

- Limited adsorbed-phase soil mass appears to remain at the Site and therefore further remediation of overburden soil is not necessary to remediate the groundwater;
- Connecting RW-1 to the P&T system with a design flow rate of 1-gpm;
- Connecting RW-2 to the P&T system with a design flow rate of 2-gpm;
- Groundwater pumping is anticipated to influence impacted primary fractures of interest above 60 feet bgs;
- Observed areal influence from pumping is anticipated to extend from the area of the on-site UST system to the off-site residential property at 1606 Rayville Road;
- Proposed groundwater pumping from RW-1 and RW-2 is not anticipated to affect potable water quantity needs or yields at adjacent/surrounding properties;
- The design and installation of an infiltration gallery to return treated groundwater from the P&T system back into the aquifer is proposed. As previously discussed, the procedures and details for infiltration gallery testing, design and installation will be submitted under separate cover and is contingent upon property owner approval;
- Potable wells at 1606 and/or 1608 Rayville Road are being evaluated to determine the practicality of using these existing wells as recovery wells. The potable wells would be replaced off of the principle strike, but within their property boundaries.
- Installed POET systems have proven effective to remove COCs from impacted potable wells. POET monitoring and maintenance will continue until impacts are determined to be below MDE actions levels.
- Operation and maintenance of the proposed P&T system will continue until groundwater quality is reduced to levels determined acceptable to risk to human health and/or the environment, until the recovery system reaches asymptotic levels or until released by MDE.

As previously discussed, a *CAP Implementation Plan* report will be submitted to the MDE after access is established with the on-site property owner to conduct additional infiltration testing and subsequently complete the design of the P&T system. It is the goal and intention of CIFC to continue to proactively seek access with the Site property owner in order to remain on schedule with the ACO.

7.0 REFERENCES

Maryland Geologic Survey. 1968, *Geologic Map of Maryland (excerpt of Baltimore County),* http://www.mgs.md.gov/esic/geo

Cleaves, Emory.T., 1974. *Petrologic and Chemical Investigation of Chemical Weathering in Mafic Rocks, Eastern Piedmont of Maryland, No. 25*

Department of Natural Resources, Maryland Geological Survey, September 2000. *Bathymetric Survey and Sedimentation Analysis of Loch Raven and Prettyboy Reservoirs.*

Environmental Alliance, February 2007. *Hydrogeologic Investigation Update Report and Work Plan*

Environmental Alliance, July 2007. *Pump Testing Report*

Maryland Department of the Environment, December 2008. *Wally's Citgo Groundwater Investigation*.

Environmental Alliance, April 2009. *Groundwater Model Report*.

Moshen, Farrukh, Ph.D., P.E., April 2009. *Expert Report of Farrukh Moshen, Ph.D, P.E.*

Environmental Alliance, May 2009. *Report on the Remedial Design for the Wally's Citgo Service Station*

Environmental Alliance, August, 2009. *Corrective Action Plan Addendum*.

Environmental Alliance, July 2010. *Quarterly Update Report*.

Environmental Alliance, August 2010. *Monitoring Well MW-15 Geophysical Testing Report & Recommendations.*

Environmental Alliance, August 2010. *Additional Monitoring Well Installation Work Plan.*

GES, October 2010. *Infiltration Pilot Test Work Plan.*

GES, January 2011. *Pumping Test Work Plan.*

GES, January 2011. *Pumping Test Work Plan – Adendum#1 – Infiltration Testing.*

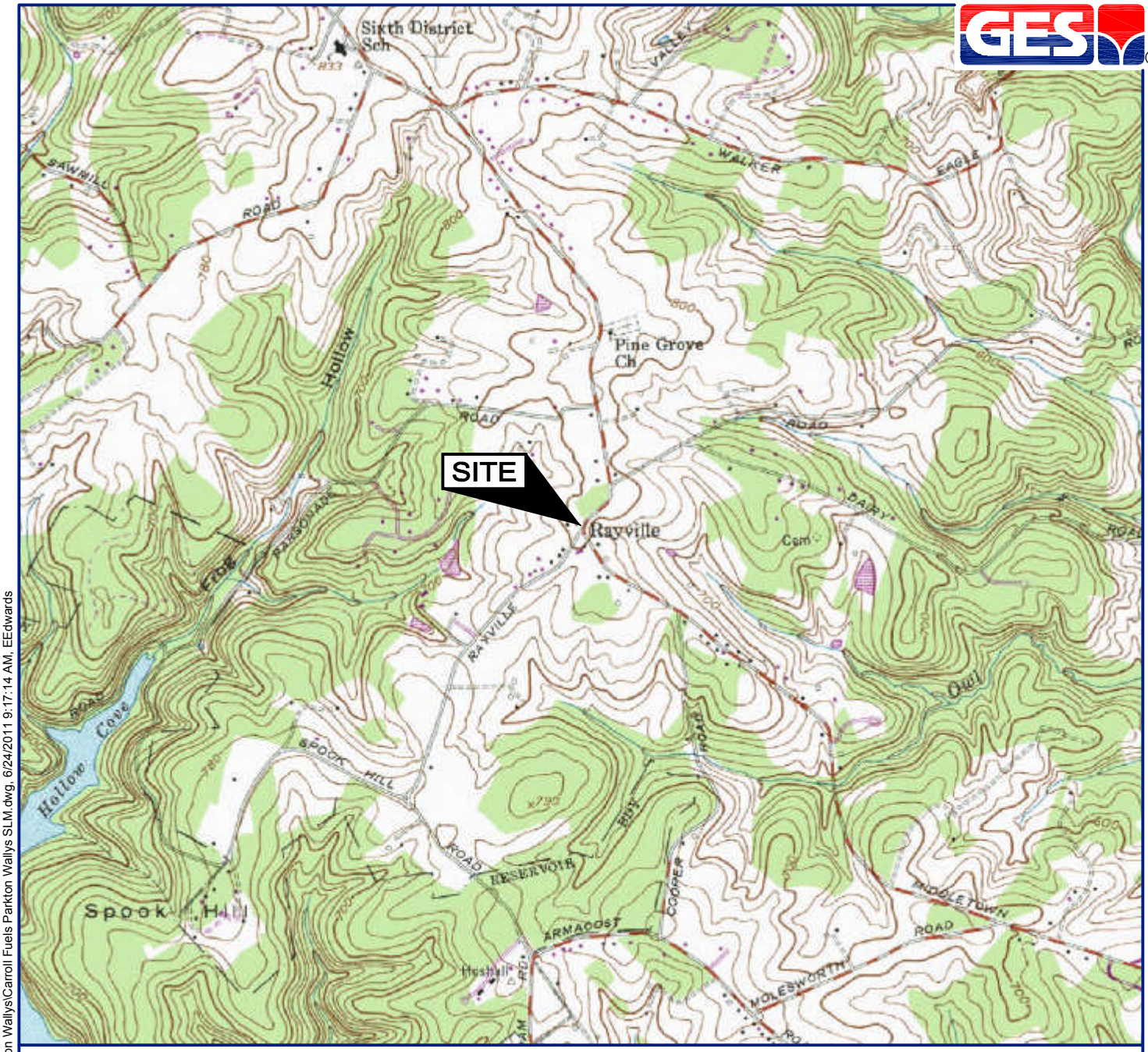
Environmental Alliance, January 2011. *Quarterly Update Report.*

Environmental Alliance, April 2011. *Quarterly Update Report.*

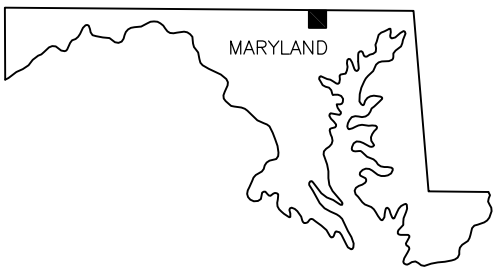
USDA Natural Resources Conservation Service, May 2011. *Web Soil Survey, National Cooperative Soil Survey; Soil Map – Baltimore County, Maryland*.

www.weatherunderground.com

www.aqtesolv.com



SOURCE: USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE 1974
NEW FREEDOM, MARYLAND
CONTOUR INTERVAL = 20'



QUADRANGLE LOCATION

DRAFTED BY: E.M.E. (N.J.)	SITE LOCATION MAP
CHECKED BY:	WALLY'S CITGO STATION 19200 MIDDLETOWN ROAD PARKTON, MARYLAND
REVIEWED BY:	
NORTH	Groundwater & Environmental Services, Inc. 2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114

SCALE IN FEET	DATE	FIGURE
0 2000	6-23-11	1

M:\Graphics\0400-Crofton\Misc\Carroll Fuels\Carroll Fuels Parkton Wallys SLM.dwg, 6/24/2011 9:17:14 AM, EEdwards

P:\CarrollFuels\ParktonMD\GIS\Maps\CarrollFuels_ParktonMD_LAM.mxd - Scale 1:7,200 - Date: 06-29-11 - Time: [12:46 PM] - amcelvery

4 Hendricks Court
2 Hendricks Court
3 Hendricks Court
Hendricks Ct
Hathorne Ct
Middletown Rd
1614 Parsonage Road
Parsonage Rd
19303 Middletown Road
19239 Middletown Road
1500 Rayville Road
19235 Middletown Road
1510 Rayville Road
1506 Rayville Road
19328 Rich Roy Court
1,000 Ft. Radius
19215 Shandall Court
19214 Shandall Court
19229 Middletown Road
19223 Middletown Road
19213 Shandall Court
Dairy Rd
19211Shandall Court
1529 Rayville
1801 Laurel Ridge Drive
19208 Shandall Court
1523 Rayville Road
PW-3
19222 Middletown
PW-2
19209 Shandall Court
19205 Middletown Road
19207 Shandall Court
PW-1
19200 Middletown Road
19200 Shandall Court
19201 Middletown Road
19205 Shandall Court
19203 Shandall Court
9 Ellen's Choice Way
19119 Middletown
19201 Shandall Court
19124 Middletown Road
1606 Rayville Road
1608 Rayville Road
1620 Rayville Road
1612 Rayville Road
1624 Rayville Road
1614 Rayville Road
1616 Rayville Road
Rayville Rd
Middletown Rd
1636 Rayville Road
2,500 Ft. Radius
1717 Rayville Road

Source: Maryland GIS, Maryland Aerial Photography August 19, 2010, Baltimore County GIS, Environmental Alliance, Inc.

Legend

- Site Location
- Potable Well Location
- Edge of Pavement
- Parcel Outline
- Topographic Contour (20ft)
- Site Radius

DRAFTED BY: AM	LOCAL AREA MAP
CHECKED BY:	WALLY'S CITGO STATION 19200 MIDDLETOWN ROAD PARKTON, MARYLAND
REVIEWED BY: SMS	Groundwater & Environmental Services, Inc. 2142 Priest Bridge Court, Suite #1, Crofton, MD 21114
NORTH	SCALE IN FEET: 0 – 600 / DATE: 6-29-11 / FIGURE: 2

P:\CarrollFuels\ParktonMD\GIS\Maps\CarrollFuels_ParktonMD_SM.mxd - Scale 1:900 - Date: 06-24-11 - Time: [11:27 AM] - amcelvery

PW-3
PW-2
PW-1
Storage
MW-9A
MW-9B
MW-13B
MW-13A
Machine Shop
MW-6
Salon
MW-5B
MW-12B
Bait Shop
SVE-5
SVE System
MW-5
AST
MW-8B
MW-8A
MW-14A
RW-3
MW-14B
SVE-4
MW-2
Canopy
MW-3
SVE-3
SVE-1
MW-3S
SVE-2
MW-1
MW-10B
MW-10A
RW-1
MW-4
Middletown Road
FARM FIELD
Currey's Excavation
MW-17B
MW-17A
MW-7B
MW-7A
RW-2
MW-18A
MW-18B
Rayville Road
1606 Rayville Road
MW-11A
MW-11B
1608 Rayville Road
MW-15
1612 Rayville Road
FIELD
MW-16A
MW-16B

Legend

- Monitoring Well
- Recovery Well
- Abandoned Well
- Potable Well
- Soil Vapor Extraction Point
- Edge of Pavement
- Fence
- Tank Field
- Building
- Canopy
- Dispenser
- Gravel

Source: Maryland GIS, Maryland Aerial Photography August 19, 2010, Environmental Alliance.

DRAFTED BY: AM	SITE MAP
CHECKED BY:	WALLY'S CITGO STATION 19200 MIDDLETOWN ROAD PARKTON, MARYLAND
REVIEWED BY: SMS	Groundwater & Environmental Services, Inc. 2142 Priest Bridge Court, Suite #1, Crofton, MD 21114
NORTH	SCALE IN FEET: 0 – 75 / DATE: 6-24-11 / FIGURE: 3

P:\CarrollFuels\ParktonMD\GIS\Maps\CarrollFuels_ParktonMD_CrossSection Location Map.mxd - Scale 1:900 - Date: 06-27-11 - Time: [11:11 AM] - amcelvery

PW-3
PW-2
PW-1
Storage
MW-9A
MW-9B
MW-13B
MW-13A
Machine Shop
A'
MW-6
Salon
MW-5B
MW-12B
SVE-5
Bait Shop
SVE System
MW-5
AST
MW-8B
MW-8A
SVE-4
MW-2
Canopy
MW-3
SVE-3
MW-3S
MW-14A
MW-14B
RW-3
SVE-2
MW-10B
MW-1
MW-10A
RW-1
MW-4
Middletown Road
FARM FIELD
Currey's Excavation
MW-17B
MW-17A
MW-7B
MW-7A
RW-2
MW-18A
Rayville Road
1606 Rayville Road
MW-11A
MW-11B
1608 Rayville Road
MW-15
1612 Rayville Road
A
FIELD
MW-16A
MW-16B

Legend

- Monitoring Well
- Recovery Well
- Abandoned Well
- Potable Well
- Soil Vapor Extraction Point
- Edge of Pavement
- Fence
- Tank Field
- A — A' Cross Section
- Building
- Canopy
- Dispenser
- Gravel

Source: Maryland GIS, Maryland Aerial Photography August 19, 2010, Environmental Alliance.

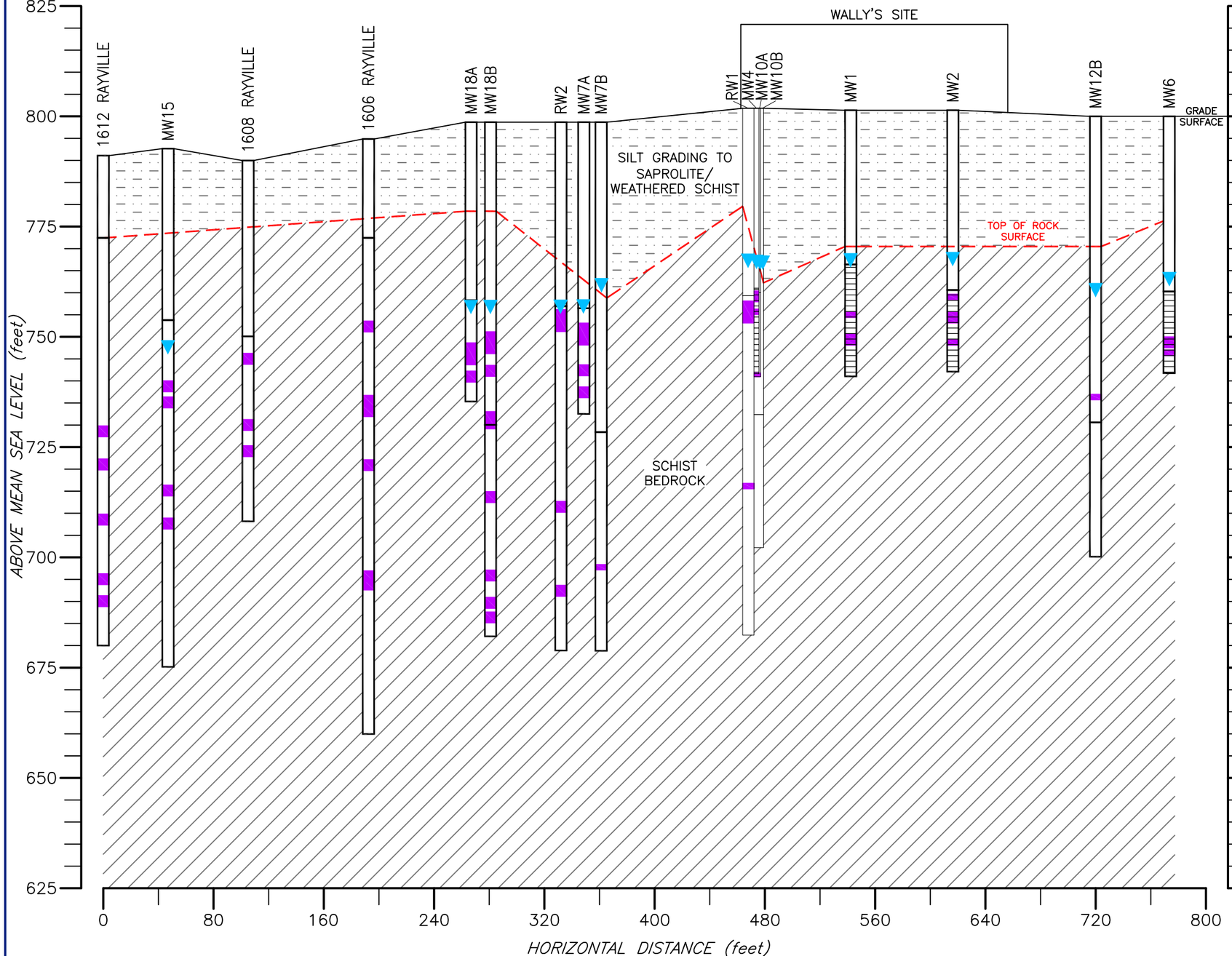
DRAFTED BY: AM	CROSS SECTION LOCATION MAP
CHECKED BY:	WALLY'S CITGO STATION 19200 MIDDLETOWN ROAD PARKTON, MARYLAND
REVIEWED BY: SMS	Groundwater & Environmental Services, Inc. 2142 Priest Bridge Court, Suite #1, Crofton, MD 21114
NORTH	SCALE IN FEET: 0 — 75 / DATE: 6-27-11 / FIGURE: 4

SOUTH

A

NORTH

A'

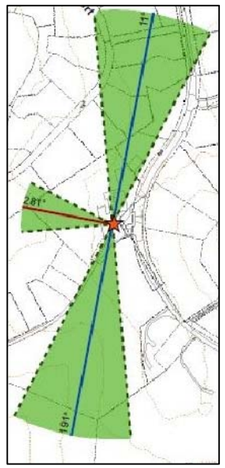


LEGEND

- RISER
- SCREENED INTERVAL
- OPEN BOREHOLE
- STATIC GROUNDWATER ELEVATION (feet) (APRIL 25, 2011)
- DEPTH OF POTENTIAL WATER BEARING ZONES (feet)

Table 1 –Historic Down-hole Geophysical Feature Summary

Planar Features	Dip (degrees)	Dip Direction (degrees)	Strike/Dip
Foliations (52 total)	26	286	N16E/26NW
Fractures (102 total)	34	282	N12E/34NW



NOTES:

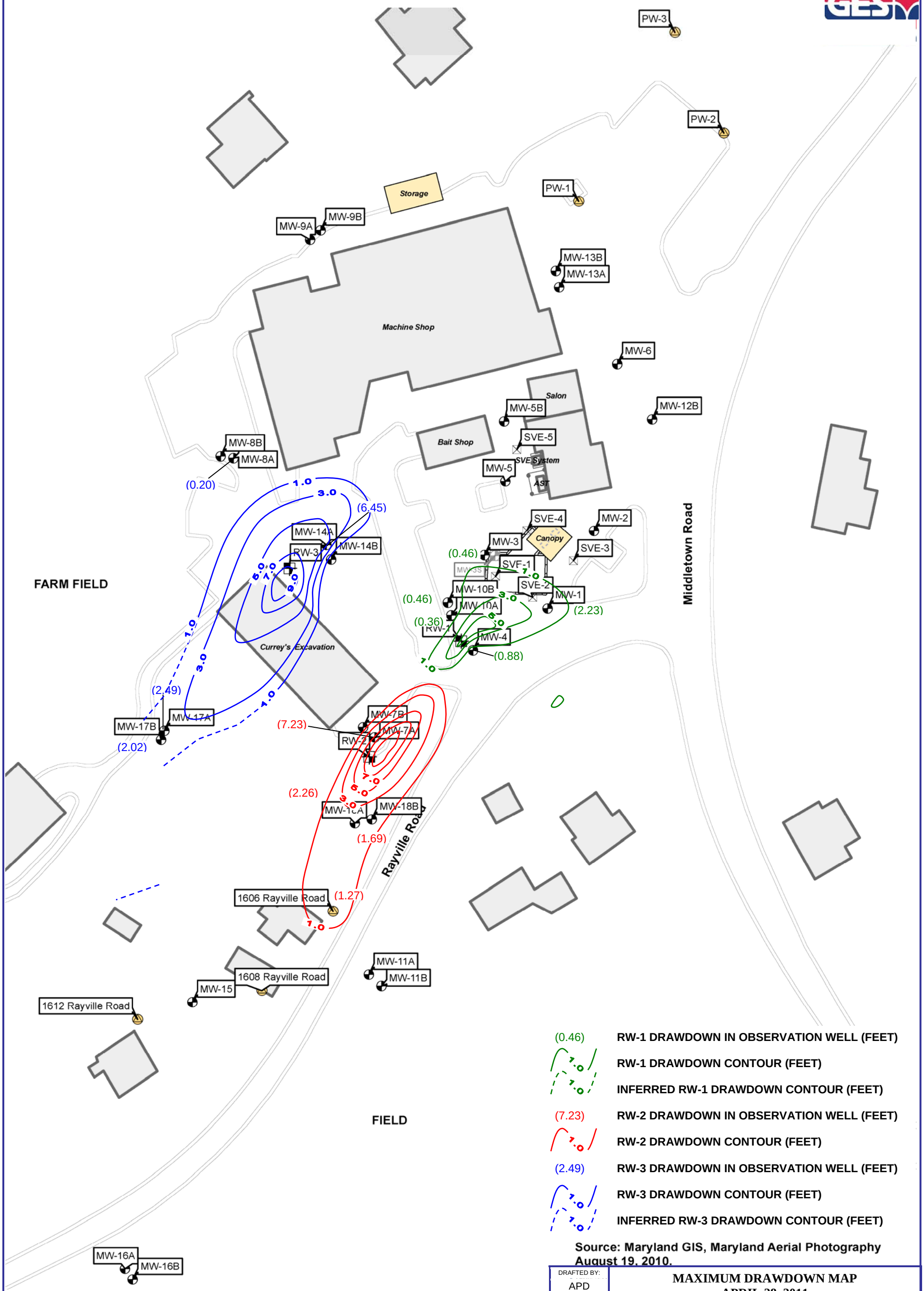
GEOLOGIC CROSS SECTION IS AN INTERPRETATION OF DATE PROVIDED BY ENVIRONMENTAL ALLIANCE.

DEPTH TO BEDROCK FOR 1606, 1608, & 1612 RAYVILLE IS UNKNOWN.

DRAFTED BY: B.C.S. (N.J.)	CROSS-SECTION A-A'
CHECKED BY:	WALLY'S CITGO STATION 19200 MIDDLETOWN ROAD PARKTON, MARYLAND
REVIEWED BY:	Groundwater & Environmental Services, Inc. 2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114

SCALE IN FEET	DATE	FIGURE
HORIZONTAL 1" = 80' VERTICAL 1" = 25'	6-23-11	5

M:\Graphics\0400-Crofton\Misc\Carroll Fuels\Carroll Fuels Parkton Wallys\Carroll Fuels Parkton Wallys XS-AA.dwg, BSilvestri



DRAFTED BY: APD

CHECKED BY: PR

REVIEWED BY: CM

NORTH

MAXIMUM DRAWDOWN MAP
APRIL 28, 2011

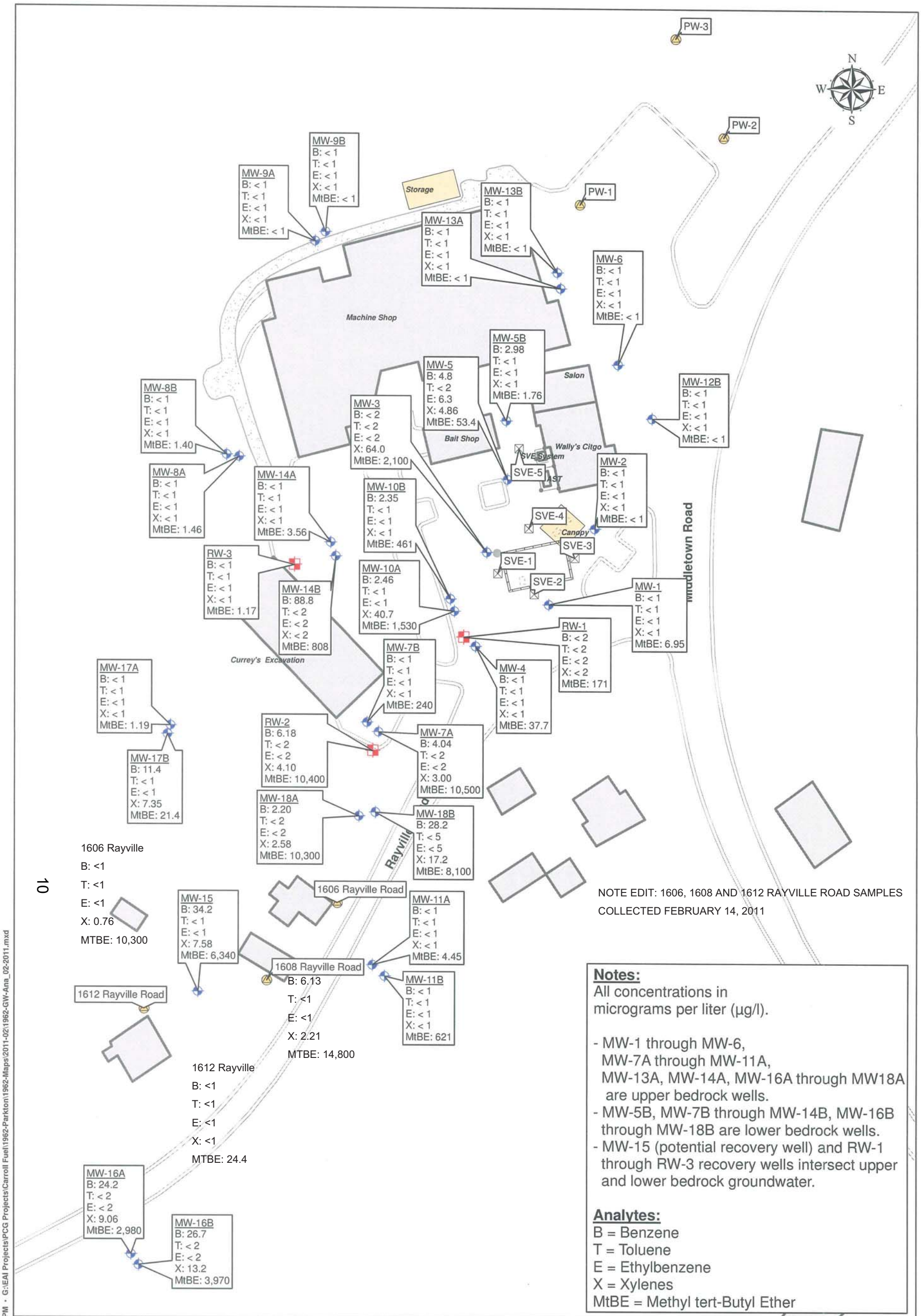
CARROLL FUELS
WALLY'S CITGO
19200 MIDDLETOWN ROAD
PARKTON, MARYLAND

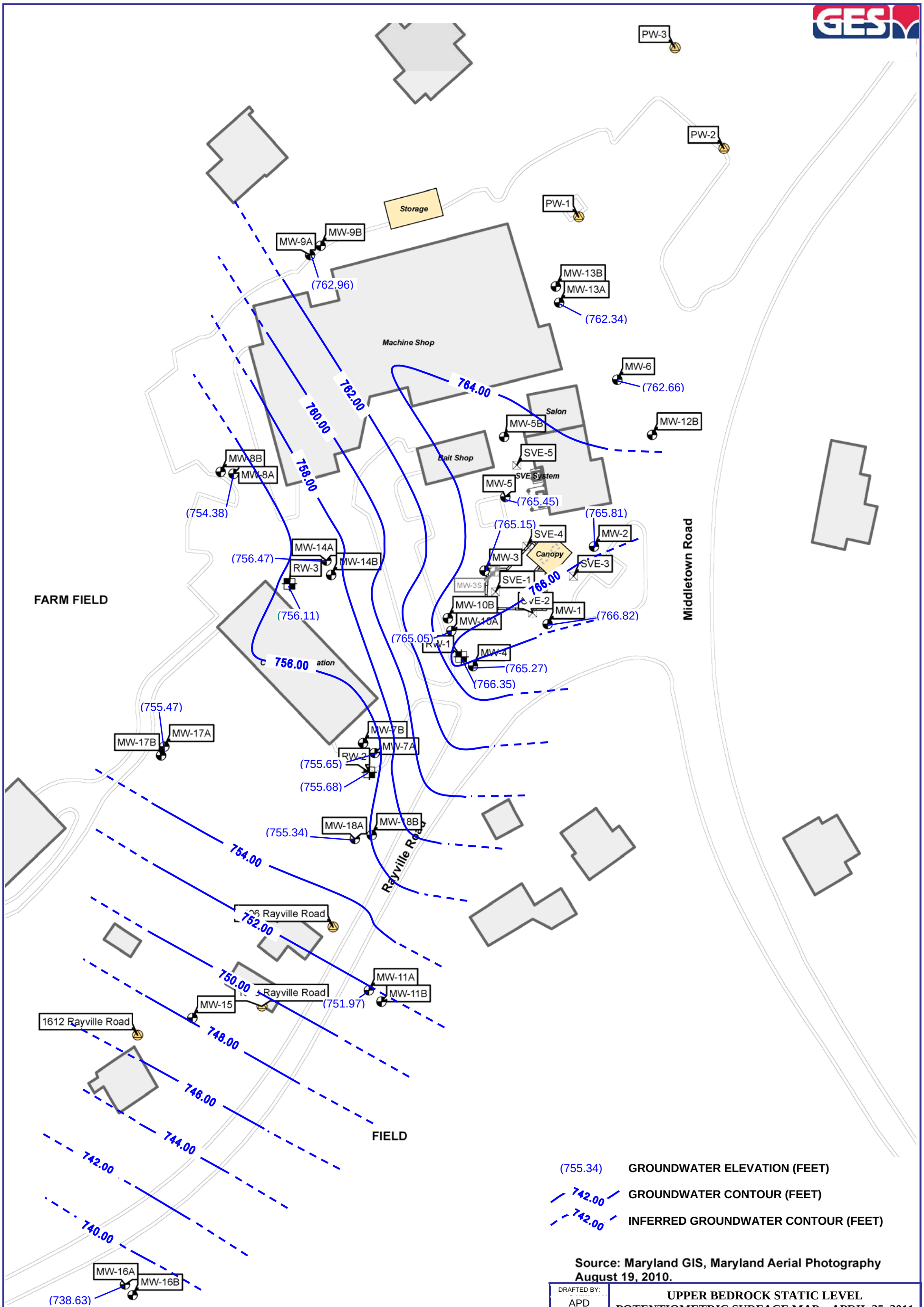
Groundwater & Environmental Services, Inc.
2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114

APPROX SCALE IN FEET: 0 — 75

DATE: 06-21-11

FIGURE: 9





Legend

- Monitoring Well
- Recovery Well
- Abandoned Well
- Potable Well
- Soil Vapor Extraction Point
- Edge of Pavement
- Fence
- Tank Field
- Building
- Canopy
- Dispenser
- Gravel

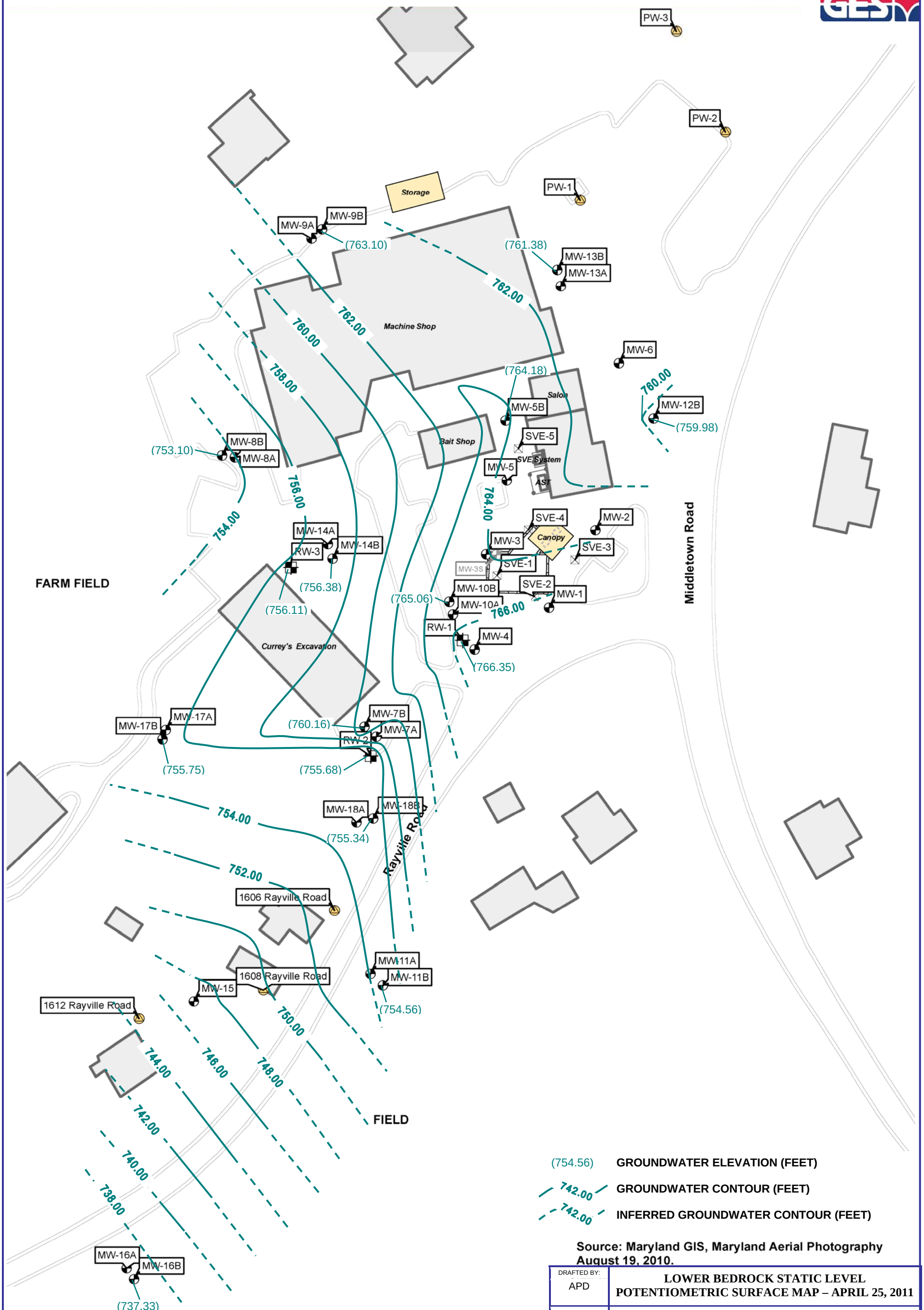
(755.34) GROUNDWATER ELEVATION (FEET)

742.00 GROUNDWATER CONTOUR (FEET)

742.00 INFERRED GROUNDWATER CONTOUR (FEET)

Source: Maryland GIS, Maryland Aerial Photography August 19, 2010.

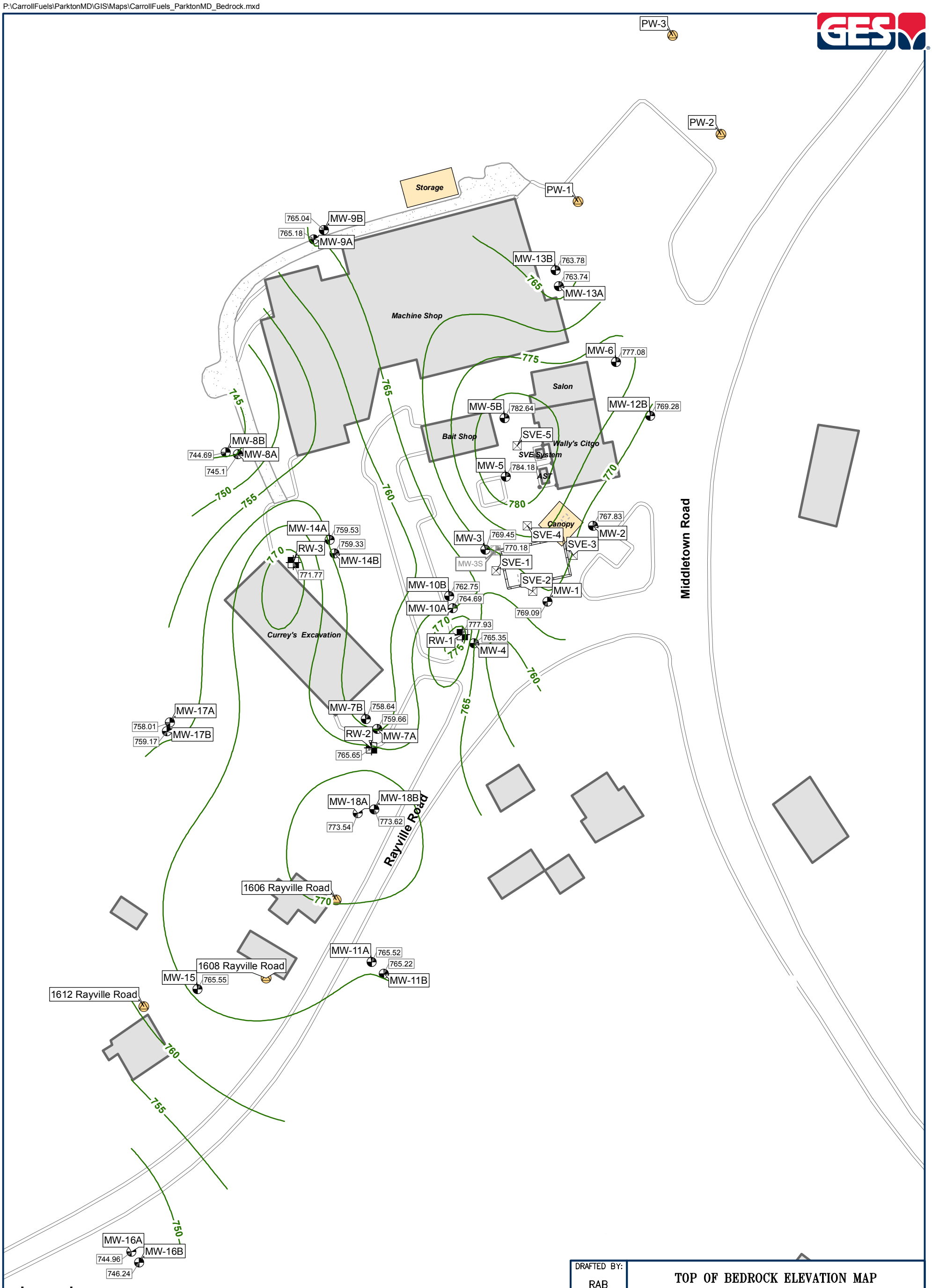
DRAFTED BY: APD	UPPER BEDROCK STATIC LEVEL POTENTIOMETRIC SURFACE MAP – APRIL 25, 2011
CHECKED BY:	CARROLL FUELS WALLY'S CITGO 19200 MIDDLETOWN ROAD PARKTON, MARYLAND
REVIEWED BY: SS	**Groundwater & Environmental Services, Inc.** 2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114
NORTH	APPROX SCALE IN FEET: 0 – 75 / DATE: 06-23-11 / FIGURE: 11



Source: Maryland GIS, Maryland Aerial Photography August 19, 2010.

DRAFTED BY: APD	LOWER BEDROCK STATIC LEVEL POTENTIOMETRIC SURFACE MAP – APRIL 25, 2011
CHECKED BY:	CARROLL FUELS WALLY'S CITGO 19200 MIDDLETOWN ROAD PARKTON, MARYLAND
REVIEWED BY: SS	**Groundwater & Environmental Services, Inc.** 2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114
NORTH	APPROX SCALE IN FEET: 0 – 75 / DATE: 06-23-11 / FIGURE: 12

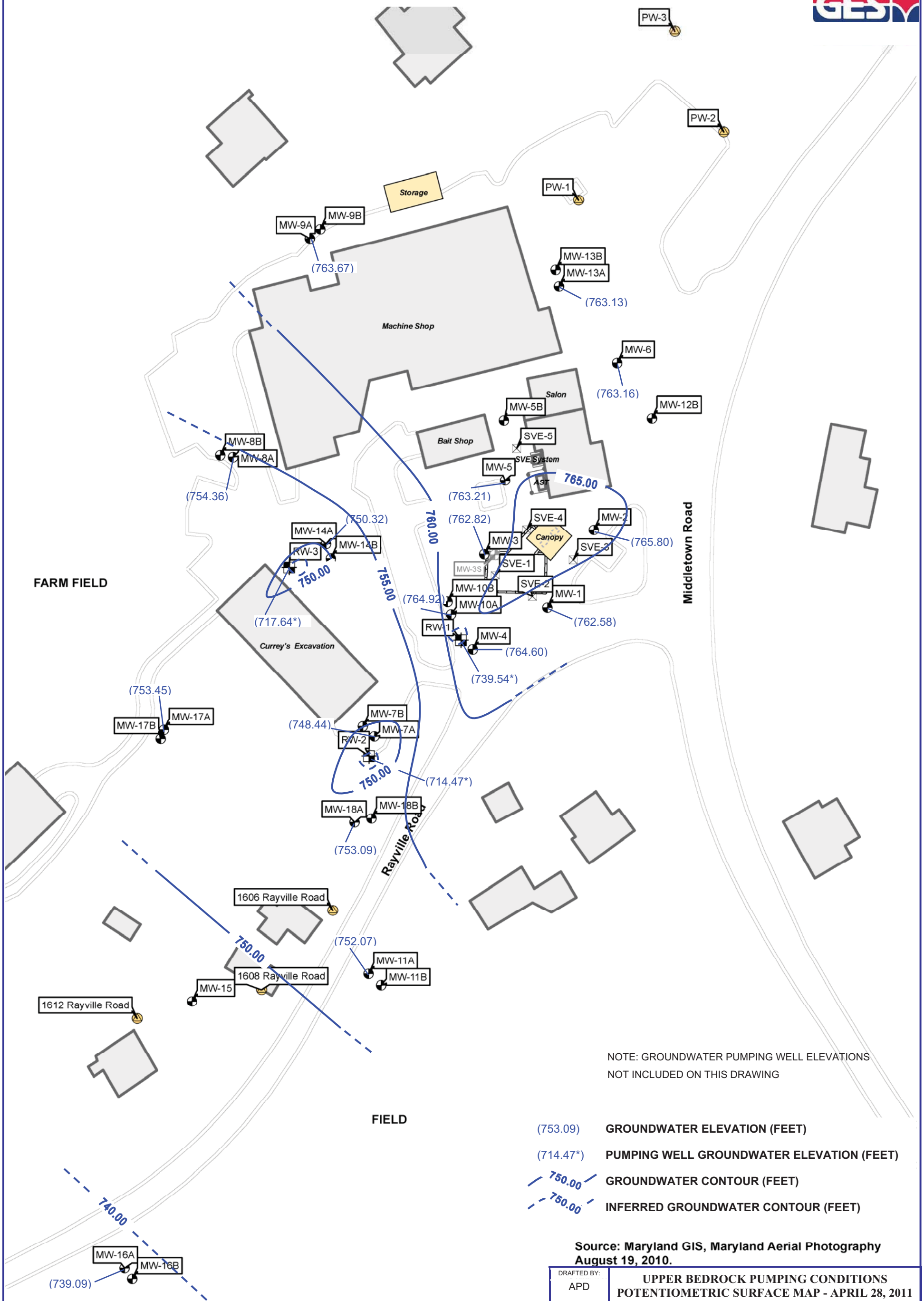
P:\CarrollFuels\ParktonMD\GIS\Maps\CarrollFuels_ParktonMD_Bedrock.mxd



Legend

- Monitoring Well
- Recovery Well
- Abandoned Well
- Potable Well
- Soil Vapor Extraction Point
- Edge of Pavement
- Fence
- Tank Field
- Top of Bedrock Elevation Contour 5 ft Interval
- Building
- Canopy
- Dispenser
- Gravel

DRAFTED BY: RAB	TOP OF BEDROCK ELEVATION MAP		
CHECKED BY:	WALLY'S CITGO STATION 19200 MIDDLETOWN ROAD PARKTON, MARYLAND		
REVIEWED BY: SMS	Groundwater & Environmental Services, Inc. 2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114		
NORTH	SCALE IN FEET 0 75	DATE 9-15-10	FIGURE 13



DRAFTED BY: APD

CHECKED BY:

REVIEWED BY: SS

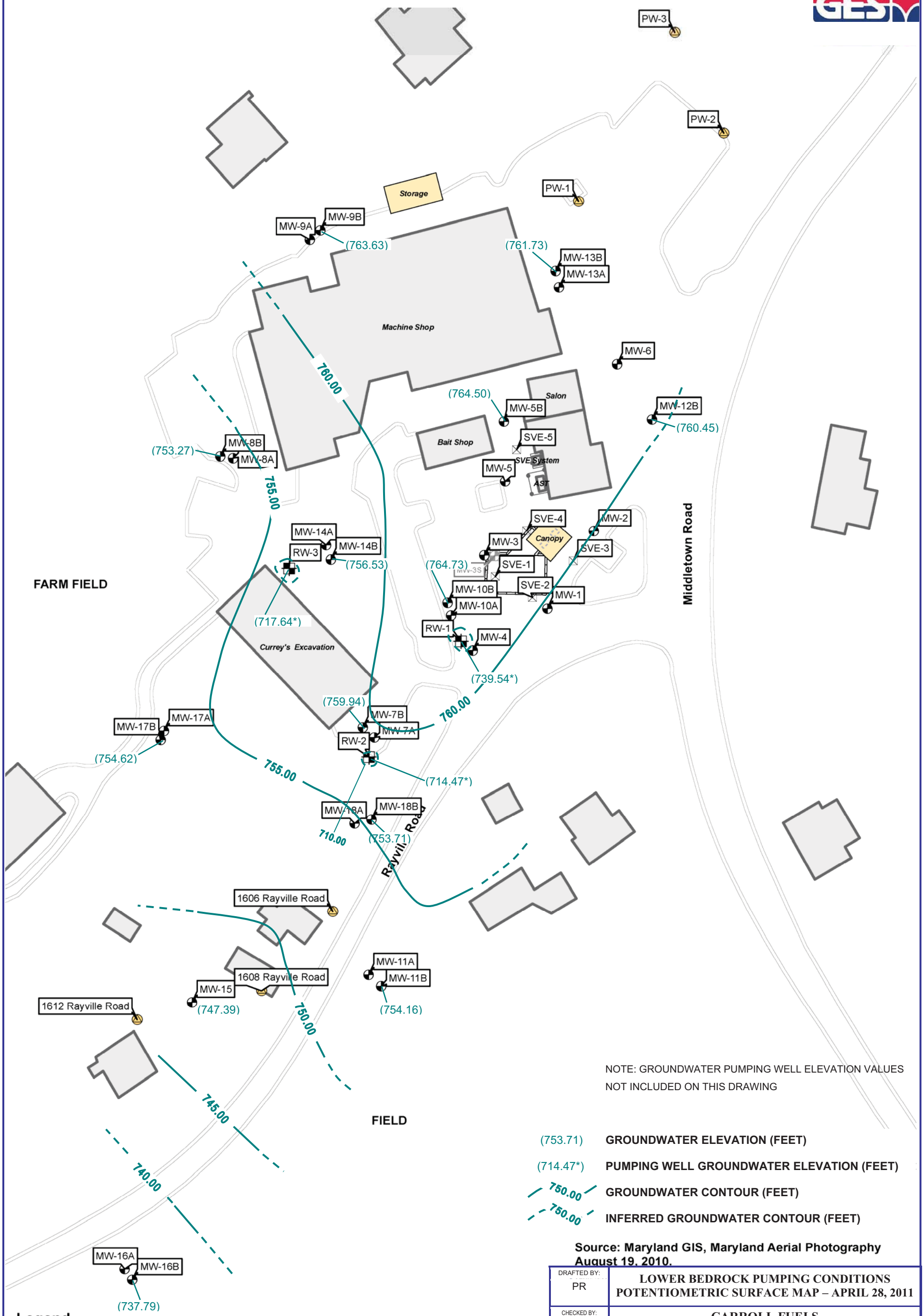
NORTH

UPPER BEDROCK PUMPING CONDITIONS POTENTIOMETRIC SURFACE MAP - APRIL 28, 2011

CARROLL FUELS
WALLY'S CITGO
19200 MIDDLETOWN ROAD
PARKTON, MARYLAND

Groundwater & Environmental Services, Inc.
2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114

APPROX SCALE IN FEET	DATE	FIGURE
0 75	06-23-11	14



DRAFTED BY: PR

CHECKED BY:

REVIEWED BY: SS

NORTH

LOWER BEDROCK PUMPING CONDITIONS POTENTIOMETRIC SURFACE MAP – APRIL 28, 2011

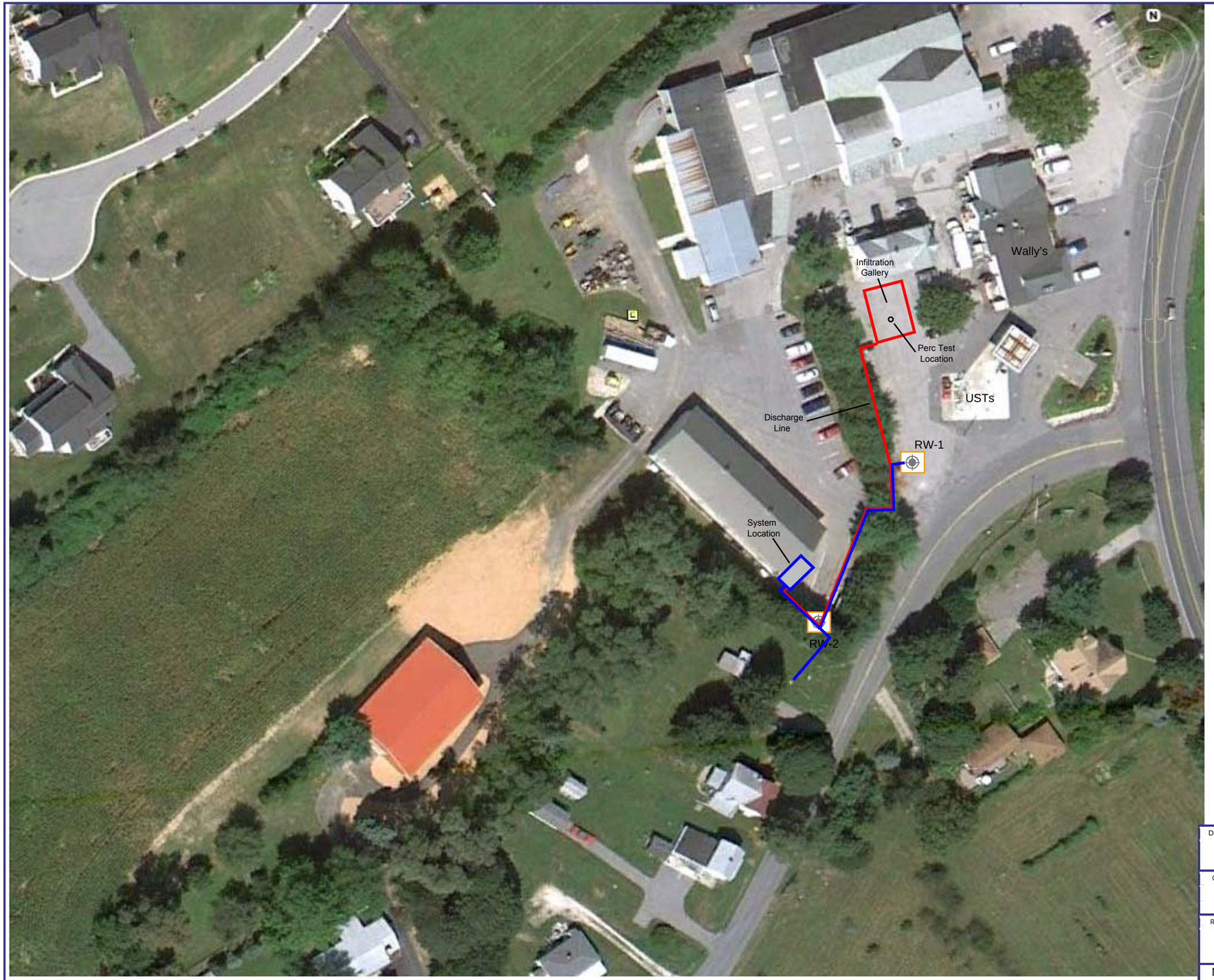
CARROLL FUELS
WALLY'S CITGO
19200 MIDDLETOWN ROAD
PARKTON, MARYLAND

Groundwater & Environmental Services, Inc.
2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114

APPROX SCALE IN FEET: 0 – 75

DATE: 06-23-11

FIGURE: 15



LEGEND:

Groundwater Extraction Wells

DRAFTED BY: DRD	PROPOSED GROUNDWATER RECOVERY SYSTEM MAP
CHECKED BY: GR	**WALLY'S CITGO STATION** **19200 MIDDLETOWN ROAD** **PARKTON, MARYLAND**
REVIEWED BY:	**Groundwater & Environmental Services, Inc.** 2142 Priest Bridge Ct, Suite 1, Crofton, Maryland 21114
NORTH	DATE: **05-20-11** / FIGURE: 16

L:\Projects\Carroll Fuel\Active\MD_Parkton_19200 Middletown Road_CITGO (Wally's)\Graphics\Carroll Wally's Pump Test Discharge and Equipment

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DATA
WALLY'S CITGO
19200 MIDDLETOWN RD
PARKTON, MARYLAND

WELL ID	WELL INSTALL DATE	WELL DIA/ MATERIAL (IN- PVC/ OPEN)	TOTAL DEPTH OF WELL FROM GROUND SURFACE	ELEV. OF TOC (FT) (NAVD 88)	DATE OF LAST SURVEY	DEPTH TO T.O.S. FROM GROUND SURFACE	DEPTH TO B.O.S. FROM GROUND SURFACE	DRILLING METHOD	DEPTH TO BEDROCK (FT)	DEPTH OF POTENTIAL WATER-BEARING ZONES (FT)	INITIAL WATER DEPTH (FT)*	COMMENTS
MW-1	08/09/05	2- PVC	62	802.09	10/01/08-10/02/08	37	62	Air Rotary	33	47, 52-54	41.25	
MW-2	08/10/05	2- PVC	62	801.83	10/01/08-10/02/08	40	60	Air Rotary	34	43, 47-49, 54	42.66	
MW-3	08/09/05	2- PVC	62	801.45	10/01/08-10/02/08	42	62	Air Rotary	32	52, 57	41.35	
MW-3S	08/30/06	2- PVC	30	98.18	09/15/06	5	30	Air Rotary	28	NE***	Dry	Abandoned 01/23/08
MW-4	11/09/05	2- PVC	61	801.35	10/01/08-10/02/08	40	60	Air Rotary	36	42-44, 46-47	40.79	
MW-5	11/09/05	2- PVC	51	802.18	10/01/08-10/02/08	30.5	50.5	Air Rotary	18	33.5, 36-37, 39	40.75	
MW-5B	07/02/08	6- OPEN **	100	802.64	10/01/08-10/02/08	70.0	100.0	Air Rotary	20	51, 64, 80, 89, 92, 95	Dry	
MW-6	11/10/05	2- PVC	62	801.08	10/01/08-10/02/08	40.5	60.5	Air Rotary	24	50-52, 54	43.74	
MW-7A	08/29/06	6- OPEN **	65	796.66	10/01/08-10/02/08	40.0	65.0	Air Rotary	37	46-51, 55-56, 60-62	44.47	
MW-7B	08/31/06	6- OPEN **	120^	796.64	10/01/08-10/02/08	70.0	120.0	Air Rotary	38	101, 216	>200	Reconstructed July-08
MW-8A	08/29/06	6- OPEN **	65	793.10	10/01/08-10/02/08	40.0	65.0	Air Rotary	48	48-53, 60-62	41.94	
MW-8B	08/29/06	6- OPEN **	100	792.69	10/01/08-10/02/08	73.5	100.0	Air Rotary	48	85, 94	95.78	
MW-9A	08/30/06	6- OPEN **	62	798.18	10/01/08-10/02/08	40.0	65.0	Air Rotary	33	40-51, 56-58	41.04	
MW-9B	08/30/06	6- OPEN **	120^	798.04	10/01/08-10/02/08	72.0	120.0	Air Rotary	33	99, 141, 186-190, 220	>200	Reconstructed July-08
MW-10A	05/08/07	6- OPEN **	62	800.69	10/01/08-10/02/08	40.0	62.0	Air Rotary	36	60-61	35.77	
MW-10B	05/08/07	6- OPEN **	100	800.75	10/01/08-10/02/08	70.0	100.0	Air Rotary	38	NE***	89.00	
MW-11A	06/26/08	6- OPEN **	60	795.52	10/01/08-10/02/08	40.0	60.0	Air Rotary	30	NE***	44.53	
MW-11B	06/26/08	6- OPEN **	100	795.22	10/01/08-10/02/08	70.0	100.0	Air Rotary	30	80, 85, 90	41.60	
MW-12B	07/02/08	6- OPEN **	100	800.28	10/01/08-10/02/08	70.0	100.0	Air Rotary	31	64	>75	
MW-13A	07/01/08	6- OPEN **	60	801.74	10/01/08-10/02/08	40.0	60.0	Air Rotary	38	50, 53	41.50	
MW-13B	07/01/08	6- OPEN **	100	801.78	10/01/08-10/02/08	70.0	100.0	Air Rotary	38	50, 53, 72, 80, 90,	>75	
MW-14A	06/27/08	6- OPEN **	60	797.53	10/01/08-10/02/08	40.0	60.0	Air Rotary	38	54, 57, 60	41.18	
MW-14B	06/27/08	6- OPEN **	100	797.33	10/01/08-10/02/08	70.0	100.0	Air Rotary	38	54, 57, 60, 78, 81, 89	>75	
MW-15	05/12/10	6- OPEN **	120	793.55	06/15/10	40.5	120.0	Air Rotary	28	54, 57, 77, 85	54	
MW-16A	05/17/10	6- OPEN **	65	778.96	06/15/10	40.5	65.0	Air Rotary	34	49-50, 55, 58-59	49	
MW-16B	05/18/10	6- OPEN **	120	778.24	06/15/10	70.5	120.0	Air Rotary	32	54.5, 56, 75, 112-113	75	
MW-17A	05/14/10	6- OPEN **	65	785.01	06/15/10	40.5	65.0	Air Rotary	27	55,57,63.5	55	
MW-17B	05/17/10	6- OPEN **	120	785.17	06/15/10	70.5	120.0	Air Rotary	26	55, 62, 64.5, 69.5, 87	87	
MW-18A	05/13/10	6- OPEN **	65	798.54	06/15/10	40.5	65.0	Air Rotary	25	51-52, 54-55, 63.5	51	
MW-18B	05/14/10	6- OPEN **	120	799.12	06/15/10	70.5	120.0	Air Rotary	25.5	48, 50.5, 53, 57.5, 66-69, 85, 103, 109, 112	90	
RW-1	05/20/10	6- OPEN **	120	800.93	06/15/10	40.5	120.0	Air Rotary	23	44-47, 106	NO	
RW-2	05/19/10	6- OPEN **	120	796.65	06/15/10	40.5	120.0	Air Rotary	29	43-47, 86-87, 100.5-101.5	NO	
RW-3	05/20/10	6- OPEN **	120	796.77	06/15/10	40.5	120.0	Air Rotary	25	46-48, 61-62.5, 72.5, 91	47	

* Depth to water measured during first sampling event
** 6 inch steel casing grouted to open hole depth
*** NE= None Encountered
^ Well reconstruction completed on 07/03/08.
NA - Not Available
NO - Not Observed
NAVD 88 = Maryland State Coordinate System, National Aerial Vertical Data 1988.

Table 3

LABORATORY ANALYTICAL DATA SUMMARY

Carroll Fuels - Wally's Citgo
19200 Middletown Road
Parkton, MD

Monitoring Well	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Isopropyl Benzene (µg/L)	Naphthalene (µg/L)	tert-Butyl Alcohol (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	2-Chlorotoluene (µg/L)	Diisopropyl ether (µg/L)	Dissolved Oxygen (mg/L)	n-propylbenzene (µg/L)	ORp (mV)	Specific Conductance (umhos/cm)	tert-Amyl alcohol (µg/L)	tert-amyl methyl ether (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	Trichloroethene (µg/L)	Well pH	Well Temperature (F)
1606-RAYVILLE-INF	05/02/2011	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3	12.7	-	ND<0.5	ND<2.5	-	-	-	ND<0.5	5.90	-	160.1	1,404	ND<2.5	ND<0.5	-	-	ND<0.5	5.55	19.29
1608-RAYVILLE-INF	05/02/2011	5.76	ND<0.5	ND<0.5	6.77	12.5	15,000	-	0.58	3,970	-	-	-	43.2	7.62	-	146.3	1,774	132	517	-	-	ND<0.5	5.75	15.00
1612-RAYVILLE-INF	05/02/2011	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3	57.5	-	ND<0.5	ND<2.5	-	-	-	ND<0.5	6.51	-	127.8	307	ND<2.5	1.9	-	-	ND<0.5	5.74	14.43
EFFLUENT	04/20/2011	ND<1	ND<1	ND<1	ND<2	ND<5	ND<1	ND<1	ND<1	ND<5	ND<1	ND<1	ND<1	ND<1	-	ND<1	-	-	-	ND<1	-	ND<100	ND<1	-	-
	04/25/2011	ND<1	ND<1	ND<1	ND<2	ND<5	ND<1	ND<1	ND<1	ND<5 MS	ND<1	ND<1	ND<1	ND<1	-	ND<1	-	-	ND<5	ND<1	ND<150	ND<100	ND<1	-	-
	04/27/2011	ND<1	ND<1	ND<1	ND<2	ND<5	ND<1	ND<1	ND<1	47	ND<1	ND<1	ND<1	ND<1	-	ND<1	-	-	ND<5	ND<1	ND<150	ND<100	ND<1	-	-
	04/28/2011	ND<1	ND<1	ND<1	ND<2	ND<5	ND<1	ND<1	ND<1	349	ND<1	ND<1	ND<1	ND<1	-	ND<1	-	-	ND<5	ND<1	ND<150	ND<100	ND<1	-	-
INFLUENT*	04/25/2011	279	557	117	495	1,448	1,820	4.68	24	ND<10	108	30.8	14.7	12	-	13.7	-	-	ND<10	33.9	622	3,470	2.1	-	-
MID	04/25/2011	ND<1	ND<1	ND<1	ND<2	ND<5	ND<1	ND<1	ND<1	ND<5	ND<1	ND<1	ND<1	ND<1	-	ND<1	-	-	ND<5	ND<1	ND<150	ND<100	ND<1	-	-
	04/27/2011	ND<1	ND<1	ND<1	ND<2	ND<5	ND<1	ND<1	ND<1	825	ND<1	ND<1	ND<1	ND<1	-	ND<1	-	-	ND<5	ND<1	ND<150	ND<100	ND<1	-	-
	04/28/2011	ND<1	ND<1	ND<1	ND<2	ND<5	11.5	ND<1	ND<1	518	ND<1	ND<1	ND<1	ND<1	-	ND<1	-	-	ND<5	ND<1	ND<150	ND<100	ND<1	-	-
RW-1	04/20/2011	ND<2	ND<2	ND<2	ND<4	ND<10	12.9	ND<2	ND<2	ND<10	ND<2	ND<2	ND<2	ND<2	-	ND<2	-	-	-	ND<2	-	ND<100	ND<2	-	-
	04/26/2011	ND<2	ND<2	ND<2	ND<4	ND<10	81.3	ND<2	ND<2	ND<10	ND<2	ND<2	ND<2	ND<2	-	ND<2	-	-	ND<10	ND<2	ND<150	ND<100	ND<2	-	-
	04/27/2011	ND<2	ND<2	ND<2	ND<4	ND<10	325	ND<2	ND<2	ND<10	ND<2	ND<2	ND<2	ND<2	-	ND<2	-	-	ND<10	ND<2	ND<150	187	ND<2	-	-
	04/28/2011	ND<2	ND<2	ND<2	ND<4	ND<10	284	ND<2	ND<2	61.4	ND<2	ND<2	ND<2	ND<2	-	ND<2	-	-	ND<10	4	ND<150	213	ND<2	-	-
	05/02/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	4.81	-	-19.7	547	-	-	-	-	-	7.73	15.74
RW-2	04/20/2011	ND<2	ND<2	ND<2	ND<4	ND<10	5,910	ND<2	ND<2	1,640	ND<2	ND<2	ND<2	24.4	-	ND<2	-	-	-	116	-	1,040	ND<2	-	-
	04/25/2011	ND<2	ND<2	ND<2	ND<4	ND<10	6,110	ND<2	ND<2	544	ND<2	ND<2	ND<2	23.9	-	ND<2	-	-	ND<10	112	ND<150	1,070	ND<2	-	-
	04/26/2011	2.76	ND<2	ND<2	ND<4	2.76	10,200	ND<2	ND<2	3,240	ND<2	ND<2	ND<2	49.1	-	ND<2	-	-	163	210	ND<150	1,120	ND<2	-	-
	04/27/2011	2.92	ND<2	ND<2	ND<4	2.92	9,210	ND<2	ND<2	3,090	ND<2	ND<2	ND<2	51.8	-	ND<2	-	-	144	222	154	1,070	ND<2	-	-
	04/28/2011	ND<2	ND<2	ND<2	ND<4	ND<10	4,720	ND<2	ND<2	1,320	ND<2	ND<2	ND<2	30.1	-	ND<2	-	-	84.8	133	171	1,120	ND<2	-	-
	05/02/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	3.71	-	-41.1	1,930	-	-	-	-	-	7.46	15.13
RW-3	04/25/2011	ND<2	ND<2	ND<2	ND<4	ND<10	ND<2	ND<2	ND<2	ND<10	ND<2	ND<2	ND<2	ND<2	-	ND<2	-	-	ND<10	ND<2	-	ND<100	ND<2	-	-
	04/27/2011	ND<2	ND<2	ND<2	ND<4	ND<10	ND<2	ND<2	ND<2	ND<10	ND<2	ND<2	ND<2	ND<2	-	ND<2	-	-	ND<10	ND<2	ND<150	ND<100	ND<2	-	-
	04/28/2011	ND<2	ND<2	ND<2	ND<4	ND<10	3.64	ND<2	ND<2	ND<10	ND<2	ND<2	ND<2	ND<2	-	ND<2	-	-	ND<10	ND<2	ND<150	ND<100	ND<2	-	-
	05/02/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	3.34	-	-74.1	308	-	-	-	-	-	7.02	16.73
TANKER	04/25/2011	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<3	ND<0.5	-	-	ND<2.5	-	-	-	ND<0.5	-	-	-	-	ND<2.5	ND<0.5	-	-	ND<0.5	-	-

Notes:

µg/L	= Micrograms per liter
mg/L	= Milligrams per liter
mV	= Millivolts
umhos/cm	= Micrisiemens per centimeter
INF	= Influent
ND<#	= Non detect at a concentration of #
MID	= Midfluent
MS	= The spike recovery was outside acceptance limits for the MS and/or MSD due to sample matrix interferences. The batch was accepted based on acceptable CCV recovery.
V4	= Check standard was outside the QC range. Data accepted based on acceptable LCS.
V8	= LCS value was outside the QC range. Data accepted based on acceptable check standard.
*	= Combined influent from frac tank prior to carbon vessels.

Table 11

PUMP TEST SOLUTION TABLE

Former Wally's Citgo
19200 Middletown Rd.
Parkton, MD

Well	Theis Solution	Cooper-Jacobs Solution	Neuman Solution	Average	
1606 Rayville	B= 79 f	B= 79	B= 79		
	T= 45.05	T= 53.98	T= 46.92	T= 48.7	ft^2/day
	S= 0.00172	S= 0.0014	S= 0.00151	S= 0.001545	
MW-1	B= 84.5	B= 84.5	B=		
	T= 29.34	T= 29.34	T=	T= 29.3	ft^2/day
	S= 0.0005	S= 0.0005	S=	S= 0.0004963	
MW-4	B= 84.5	B= 84.5	B=		
	T= 55.47	T= 55.47	T=	T= 55.5	ft^2/day
	S= 0.1107	S= 0.1107	S=	S= 0.1107	
MW-7A	B= 79	B= 79	B= 79		
	T= 32.85	T= 26.3	T= 29.23	T= 29.5	ft^2/day
	S= 0.00164	S= 0.0038	S= 0.00113	S= 0.0021753	
MW-10A	B= 84.5	B= 84.5	B=		
	T= 93.19	T= 112.9	T=	T= 103.0	ft^2/day
	S= 0.1057	S= 0.0807	S=	S= 0.0932	
MW-10B	B= 84.5	B= 84.5	B=		
	T= 76.13	T= 77.77	T=	T= 77.0	ft^2/day
	S= 0.03274	S= 0.029	S=	S= 0.030875	
MW-14A	B= 84.5	B= 84.5	B=		
	T= 29.74	T= 29.74	T=	T= 29.7	ft^2/day
	S= 0.00519	S= 0.0052	S=	S= 0.005186	
MW-17A	B= 84.5	B= 84.5	B=		
	T= 30.67	T= 30.67	T=	T= 30.7	ft^2/day
	S= 0.00126	S= 0.0013	S=	S= 0.001261	
MW-17B	B= 90.6	B= 90.6	B=		
	T= 20.45	T= 27.22	T=	T= 23.8	ft^2/day
	S= 0.00183	S= 0.0016	S=	S= 0.001723	
MW-18A	B= 79	B= 79	B= 79		
	T= 39.97	T= 39.97	T= 38.54	T= 39.5	ft^2/day
	S= 0.00854	S= 0.0085	S= 0.01117	S= 0.0094187	
MW-18B	B= 79	B= 79	B= 79		
	T= 39.7	T= 43.93	T= 38.54	T= 40.7	ft^2/day
	S= 0.01988	S= 0.0163	S= 0.00131	S= 0.0125063	

= solution determined "poor fit" and therefore not included in aquifer parameter tabulation

"B" = aquifer thickness, measured in feet (ft)

"T" = Transmissivity, measured in ft^2 per day

"S" = Storativity as dimensionless value

Table 11
Pump Test Solution Table
Former Wally's Citgo
19200 Middletown Rd.
Parkton, MD

Well	Theis Solution	Cooper-Jacobs Solution	Neuman Solution	Average	
1606 Rayville	B= 79 f	B= 79	B= 79		
	T= 45.05	T= 53.98	T= 46.92	T= 48.7	ft^2/day
	S= 0.002	S= 0.0014	S= 0.00151	S= 0.001545	
MW-1	B= 84.5	B= 84.5	B=		
	T= 29.34	T= 29.34	T=	T= 29.3	ft^2/day
	S= 5E-04	S= 0.0005	S=	S= 0.0004963	
MW-4	B= 84.5	B= 84.5	B=		
	T= 55.47	T= 55.47	T=	T= 55.5	ft^2/day
	S= 0.111	S= 0.1107	S=	S= 0.1107	
MW-7A	B= 79	B= 79	B= 79		
	T= 32.85	T= 26.3	T= 29.23	T= 29.5	ft^2/day
	S= 0.002	S= 0.0038	S= 0.00113	S= 0.0021753	
MW-10A	B= 84.5	B= 84.5	B=		
	T= 93.19	T= 112.9	T=	T= 103.0	ft^2/day
	S= 0.106	S= 0.0807	S=	S= 0.0932	
MW-10B	B= 84.5	B= 84.5	B=		
	T= 76.13	T= 77.77	T=	T= 77.0	ft^2/day
	S= 0.033	S= 0.029	S=	S= 0.030875	
MW-14A	B= 84.5	B= 84.5	B=		
	T= 29.74	T= 29.74	T=	T= 29.7	ft^2/day
	S= 0.005	S= 0.0052	S=	S= 0.005186	
MW-17A	B= 84.5	B= 84.5	B=		
	T= 30.67	T= 30.67	T=	T= 30.7	ft^2/day
	S= 0.001	S= 0.0013	S=	S= 0.001261	
MW-17B	B= 90.6	B= 90.6	B=		
	T= 20.45	T= 27.22	T=	T= 23.8	ft^2/day
	S= 0.002	S= 0.0016	S=	S= 0.001723	
MW-18A	B= 79	B= 79	B= 79		
	T= 39.97	T= 39.97	T= 38.54	T= 39.5	ft^2/day
	S= 0.009	S= 0.0085	S= 0.01117	S= 0.0094187	
MW-18B	B= 79	B= 79	B= 79		
	T= 39.7	T= 43.93	T= 38.54	T= 40.7	ft^2/day
	S= 0.02	S= 0.0163	S= 0.00131	S= 0.0125063	

= solution determined "poor fit" and therefore not included in aquifer parameter tabulation

"B" = aquifer thickness, measured in feet (ft)

"T" = Transmissivity, measured in ft^2 per day

"S" = Storativity as dimensionless value

APPENDICES

APPENDIX A

Chronology of Key Site History

Wally's Citgo
19200 Middletown Road, Parkton, Baltimore County, MD

Site History

January 1998:	Maryland Department of the Environment (MDE) opened Case #98-1371-BA2 during the retrofit of the underground storage tank (UST) system.
March 1998:	The MDE-Oil Control Program (MDE-OCP) conducted a site inspection during system upgrade and did not observe contamination in shallow soils. A Notice of Compliance (NOC) was issued for Case #98-1371-BA2.
June 5, 2001:	A Phase II Environmental Assessment was conducted at the Site by ATC Associates, Inc. Two soil samples were collected; concentrations of gasoline constituents were detected below Maryland Department of the Environment's (MDE's) cleanup standards for soil. An on-site potable well was also sampled; concentrations of barium and lead were detected below MDE's drinking water standards.
October 21, 2004:	MDE Case #2005-0537-BA2 was opened for the Site when a customer drove away from a dispenser with the gasoline hose still in the car's gas tank. A surface spill occurred, which ran off the lot and into a storm drain at 19205 Middletown Road. The gasoline was cleaned up by the Fire Department and Carroll, and the dispenser hose was repaired.
June 8, 2005:	MDE Case #2005-0537-BA2 was closed.
July 25 – August 9, 2005:	Monitoring wells MW-1, MW-2, MW-3, and MW-3S were installed on-site to comply with MDE – Oil Control Program (MDE-OCP) emergency regulations concerning underground storage tank (UST) systems in high-risk groundwater use areas (HRGUA).
September 12, 2005:	The on-site potable well was sampled. No analytes were detected above MDE action levels.
September 2005 – December 2005:	Thirty-five (35) area potable wells were sampled, including the station's on-site potable well. Off-site potable well sampling was established for select wells on a quarterly or monthly basis.
October 4, 2005:	Environmental Alliance (EA) submitted *Final Emergency Regulations Installation of Three Monitoring Wells and Groundwater Sampling.*
October 18, 2005:	The MDE issued a directive to Carroll Independent Fuel Company (Carroll) requiring UST system testing and a well receptor survey, and informed the local health department of above-standard concentrations of petroleum constituents in Site monitoring wells.
October 31, 2005:	MDE mailed notification letters to residents within a half-mile radius of the Site.
November 2 -15, 2005:	Carroll sampled or obtained records of sampling for select potable wells within a 1/2-mile radius of the Site.
November 7, 2005:	A proposal for installation of three to four additional monitoring wells was submitted to the MDE via fax. The proposal was approved via email.
November 8, 2005:	Results of potable well sampling were submitted to the MDE via fax. Methyl tertiary butyl ether (MTBE) was detected in the domestic wells at 1606 and 1608 Rayville Road above the MDE's action level of 20 micrograms per liter (µg/L).
November 9-10, 2005:	Monitoring wells MW-4, MW-5 and MW-6 were installed at the Site.
November 10, 2005:	A meeting was conducted at the MDE to discuss Site conditions.

November 18, 2005:	Point-of-entry-treatment (POET) systems were installed on the water supplies at residences at 1606 and 1608 Rayville Road.
November 29, 2005:	EA submitted *Activities to be Completed Regarding MD Emergency Regulations* to the MDE, detailing the results of the well receptor survey and results of the UST system testing.
December 9, 2005:	EA submitted *Soil Vapor Extraction Work Plan* to the MDE, proposing soil vapor extraction (SVE) pilot testing on the tank field.
December 19, 2005:	The MDE approved the *Work Plan*.
December 30, 2005:	The MDE sent a site update letter to area residents.
January 30, 2006:	SVE remedial feasibility testing was conducted on the tank field observation wells. A short-term groundwater pump test was conducted on monitoring well MW-3.
March 8, 2006:	A meeting was conducted between Carroll, EA, and the MDE. Action items included a soil boring investigation, domestic well sampling at select properties, and installation of an SVE system on the tank field.
March 14, 2006:	EA submitted *Environmental Assessment Report* to the MDE.
March 30, 2006:	Soil borings SB-1 through SB-11 and SB-11A were advanced.
March – April 2006:	SVE piping was installed, connected to the tank field observation wells.
May 2, 2006:	MDE correspondence was issued in response to *Environmental Site Assessment Report,* and outlined the next action items to be performed as discussed at the March 8, 2006 meeting.
June 1, 2006:	EA submitted *Environmental Report/Work Plan* in response to the MDE correspondence, proposing the installation of monitoring wells at five additional locations.
June 20, 2006:	EA submitted *Work Plan Additions and Changes* to the MDE, modifying the plan presented in the June 1, 2006 letter report.
July 7, 2006:	MDE correspondence approved the Work Plan, and required additional domestic well sampling at five area residences.
July 14, 2006:	A proposal to conduct a geophysical survey of the area was submitted to the MDE.
July 21, 2006:	MDE-OCP approved the geophysics proposal.
July 31, 2006:	A geophysical investigation conducted on-site. The MDE requested a *Revised Work Plan* for the installation of monitoring wells based on geophysical data.
August 8, 2006:	The SVE system was started. MDE representatives were on-site. Monthly monitoring of the SVE system was initiated.
August 10, 2006:	EA submitted *Updated Work Plan* to the MDE.
August 17, 2006:	The MDE approved the *Updated Work Plan*.
August 21, 2006:	EA met with MDE personnel on-site to approve seven monitoring well locations. Two additional domestic wells and four on-site potable wells were identified for future sampling.
August 24 – 31, 2006:	Shallow overburden monitoring well MW-3S, shallow bedrock wells MW-7A, MW-8A, and MW-9A, and deep bedrock wells MW-7B, MW-8B, and MW-9B were installed.
September 15, 2006:	An updated Site survey was performed to determine top-of-casing elevations for the new wells relative to an arbitrary datum established for the Site.
September 18, 19 and October 13, 2006:	Down-well geophysical surveys were conducted of bedrock wells MW-7A, MW-7B, MW-8A, MW-9A, and MW-9B by ARM Group, Inc.
December 5, 2006:	Groundwater samples were collected for analysis of major geochemical ions from the new bedrock wells.

January 2007:	EA submitted *January 2007 Update Letter Report* to the MDE, including groundwater monitoring data, potable well data, soil vapor extraction remedial system operation and monitoring data, and potable well construction details within 1/2 mile of the Site.
January 31, 2007:	EA submitted *Site Update Letter Report* to the MDE, detailing results of monitoring well and domestic well sampling.
February 6, 2007:	EA submitted *Hydrogeologic Investigation Update Report and Work Plan* to the MDE, detailing the installation of monitoring wells MW-3S, MW-7A, MW-7B, MW-8A, MW-8B, MW-9A, and MW-9B, down-well geophysical survey results, deep bedrock well geochemical monitoring data, and a Work Plan proposing the abandonment of bedrock well MW-7B, modification of bedrock well MW-9B from a 242-foot well to a 110-foot well, installation of bedrock wells MW-7C, MW-10A, MW-10B, down-well geophysical surveys of the new bedrock wells, and pump tests at proposed well locations MW-10A and MW-10B.
March 21, 2007:	The MDE issued *Notice of Violation (NOV) NV-2007-067* to Carroll. The NOV required groundwater sampling and analysis via EPA Methods 8260 and 8015B, collection of groundwater samples from the fracture zones identified in the hydrogeologic report, the submission of a *Work Plan* to vertically delineate contamination, the extension of the SVE system to include monitoring wells MW-3, MW-4 and MW-5, and approved the installation of monitoring wells MW-10A and MW-10B. The MDE approved the pump testing activities, with modifications. Only the upper bedrock monitoring well MW-10A was to be used for the pump test.
March 30, 2007:	EA submitted *Groundwater Sampling Work Plan*, and scheduled a groundwater sampling event for April 3-4, 2007.
April 10, 2007:	The MDE issued RE: Notice of Violation NV-2007-067, approving an extension, but requiring the submittal of a *Revised CAP* that expanded SVE to include monitoring wells MW-3, MW-4 and MW-5.
May 8, 2007:	Monitoring wells MW-10A and MW-10B were installed on-site. The MDE was on-site to observe packing and sampling of monitoring well MW-10B.
May 21, 2007:	EA submitted modifications to the *Work Plan* to the MDE via email.
May 22, 2007:	The MDE approved the *Work Plan* modifications via email.
May 23 – June 4, 2007:	EA conducted a step test and a 72-hour pump test on monitoring well MW-10A.
June 15, 2007:	EA submitted *Hydrogeologic Investigation Update Report, Groundwater Delineation Work Plan, and Soil Alternative Corrective Action Plan* to the MDE.
July 30, 2007:	EA submitted *Pump Testing Report* to the MDE.
December 4-6, 2007:	Soil borings SB-12 through SB-22 were advanced.
December 28, 2007:	EA submitted *December 2007 Soil Boring Investigation Results* to the MDE.
January 2008:	The SVE system was shut down.
January 23, 2008:	Monitoring well MW-3S was abandoned.
January 24-29, 2008:	The existing UST system was removed for upgrade to a new UST system. Approximately 99.25 tons of impacted soil was removed from the area northeast of the UST system and disposed off-site. An unspecified additional quantity of non-impacted soil was removed in order to install the new UST system and was disposed off-site. A total of approximately 1,300 cubic yards of soil was removed.
March 7, 2008:	EA submitted *UST Closure, UST System Installation, and Soil Remediation Sampling Results Letter Report* to the MDE.
May 2008:	A POET system was installed on the water supply at 1612 Rayville Road.
June 26 – July 2, 2008:	Monitoring wells MW-11A, MW-11B, MW-12B, MW-13A, MW-13B, MW-14A and MW-14B were installed off-site.

January 9, 2009:	The MDE issued a directive requiring the submittal of a *Corrective Action Plan* (CAP) by February 27, 2009.
February 26, 2009:	EA submitted a CAP to the MDE, proposing the installation of four new borings around the perimeter of the UST field for SVE pilot testing, and presenting a conceptual design of a groundwater pump and treat (P&T) system extracting groundwater from on-site wells.
April 15, 2009:	EA submitted *Groundwater Model Report* to the MDE. The MDE issued letters to area residents for a comment period on the CAP.
April 30, 2009:	MDE received a letter from counsel representing members of the community.
May 5, 2009:	A meeting was conducted between Carroll, EA, Carroll's legal counsel, and the MDE to discuss the CAP.
May 22, 2009:	EA submitted *Report on the Remedial Design for the Wally's Citgo Service Station* to the MDE, updating the concepts for the discharge of treated water from the proposed P&T system, and evaluating the possible addition of off-site pumping wells.
May 28, 2009:	MDE correspondence approved the SVE pilot test, required an investigation of off-site impacted drinking water wells including geophysical surveys of the wells at 1606, 1608 and 1612 Rayville Road, required installation of additional monitoring wells, and required a *CAP Addendum* to be submitted by July 10, 2009. The letter stated that the MDE did not approve discharge of a P&T system to the tank field or a septic field, as proposed in previous submittals.
June 11, 2009:	A *Borehole Geophysical Testing Work Plan* was submitted to the MDE.
June 18, 2009:	MDE correspondence approved the *Borehole Geophysical Testing Work Plan.*
June 15, 2009:	SVE points SVE-1 through SVE-4 were installed at the four sides of the existing UST field.
June 25, 2009:	SVE pilot testing was conducted.
July 23, 2009:	MDE correspondence approved an extension for the submittal of the *CAP Addendum* to August 21, 2009. The letter also required the submittal of monthly *Domestic Well Sampling Reports*.
June 30, 2009:	A down-well geophysical surveys of the domestic wells at 1606, 1608, and 1612 Rayville Road were conducted. The well head at 1606 Rayville Road was excavated and raised to above grade to bring the well head into compliance with Baltimore County requirements.
August 21, 2009:	EA submitted a *CAP Addendum*, detailing domestic well down-well geophysical surveys, SVE point installation, and SVE pilot testing. The CAP proposed the installation and operation of a P&T system pumping from three proposed recovery wells located in the MW-7A/MW-7B area, the MW-10A/MW-10B area and the MW-14A/MW-14B area, and discharging to a storm sewer that orginates near the intersection of Middletown Road and Rayville Road north of the Site. The *CAP Addendum* also proposed the installation of an SVE system, utilizing existing vapor extraction well SVE-04 and a new proposed SVE well, SVE-5. Installation of a new monitoring well on the property of 1608 Rayville Road, and was also proposed.
October 14, 2009:	The MDE approved the *CAP Addendum*, with modifications, including the requirement for installation of two additional monitoring well clusters, continuous split-spoon sampling during the installation of SVE point SVE-5, the submission of final system engineering drawings, geophysical surveying of proposed monitoring well MW-15, and the inclusion of septic system setbacks on future maps. The storm water discharge location was approved, and the potable well sampling frequency for nine area wells was reduced to semi-annual.

November 2, 2009:	EA, Carroll and the MDE conducted a site walk to select monitoring well locations.
May 10 – 20, 2010:	Monitoring wells MW-15, MW-16A, MW-16B, MW-17A, MW-17B, MW-18A and MW-18B, recovery wells RW-1, RW-2 and RW-3, and SVE point SVE-5 were installed.
May 12, 2010:	MDE personnel were on-site to observe monitoring well installation activities, and issued a Report of Observations.
June 15, 2010:	New monitoring wells were surveyed by a Maryland-licensed surveyor based on established Maryland State coordinate system and elevation control above mean sea level (NAVD 88).
June 17, 2010:	Geophysical testing of monitoring well MW-15 was conducted by ARM Geophysics.
July 15, 2010:	ES submitted Quarterly Update Report, detailing the installation of new monitoring wells, recovery wells, and SVE points.
August 10, 2010:	A meeting was conducted between Carroll and the MDE. It was determined that three area domestic wells be added to the semi-annual sampling schedule.
August 12, 2010:	Carroll correspondence informed the MDE that Groundwater & Environmental Services, Inc. (GES) had been added to the environmental team investigating the Site, and requested an extension of the Revised CAP deadline to October 29, 2010.
August 20, 2010:	EA submitted *Monitoring Well MW-15 Geophysical Testing Report & Recommendations* to the MDE.
August 20, 2010:	The MDE approved the extension of the *Revised CAP* deadline.
August 31, 2010:	EA submitted *Additional Monitoring Well Installation Work Plan,* proposing the installation of two new monitoring well clusters, MW-19A/MW-19B located 150 feet southeast of monitoring well cluster MW-16A/MW-16B, and MW-20A/MW-20B located approximately 300 feet south-southwest of monitoring well cluster MW-16A/MW-16B.
October 11, 2010:	Carroll reported a sump alarm to the MDE. A small amount of product was found in a containment sump, and a vapor line weep was suspected.
October 12, 2010:	A loose "vapor tee" was replaced and the vapor line and containment sump were subsequently tested and passed.
October 14, 2010:	GES submitted *Infiltration Pilot Test Work Plan* to the MDE, proposing pumping groundwater from recovery well RW-2, while injecting clean water into monitoring well MW-5 at the same rate.
December 17, 2010:	The MDE approved EA's *Additional Monitoring Well Installation Work Plan,* with modifications. The MDE did not approve the infiltration portion of GES's *Infiltration Pilot Test Work Plan*. However, a 72-hour pumping test was approved, with modifications. The MDE required a *Revised Work Plan* for the pumping test by January 15, 2011, and a *Report of Results* of the pumping test within 60 days of the conclusion of the pump test. It was noted that a *CAP Addendum* would be required under separate cover based on the MDE's review of the *Report of Results.*
January 11, 2011:	GES submitted *Pumping Test Work Plan* to the MDE, proposing a step test prior to the 72-hour pump test, detailing the procedures of the pumping test, and proposing re-infiltration testing at monitoring well MW-8A during the pumping test.
January 14, 2011:	GES submitted *Pumping Test Work Plan – Adendum#1 – Infiltration Testing* to the MDE, clarifying the procedures for the proposed infiltration test to be conducted during the final 8 hours of the pumping test.
February 1, 2011:	A teleconference was conducted between Carroll and the MDE.

February 8, 2011:	The MDE emailed a request for additional clarification of the *Pumping Test Work Plan*.
February 11, 2011:	GES submitted a memo response to the MDE's questions.
March 8, 2011:	The MDE issued *Work Plan Approval*, approving the *Pumping Test Work Plan* as amended by the January 14, 2011 and February 11, 2011 submittals, with some modifications and reiterated the requirement for a *Report of Results* to be submitted within 60 days of the conclusion of the pumping test.
March 18, 2011:	An Administrative Consent Order (CO) was signed between Carroll and the MDE. The CO required the submittal of a *Revised CAP* within 60 days of the conclusion of the MDE-approved pumping test, required the MDE to review it within 60 days of submittal, and required Carroll to begin implementation of the CAP within 10 days of approval. Quarterly reports were required to be submitted by February 15, May 15, August 15 and November 15 of each year of the environmental investigation.
April 20, 2011:	A step test was conducted.
April 22, 2011:	Data from the step test and proposed pumping rates for the pumping test were submitted to the MDE via email.
April 25 – 28, 2011:	A 72-hour pumping test was conducted on recovery wells RW-2, RW-1 and RW-3.

APPENDIX B

Pumping Test Work Plan

Groundwater
& Environmental Services, Inc.

2142 Priest Bridge Court • Suite 1 • Crofton, Maryland 21114 • (800) 220-3606 • FAX (410) 721-3733

January 11, 2011

Ms. Ellen Jackson
Oil Control Program
Maryland Department of the Environment
1800 Washington Boulevard, Suite 620
Baltimore, MD 21230

RE: Pumping Test Work Plan
Wally's Citgo Station
19200 Middletown Road
Parkton, Maryland
MDE Case # 2006-0319-BA2

Dear Ms. Jackson:

Groundwater & Environmental Services, Inc. (GES), on behalf of Carroll Fuels, is providing this work plan to the Maryland Department of the Environment's (MDE) Oil Control Program (OCP) for review and approval. This revised work plan has been prepared in response to the *MDE Work Plan Approval - December 17, 2010* letter requiring modifications to the previously submitted *Additional Monitoring Well Installation Work Plan – August 31, 2010,* and the *Infiltration Pilot Test Work Plan – October 14, 2010*, outlining requirements to conduct pumping tests at recovery wells RW-1, RW-2, and RW-3. The tests will be conducted to assess if water depletion is a concern that should be considered in the planned design, installation and/or operation of the proposed groundwater pump and treat (P&T) remediation system. The following sections provide information on our proposed procedures and methodologies associated with recovery well step-drawdown testing, long term pump testing and contingencies for supplemental water supply at 1606, 1608 and 1612 Rayville Road, as well as the potential for re-infiltration of treated groundwater during the test execution. The location of existing recovery wells, monitoring wells and potable wells cited in this Work Plan are illustrated on **Figure 1.**

Short Term Recovery Well Step-Drawdown Testing

It is proposed that an initial short-term groundwater pumping step-drawdown test will be performed in RW-1, RW-2 and RW-3 at least two days prior to the start of the 72-hour sustained yield pumping test. The step-drawdown testing will be conducted to identify a pumping rate for the 72-hour test which would maximize hydraulic capture and provide useful data in terms of evaluating hydraulic properties for final design of the P&T remediation system. It is also important to note that RW-1, RW-2 and RW-3 have not been previously tested and the potential exists that one or more of the recovery wells may not produce adequate steady-state flow to support continuous pumping over an extended duration.

The step-drawdown tests will be conducted at a field-determined rate between approximately 0.5-gallons per minute (gpm) and 3-gpm using a Grundfos Redi-Flow electric submersible pump placed near the bottom of each of the three recovery wells. Pumping from each recovery well will be conducted for a length of time sufficient in duration (approximately two to three hours per well) to determine sustainable flow rates and corresponding drawdown in the pumping wells. The flow rates achieved during the test will be monitored using a fluid totalizer and extracted groundwater will be pumped into an on-site frac tank for treatment through granular activated carbon (GAC) filtration prior to discharge and/or transported offsite for treatment. After the field-determined pumping period has elapsed, the pump will be shut off and each recovery well will be allowed to recharge. The recovery wells and a subset of monitoring wells in proximity to the recovery wells will be manually gauged before, during and after the test.

Long Term 72-hour Recovery Well Pumping Tests

The 72-hour pumping test of RW-1, RW-2 and RW-3 will be iniatiated in a sequential order starting with RW-2 followed by the well that produces a higher yield based on the step-drawdown tests. Individual recovery well flow rates will be determined based on the findings of the step-drawdown tests with assumed flows ranging from 0.5 gpm to 3 gpm.

Each recovery well will be sequentially brought online after 24-hours of pumping and will remain online (if producing flow) at a constant flow rate using a Grundfos single-speed electric submersible pump for the complete 72-hour duration. The pumps will be placed near the bottom of each of the three recovery wells. The flow rate will be monitored using a fluid totalizer and extracted groundwater will be pumped into an on-site frac tank for treatment through granular activated carbon (GAC) filtration prior to discharge and/or transported offsite for treatment.

Static aquifer levels in the three extraction wells, four select monitoring wells and potable wells 1606, 1608 and 1612 Rayville Road will be monitored using in-situ pressure transducers that would be initiated, at a minimum, 48 hours prior to the start of the long-term pumping test. A round of groundwater elevations will also be manually collected from all project study area monitoring wells. The transducers in the extraction wells, monitoring wells and potable wells will remain in use for the duration of the pumping test to monitor aquifer response and, subsequent to the end of the pumping test, to monitor the aquifer recharge. In addition, periodic manual gauging measurements will be collected from each extraction well and all project study area monitoring wells during this timeframe to validate the transducer data and record the aquifer level in observation wells without transducers. Groundwater samples will be collected from each extraction well during the initial drawdown period and prior to the active pumping phase of the test.

Although the pumping phase of the test is planned to last for 72 hours, the active pumping of the wells may conclude earlier based on the following field determined criteria:

1. hydraulic boundary conditions are reached in which the rate of the pump has to be significantly reduced to manage reduction of formation yield
2. unacceptable water losses are determined in observed rock wells near in-use potable wells or in the potable wells serving 1606, 1608 and 1612 Rayville Road.

After the proposed 72 hours of extraction, the pumping from the extraction well will be terminated and aquifer recharge will be both manually and electronically monitored until a minimum of 90% recovery is achieved. It is expected that active logging will continue for at least 48 hours after the conclusion of pumping. Construction details of the three recovery wells are listed in **Table 1** below.

Table 1. Construction Details of the Extraction / Recovery Wells

Well ID	Well Diameter (inches)	Total Depth (feet)	Screen Interval (feet)
RW-1	6”- steel / open bedrock	120’	40.5 - 120’
RW-2	6”- steel / open bedrock	120’	40.5 - 120’
RW--3	6”- steel / open bedrock	120’	40.5 - 120’

Observation points will be equipped with in-situ pressure transducers and/or manually gauged to monitor aquifer response. Observation well construction details, and proposed method of monitoring, are summarized below in **Table 2**.

Table 2. Construction Details of Observation Wells

Well ID	Well Diameter (inches)	Total Depth (feet bsg)	Screen Interval (feet bsg)	Method of monitoring aquifer response
MW-1	2 - PVC	62	37-62	Manual
MW-2	2 - PVC	60	40-60	Manual
MW-3	2 - PVC	62	42-62	Transducer
MW-3S	2 - PVC	30	5 - 30	Manual
MW-4	2 - PVC	60	40 - 60	Manual
MW-5	2 - PVC	50.5	30.5 - 50.5	Manual
MW-5B	6 – Steel / Open Bedrock	100	70 - 100	Manual
MW-6	2 - PVC	60.5	40.5 - 60.5	Manual
MW-7A	6 – Steel / Open Bedrock	65	40 - 65	Manual
MW-7B	6 – Steel / Open Bedrock	120	70 - 120	Manual
MW-8A	6 – Steel / Open Bedrock	65	40 - 65	Manual
MW-8B	6 – Steel / Open Bedrock	100	73.5 - 100	Manual
MW-9A	6 – Steel / Open Bedrock	65	40 - 65	Manual
MW-9B	6 – Steel / Open Bedrock	120	72 - 120	Manual
MW-10A	6 – Steel / Open Bedrock	62	40 - 62	Manual
MW-10B	6 – Steel / Open Bedrock	100	70 -100	Manual
MW-11A	6 – Steel / Open Bedrock	60	40 - 60	Manual
MW-11B	6 – Steel / Open Bedrock	100	70 - 100	Manual
MW-12B	6 – Steel / Open Bedrock	100	70 - 100	Manual
MW-13A	6 – Steel / Open Bedrock	60	40 - 60	Manual
MW-13B	6 – Steel / Open Bedrock	100	70 - 100	Manual
MW-14A	6 – Steel / Open Bedrock	60	40 - 60	Manual
MW-14B	6 – Steel / Open Bedrock	100	70 - 100	Manual
MW-15	6 – Steel / Open Bedrock	120	40.5 - 120	Transducer
MW-16A	6 – Steel / Open Bedrock	65	40.5 - 65	Manual
MW-16B	6 – Steel / Open Bedrock	120	70.5 - 120	Manual
MW-17A	6 – Steel / Open Bedrock	65	40.5 - 65	Manual
MW-17B	6 – Steel / Open Bedrock	120	70.5 - 120	Manual
MW-18A	6 – Steel / Open Bedrock	65	40.5 - 65	Transducer
MW-18B	6 – Steel / Open Bedrock	120	70.5 - 120	Transducer
1606 Rayville	6 – Steel / Open Bedrock	135.7	27 - 135.7	Transducer
1608 Rayville	6 – Steel / Open Bedrock	84.7	44 - 84.7	Transducer
1612 Rayville	6 – Steel / Open Bedrock	114	23 - 114	Transducer

Manually gauged observation wells will be monitored as frequently as possible throughout the duration of the pumping test and during aquifer recharge. This gauging frequency is estimated to be once every two hours during the early stages of the test to once every 8 to 12 hours by the conclusion of the pumping portion of the test.

Planned Equipment / Materials

Equipment to be utilized for the long term 72-hour pumping test will include the following:

1. In-situ transducers (10)
2. Electronic Interface Probe
3. Grundfos electric submersible single-speed pumps (3)
4. Halliburton Services Model MC-II Flow Analyzer including a built in totalizer or similar (3)
5. Large capacity storage tank or frac tank for groundwater
6. Poly hose
7. Miscellaneous plumbing fittings and parts
8. Diesel-powered generator
9. GAC filtration vessels as needed
10. *Planned potable tank and/or bottled water available for residents at 1606, 1608 and 1612 Raysville Road should water depletion be observed during testing.*

Evaluations for Re-Infiltration of Treated Groundwater and/or Potable Water

A corrective action plan (CAP) to remediate dissolved phase impacts in the groundwater has been conditionally approved by the MDE. The CAP consists of the installation of a groundwater P&T system to inhibit migration of and remove contaminants of concern (COC) from groundwater recovered on-site. The CAP proposes discharge of treated water into the storm drain located off-site to the northeast. This approach is being re-evaluated and this work plan is being developed to further assess the potential concerns to aquifer depletion or adverse water quantity impacts resulting from sustained water withdrawal without replacement.

GES proposes that infiltration of treated groundwater be undertaken for the last 8 hours of the active pumping phase to allow for comprehensive monitoring of hydraulic response. GES recognizes the MDE's potential concerns with re-infiltration of water to the formation and therefore proposes that prior to completion of the 72-hour pumping test once adequate capture is defined, a percentage of water (not to exceed the ongoing pumping rate and quantity pumped) be infiltrated as an alternative to discharging treated groundwater into an off-site storm drain. The objectives of the test are to evaluate if the water bearing interval located between 40 and 60 feet below ground surface has sufficient capacity to accept treated groundwater that would be produced during operation of recovery wells at a sustained rate. The test will include the infiltration of clean water into *Side Gradient Well MW-8A* while withdrawing groundwater with an electric submersible pump from the proposed recovery wells. The clean water will be infiltrated into MW-8A by gravity feed. The withdrawal rate will be equal to or less than the extraction rate during testing and will be controlled by using gate valves and in-line flow meters during testing.

Data Analysis and Report Submission

GES has licensed access to the aquifer pumping test analysis program Aqtesolv ™. The software includes many of the standard models for analyzing pumping test data. Pumping test data will be analyzed to determine the performance characteristics of the extraction well and hydraulic parameters of the aquifer. This analysis will enable the prediction of the drawdown in an extraction well at future times and different extraction rates. Additional data analysis will also provide a radius of influence determination and capture zone calculation for individual or multiple extraction wells. An evaluation of the pumping tests will be included in a Summary Report to be submitted to the MDE within sixty days from the conclusion of all testing activities.

GES and Carroll Fuels would appreciate the MDE's review and approval of the pumping test work plan presented above. If you have any questions or require any additional information, please do not hesitate to contact me at (800) 220-3606, extension 3706.

Sincerely,
Groundwater & Environmental Services, Inc.

Steven M. Slatnick
Site Operations Manager/
Senior Project Manager

Christopher Mulry, PG
VP Major Projects/
Principal Hydrogeologist

Attachment

c: Herb Meade, Carroll Fuels
Chris Ralston, MDE
Jenny Herman, MDE
Andrew Applebaum, Environmental Alliance
Dwight W. Stone, Esq., Whiteford Taylor Preston
Eric M. Rosenfield, Esq., Law Offices of Peter G. Angelos

Groundwater
& Environmental Services, Inc.

2142 Priest Bridge Court • Suite 1 • Crofton, Maryland 21114 • (410) 721-0047 • (410) 721-3733

January 14, 2011

Mr. Chris Ralston
Oil Control Program - Maryland Department of the Environment
1800 Washington Boulevard, Suite 620
Baltimore, MD 21230

RE: Pumping Test Work Plan – Adendum#1 – Infiltration Testing
Wally's Citgo Station
19200 Middletown Road, Parkton, Maryland
MDE Case # 2006-0319-BA2

Dear Mr. Ralston:

As recently discussed with Herb Meade of Carroll Independent Fuel Company (CIFC), Groundwater & Environmental Services, Inc. (GES), is providing this addendum to our work plan dated January 11, 2011, to the Maryland Department of the Environment's (MDE) Oil Control Program (OCP) as per your request for further details on our plans for re-infiltration of treated groundwater during proposed pumping test activities.

GES proposes that infiltration of treated groundwater be undertaken for the last 8 hours of the active pumping phase of the proposed 72-hour pumping test to allow for comprehensive monitoring of hydraulic response. Groundwater extracted during pumping test activities will be stored in on-site frac tank(s) prior to treatment and discharge on-site. Discharged water will comply with all requirements of previously obtained *General Discharge Permit Number 2010-OGR-5093 / NPDES Permit Number MDG915093*. Groundwater will be treated through two 200-lb liquid granular activated carbon vessels (LGACs) installed in series (400-lbs of GAC) to achieve permitted discharge levels. Westates® virgin acid washed coconut shell based activated carbon (AquaCarb® 1230AWC) is to be used. Information regarding this proposed GAC is attached. GES engineers, with GAC supplier Siemens Water Technologies (Siemens), have completed GAC usage calculations. Based on the information provided by Siemens, approximately 100,000 gallons of water can be treated to permit discharge levels at the maximum expected groundwater flow rate of 9 gallons per minute (gpm) and using the current maximum concentration reported in the proposed pumping wells (recovery wells RW-1, RW-2 and RW-3). Pumping test activities are not expected to generate more than approximately 35,000-gallons of water. Therefore 400 lbs of GAC will provide ample treatment capacity.

The water infiltration rate will be equal to or less than the extraction rate during testing and will be controlled by using gate valves and in-line flow meters during testing. Treated groundwater will either be discharged into monitoring well MW-8A and/or discharged to the surface of the farm property located adjacent to the western property boundary of the site. Quantities of water discharged to the surface vs. infiltration will be field determined based on observed water levels during discharge. The adjacent farm field will only be used with the permission of the property owner and GES will monitor conditions to ensure that no erosion or excessive pooling occurs. Should any undesirable conditions result as a function of either re-infiltration (i.e., excessive groundwater mounding in MW-8A or groundwater mounding above two feet in any other site wells) or discharge, all water will be retained in the site frac tank(s) for disposal or discharge to off-site storm drains.

GES and Carroll Fuels would appreciate the MDE's review and approval. If you have any questions or require any additional information, please do not hesitate to contact me at (800) 220-3606, extension 3706.

Sincerely,
Groundwater & Environmental Services, Inc.

Steven M. Slatnick
Site Operations Manager

Attachment
c: Herb Meade, Carroll Fuels
Ellen Jackson, MDE
Andrew Applebaum, Environmental Alliance
Dwight W. Stone, Esq., Whiteford Taylor Preston
Eric M. Rosenfield, Esq., Law Offices of Peter G. Angelos

ATTACHMENT

Westates Coconut Shell Based Granular Activated Carbon –
AquaCarb 830C, 1230C and 1230AWC

Westates® coconut shell based granular activated carbon - AquaCarb® 830C, 1230C and 1230AWC

For use in Potable water, Wastewater and Process Water applications

Description

AquaCarb® 830C, 1230C and 1230AWC carbons are high activity coconut shell based granular activated carbons. These hard, attrition resistant high surface area carbons are designed to remove difficult to adsorb organics from potable, waste and process water. They are especially effective for adsorbing chlorine, disinfection by-products, TCE, PCE, MTBE and other trace level organics. AquaCarb® 1230AWC carbon is acid washed yielding a very low ash content, pH neutral carbon that is ideally suited for use in potable water and high purity water systems for the microelectronics and other industries.

Applications

Cost effective AquaCarb® activated carbons developed by Siemens have been demonstrated to provide superior performance in an extensive array of liquid phase treatment applications. AquaCarb® activated carbons are available for:

- Removal of trace organic contaminants
- Pesticide removal
- MTBE removal
- Disinfection by-product (DBP) removal
- Drinking water treatment
- Industrial process water treatment
- High purity water applications
- Home water filtration systems

Quality Control

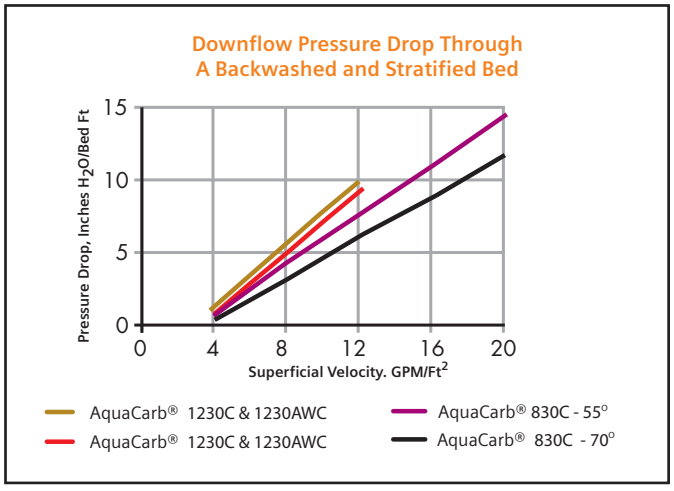
AquaCarb® activated carbons are extensively quality checked at our State of California certified environmental and carbon testing laboratory located in Los Angeles, CA. Siemens' laboratory is fully equipped to provide complete quality control analyses using ASTM standard test methods in order to assure the consistent quality of all Westates® carbons.

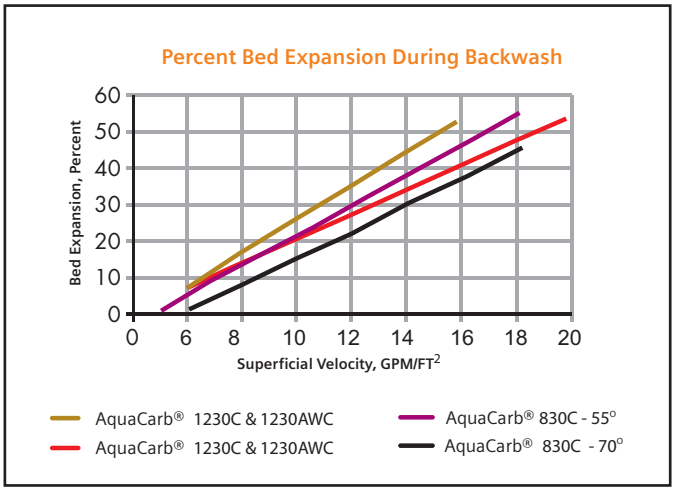
Our technical staff offers hands-on guidance in selecting the most appropriate system, operating conditions and carbon to meet your needs. For more information, contact your nearest Siemens representative.

Features and Benefits:

- ANSI/NSF Standard 61 classified for use in potable water applications
- Fully conforms to physical, performance and leachability requirements established by the current ANSI/AWWA B604 (which includes the Food Chemical Codex requirements)
- A detailed quality assurance program guarantees consistent quality from lot to lot and shipment to shipment

Typical Properties			
Parameter	**AquaCarb® 1230C**	**AquaCarb® 1230AWC**	**AquaCarb® 830C**
Carbon Type	Coconut Shell	Coconut Shell	Coconut Shell
Mesh Size, U.S. Sieve	12 x 30	12 x 30	8 x 30
Effective Size, mm	0.6 - 0.85	0.6 - 0.85	0.8 - 1.1
Uniformity Coefficient	2.0	2.0	2.1
Iodine No., mg I_2/g	1100	1100	1100
Hardness No., Wt. %	95	95	95
Abrasion No., Wt. %	85	85	85
Apparent Density, g/cc	0.46 - 0.52	0.45 - 0.52	0.46 - 0.52
Water Soluble Ash, Wt. %	2	0.2	2
Contact pH	9 - 10	6.5 - 8	9 - 10





Safety Note: Under certain conditions, some compounds may oxidize, decompose or polymerize in the presence of activated carbon causing a carbon bed temperature rise that is sufficient to cause ignition. Particular care must be exercised when compounds that have a peroxide-forming tendency are being adsorbed. In addition the adsorption of VOCs will lead to the generation of heat within a carbon bed. These heats of reaction and adsorption need to be properly dissipated in order to fully assure the safe operation of the bed.

Wet activated carbon readily adsorbs atmospheric oxygen. Dangerously low oxygen levels may exist in closed vessels or poorly ventilated storage areas. Workers should follow all applicable state and federal safety guidelines for entering oxygen depleted areas.

All information presented herein is believed reliable and in accordance with accepted engineering practices. Siemens makes no warranties as to the completeness of this information. Users are responsible for evaluating individual product suitability for specific applications. Siemens assumes no liability whatsoever for any special, indirect or consequential damages arising from the sale, resale or misuse of its products.

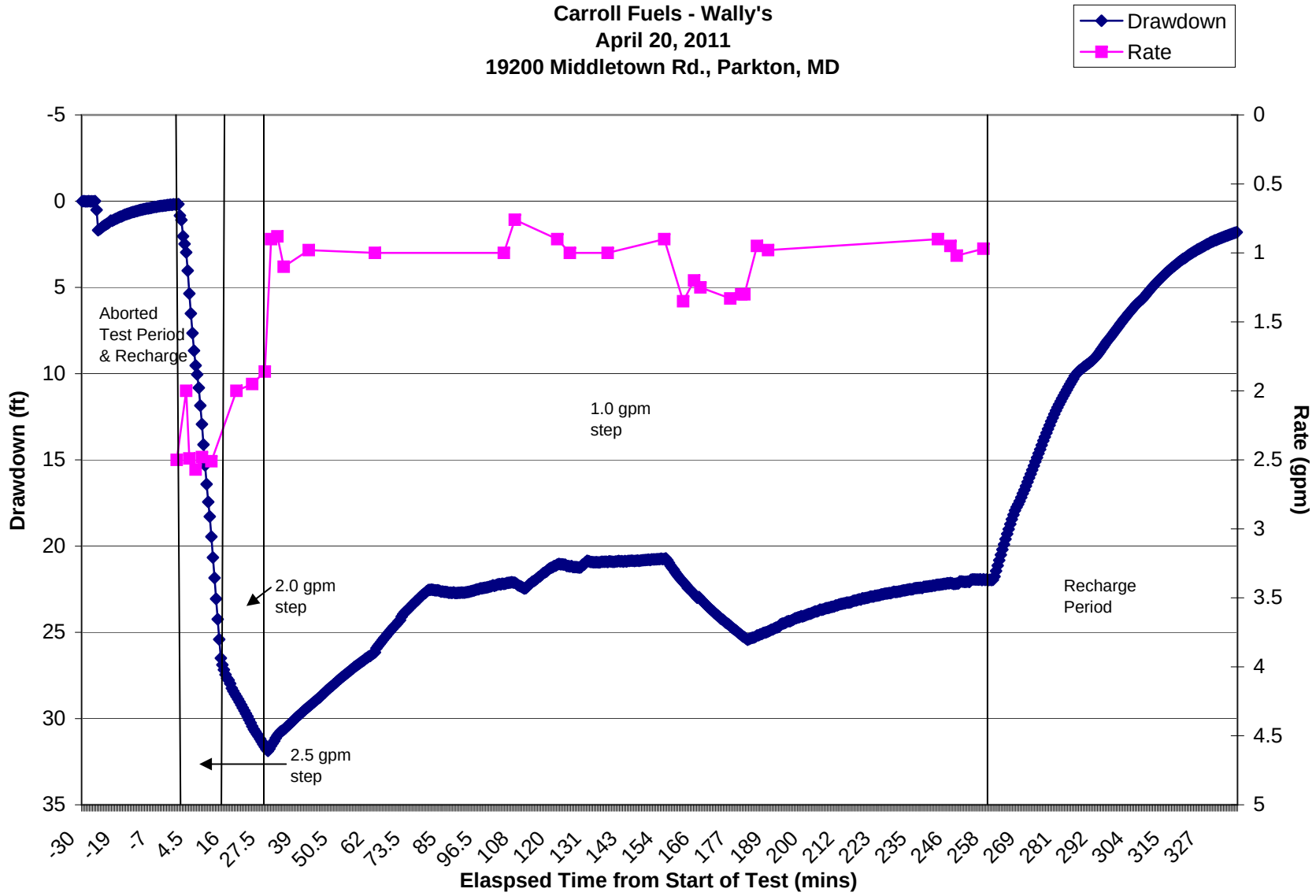
Siemens
Water Technologies
phone 866-613-5620

WS-AQ12dr-DS-0910

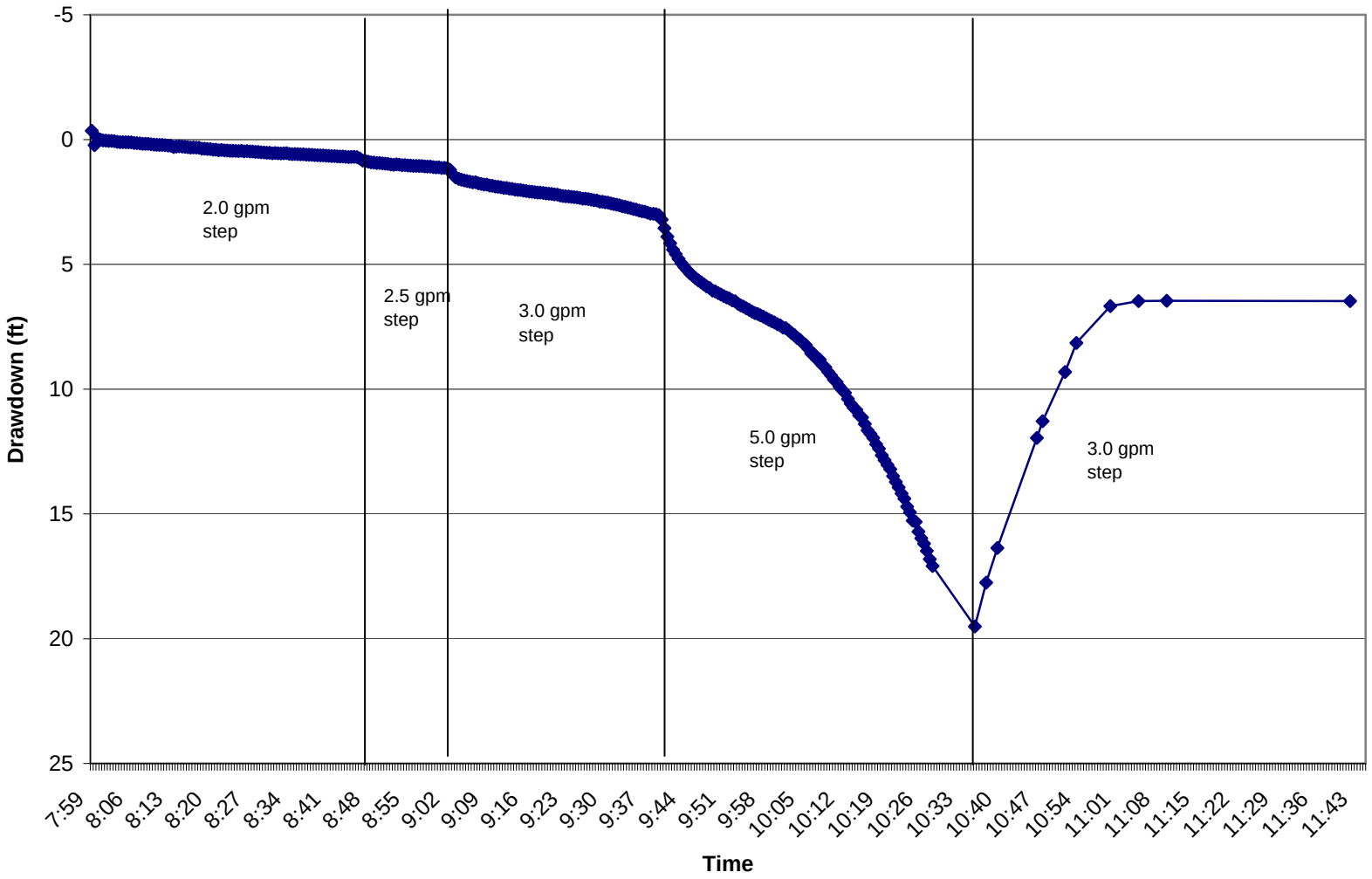
APPENDIX C

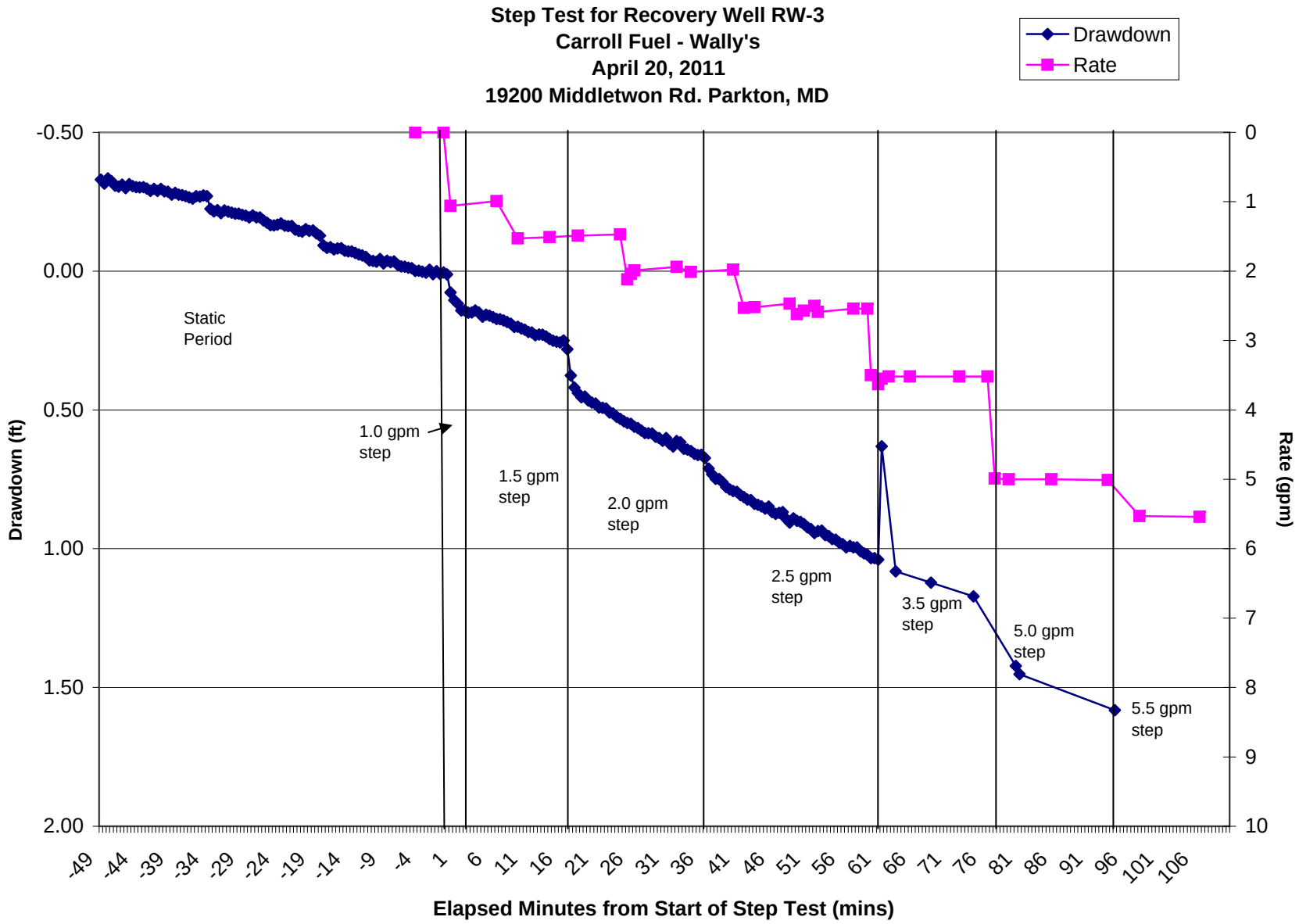
Step Test Hydrographs

Step Test for Recovery Well RW-1
Carroll Fuels - Wally's
April 20, 2011
19200 Middletown Rd., Parkton, MD

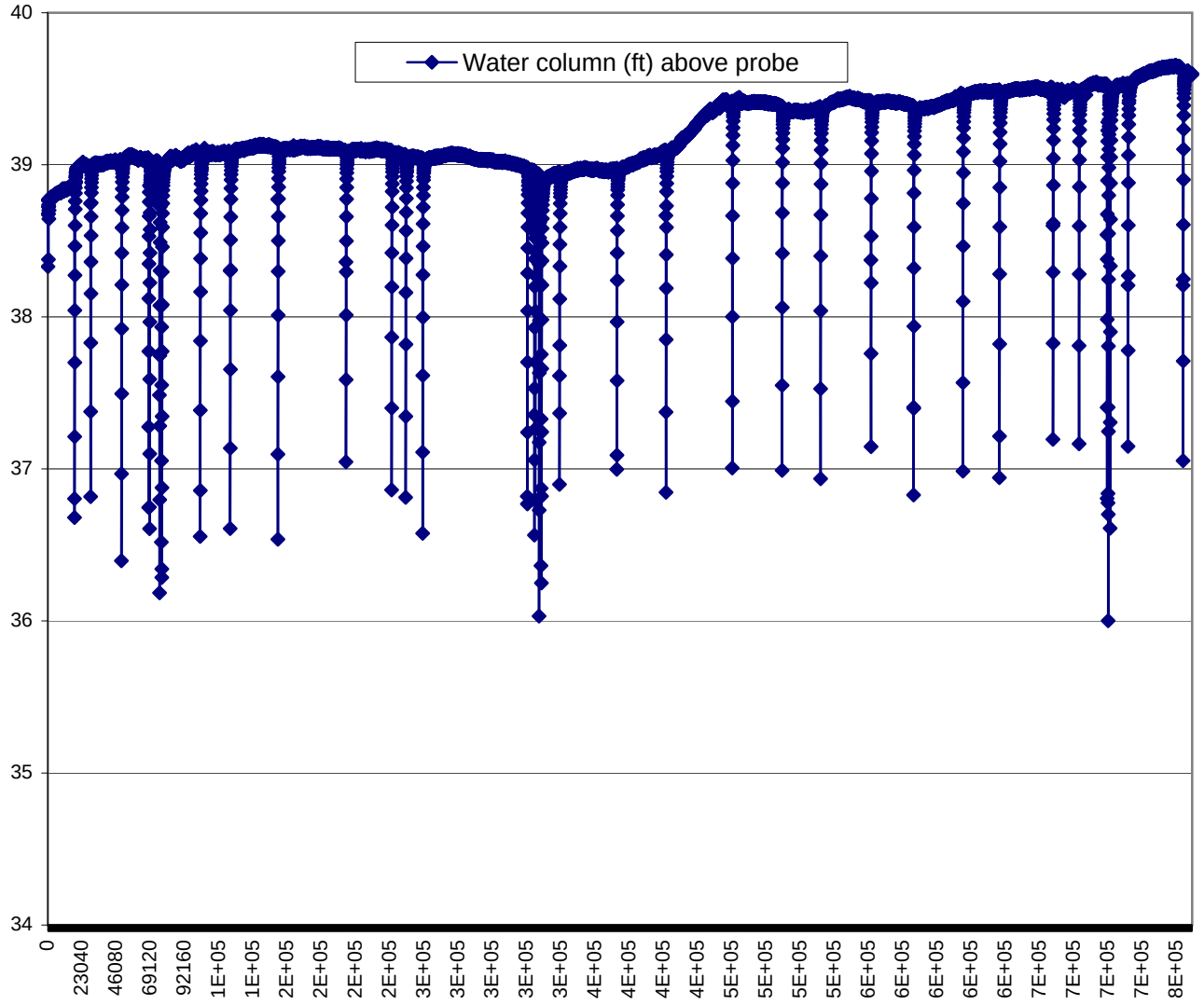


Step Test for RW-2
April 20, 2011
Carroll Fuels -Wally's
19200 Middletown Rd., Parkton, MD

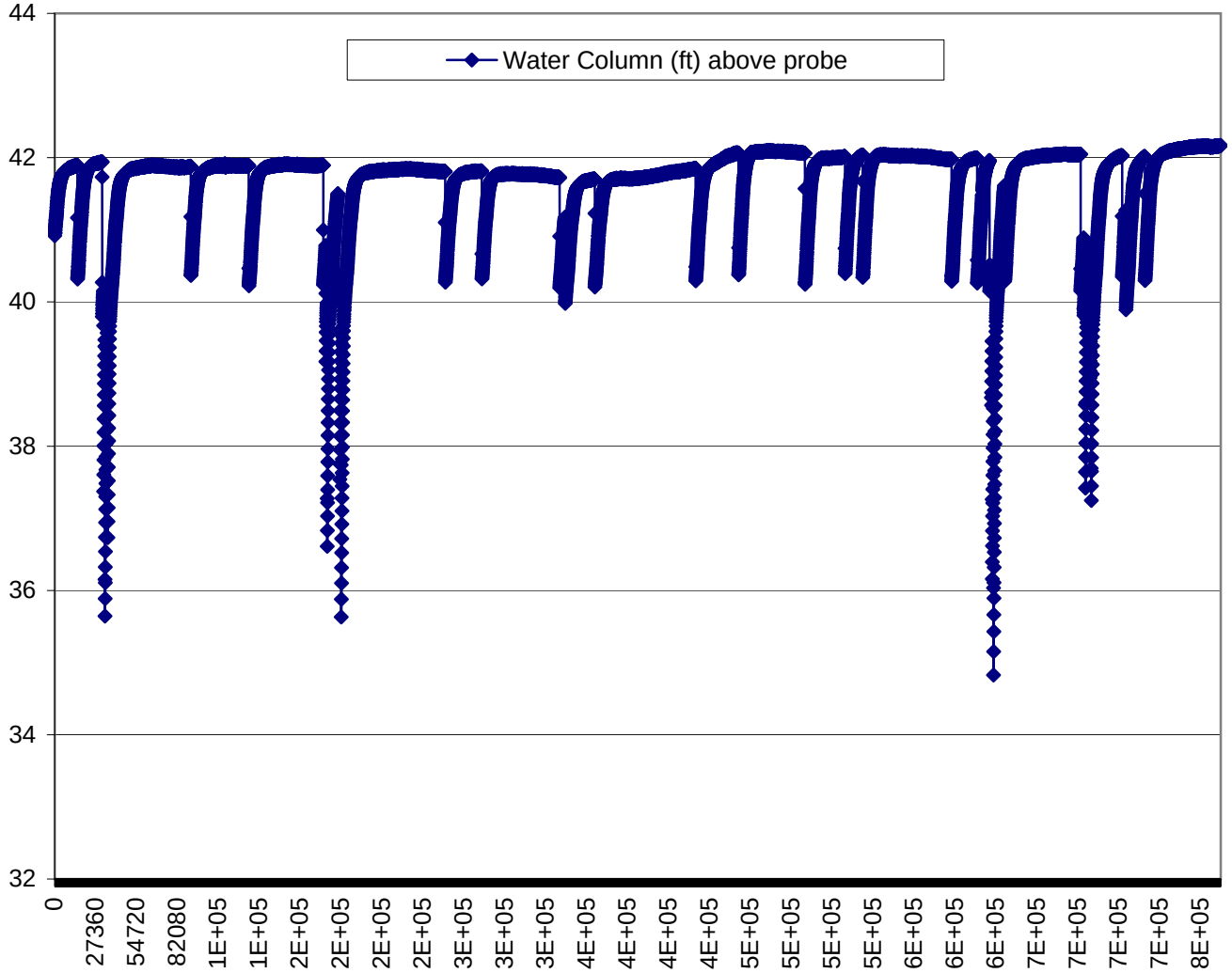



Step Test for Recovery Well RW-3
Carroll Fuel - Wally's
April 20, 2011
19200 Middletwon Rd. Parkton, MD
Drawdown
Rate
Drawdown (ft)
Rate (gpm)
-0.50
0.00
0.50
1.00
1.50
2.00
0
1
2
3
4
5
6
7
8
9
10
Static Period
1.0 gpm step
1.5 gpm step
2.0 gpm step
2.5 gpm step
3.5 gpm step
5.0 gpm step
5.5 gpm step
-49
-44
-39
-34
-29
-24
-19
-14
-9
-4
1
6
11
16
21
26
31
36
41
46
51
56
61
66
71
76
81
86
91
96
101
106
Elapsed Minutes from Start of Step Test (mins)

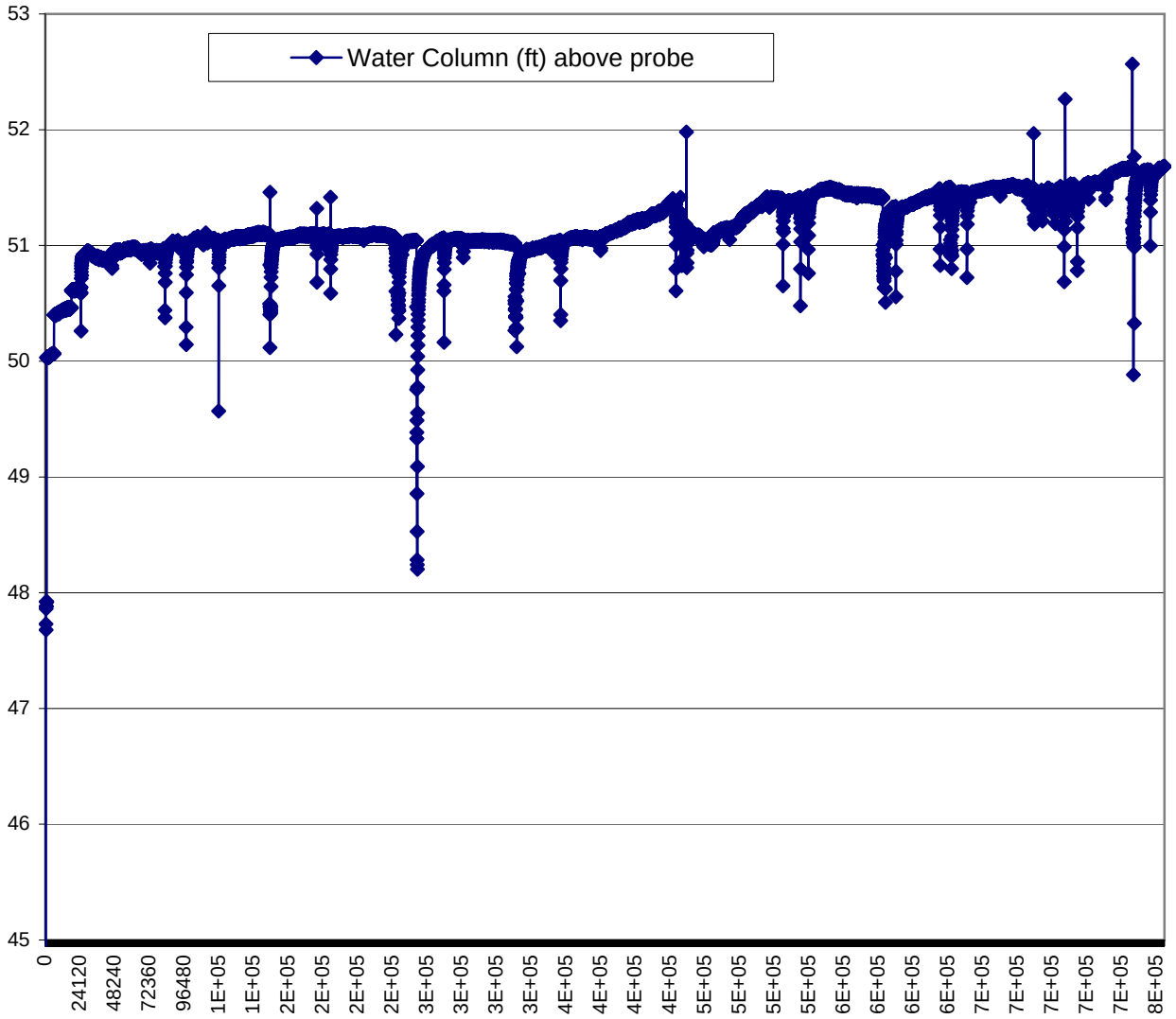
1606 Rayville Rd. Potable Well
From 4/11/11 to 4/20/11



1608 Rayville Rd. Potable Well
From 4/11/11 to 4/20/11



1612 Rayville Rd. Potable Well
From 4/11/11 to 4/20/11



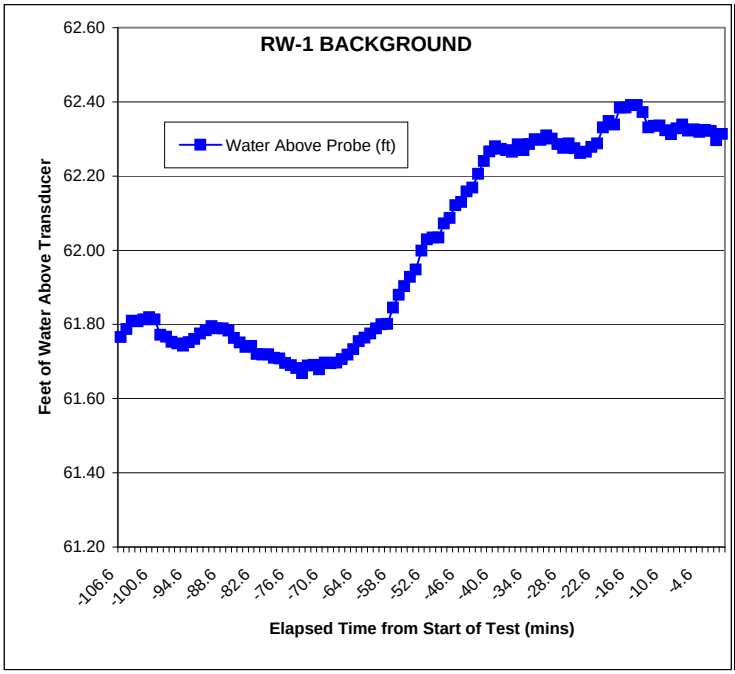
APPENDIX D

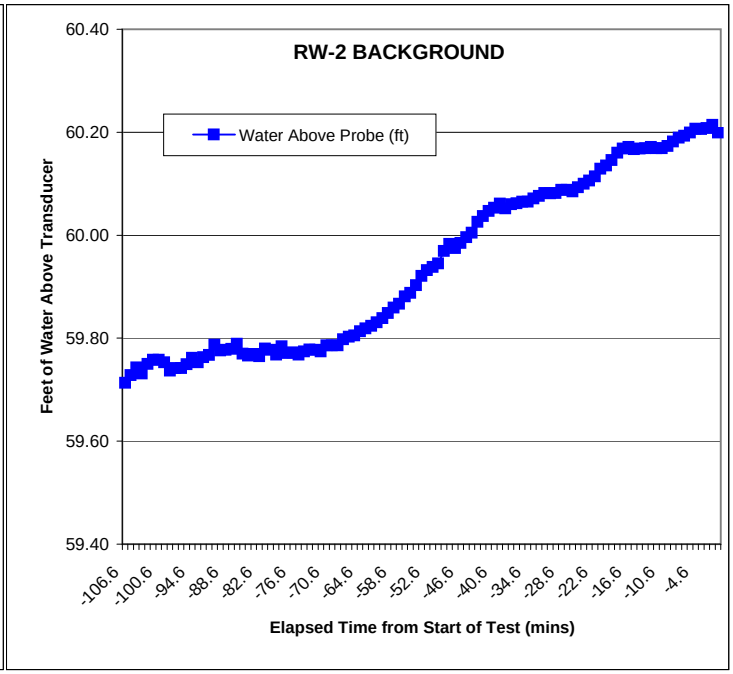
Background Period Hydrographs

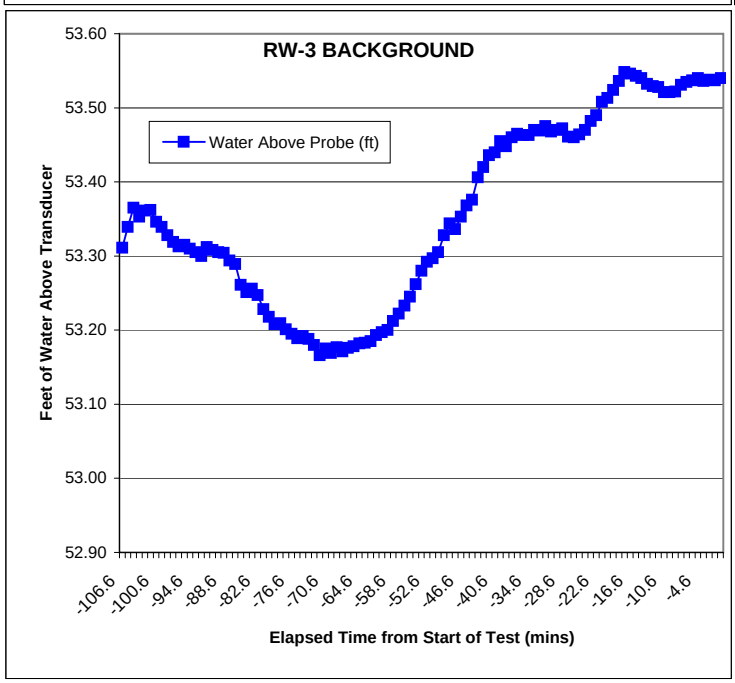
Appendix D

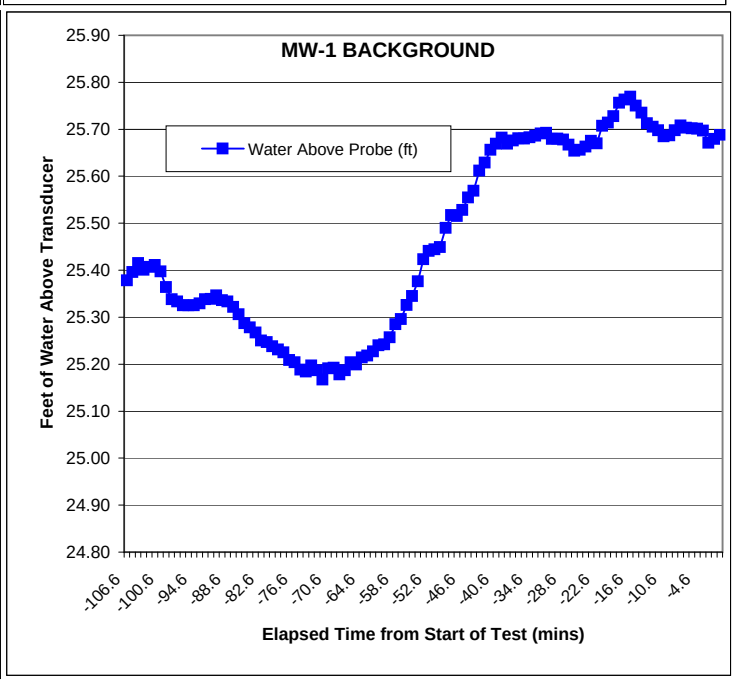
BACKGROUND PERIOD HYDROGRAPHS

Wally's CITGO
19200 Middletown Rd.
Parkton, MD





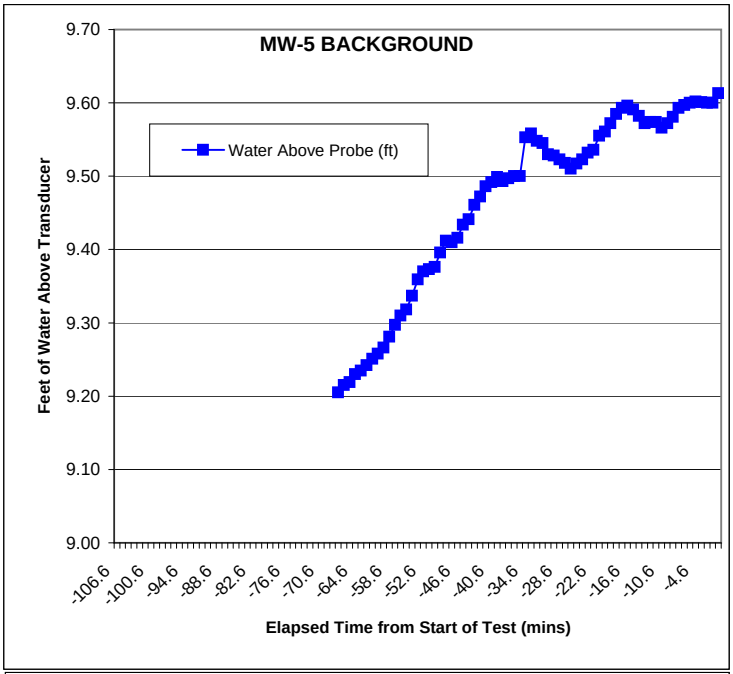


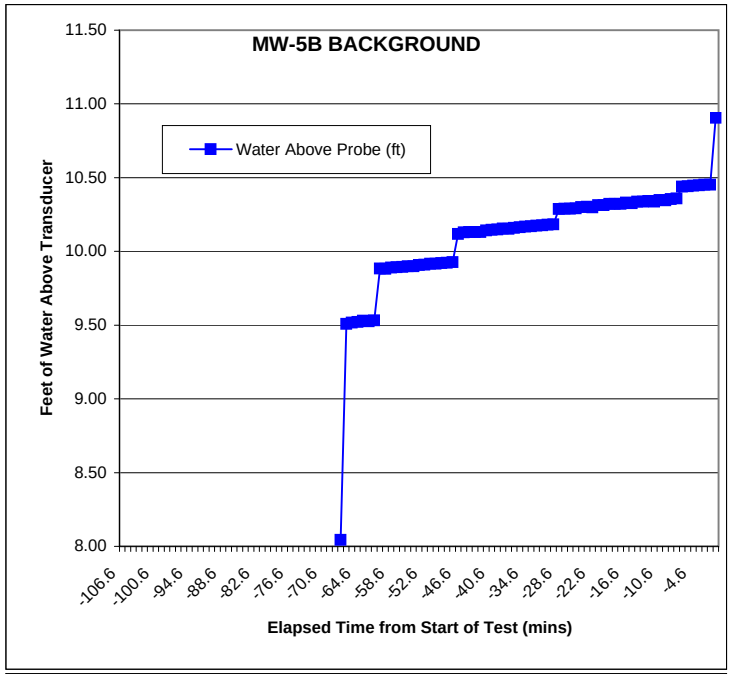


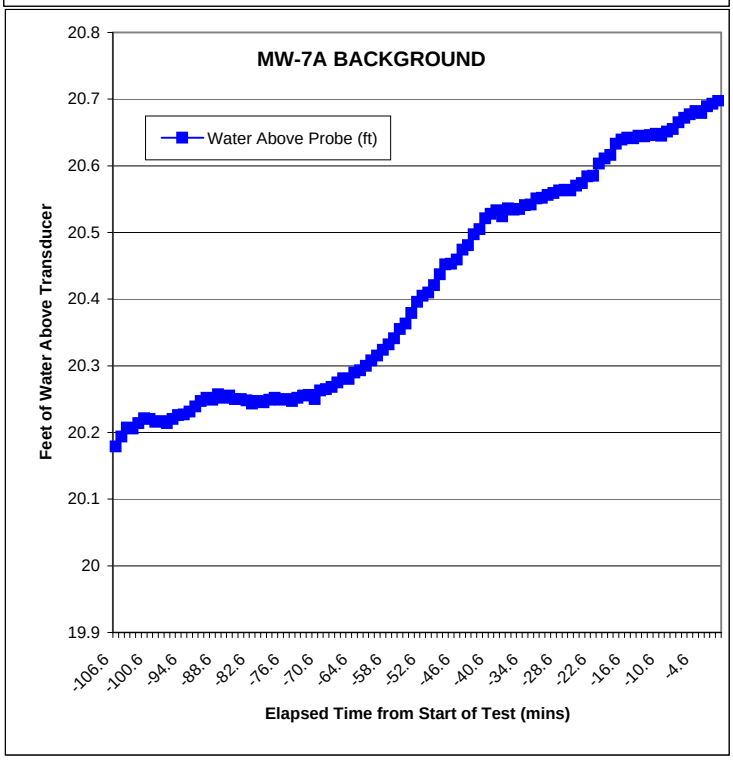
Appendix D

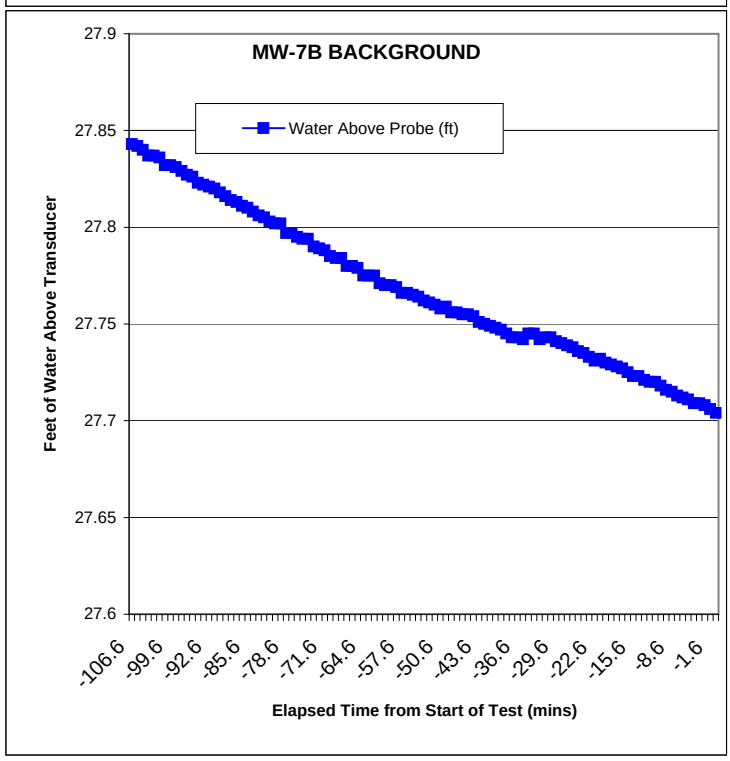
BACKGROUND PERIOD HYDROGRAPHS

Wally's CITGO
19200 Middletown Rd.
Parkton, MD





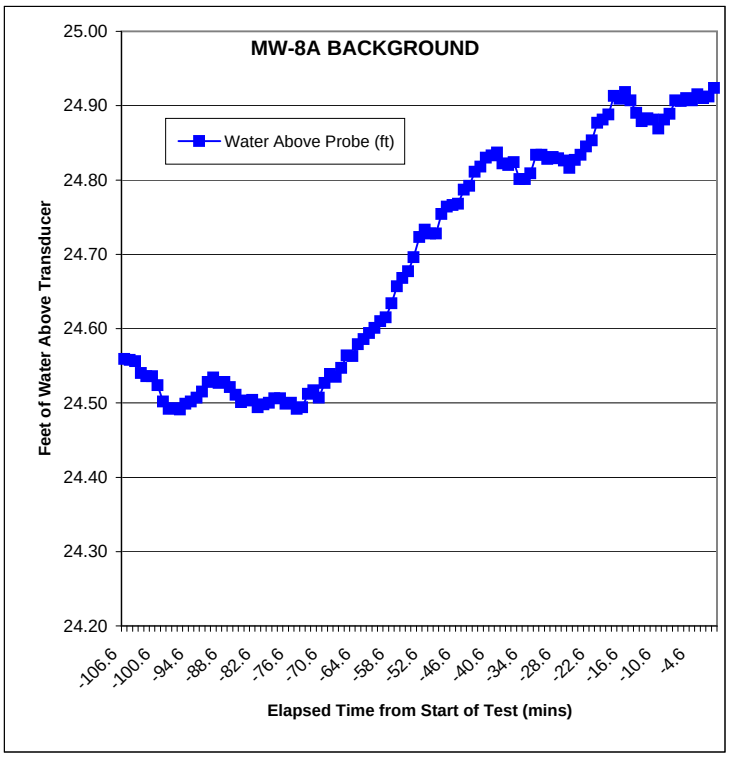


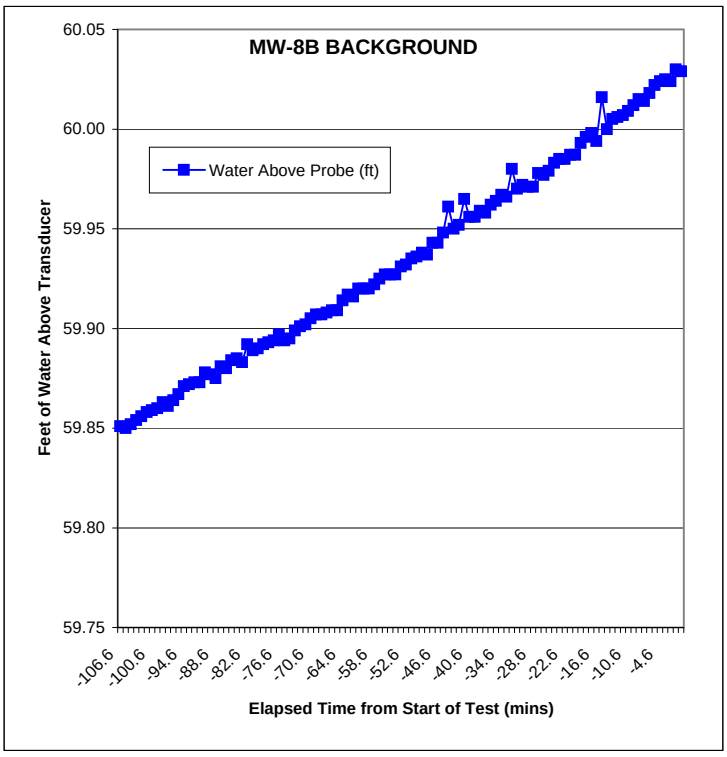


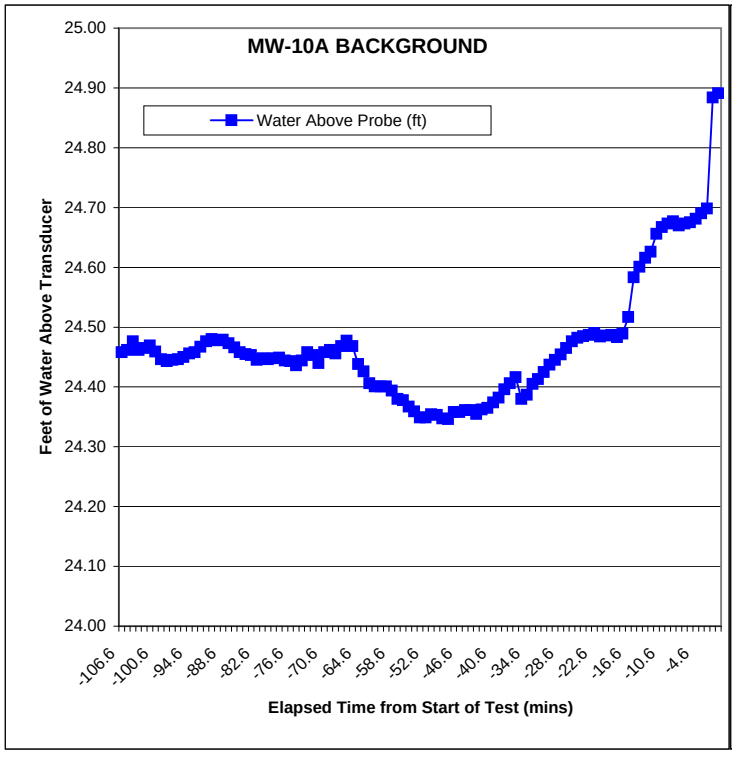
Appendix D

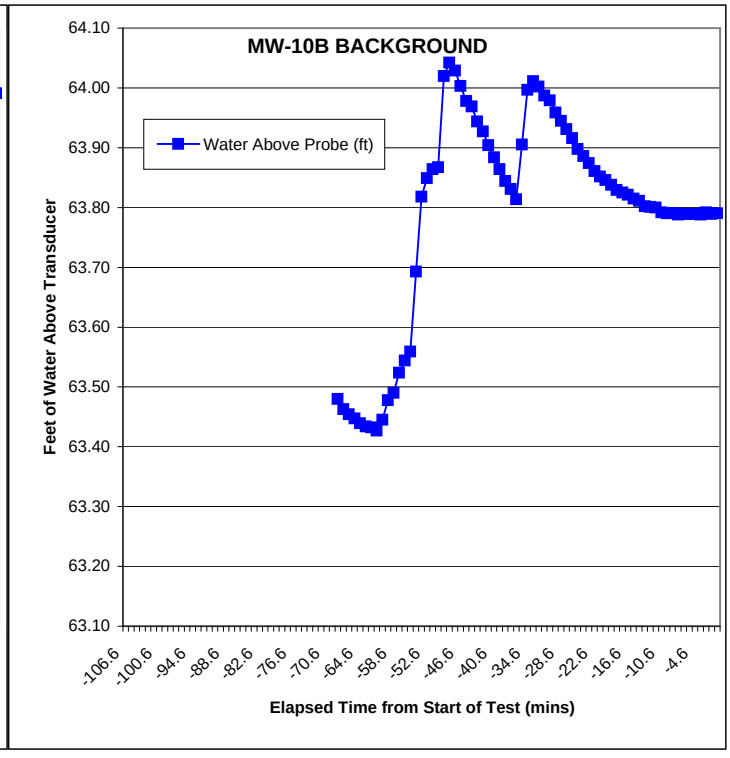
BACKGROUND PERIOD HYDROGRAPHS

Wally's CITGO
19200 Middletown Rd.
Parkton, MD





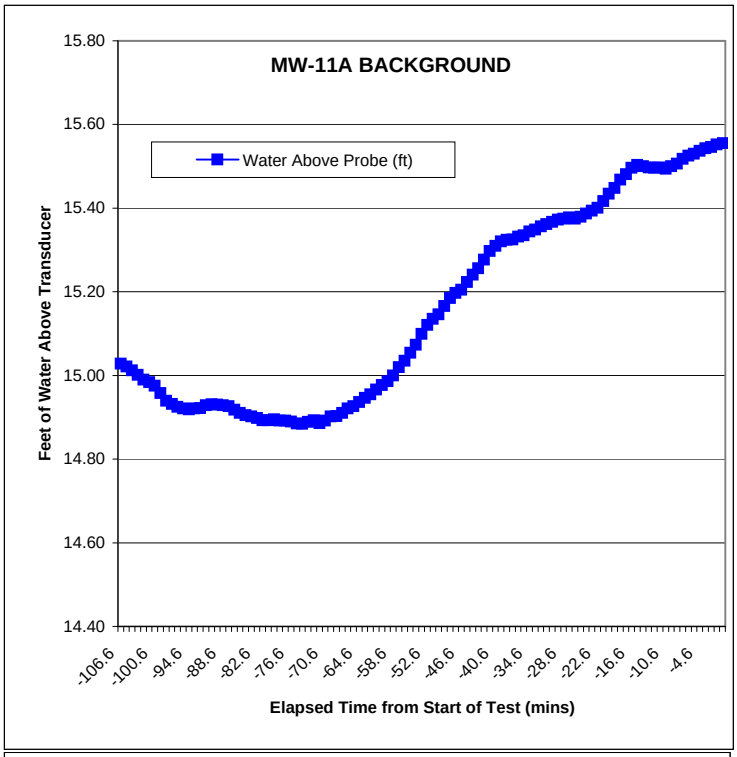


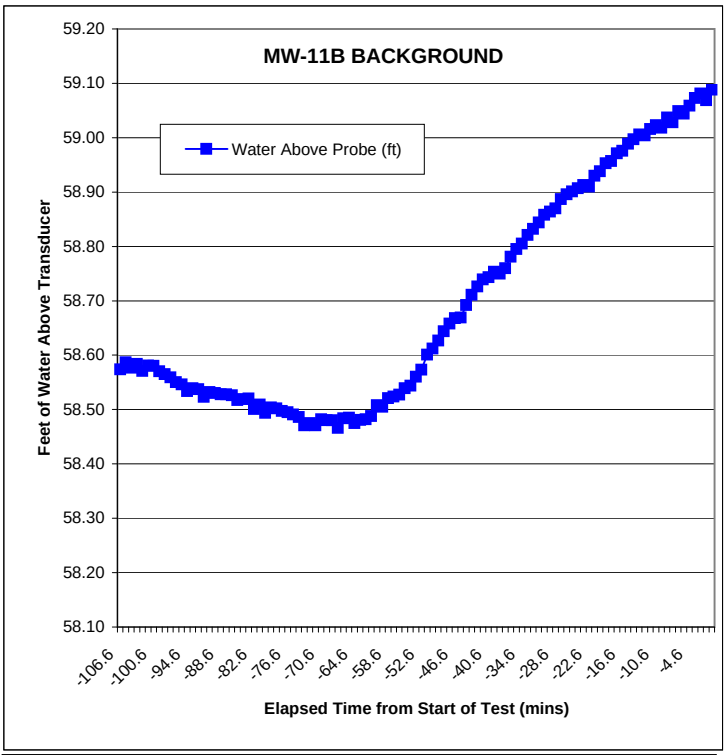


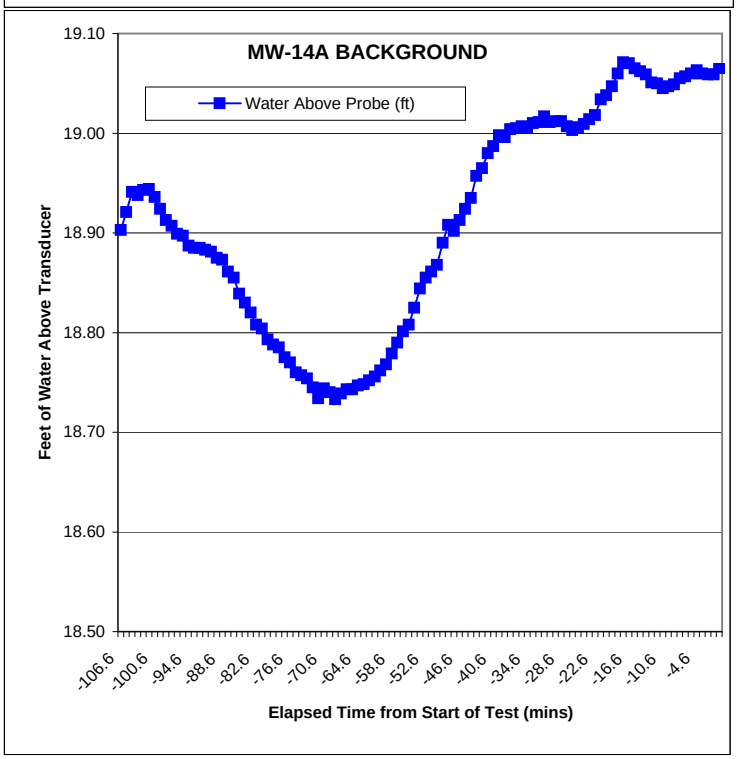
Appendix D

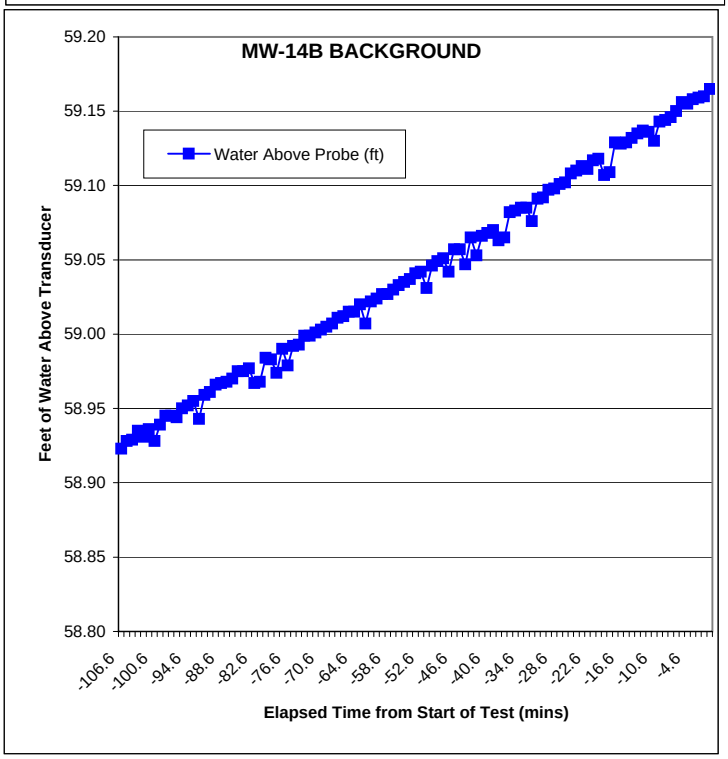
BACKGROUND PERIOD HYDROGRAPHS

Wally's CITGO
19200 Middletown Rd.
Parkton, MD





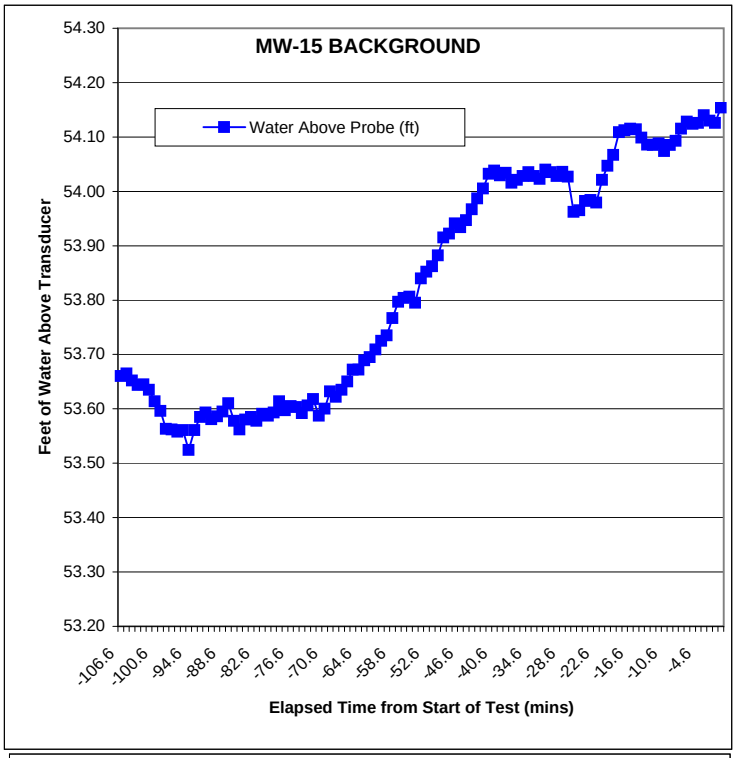


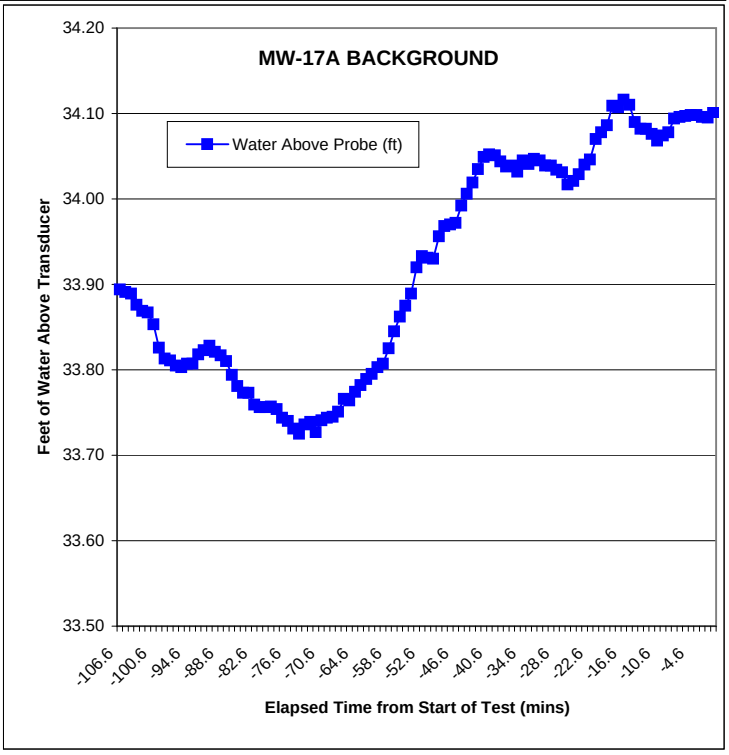


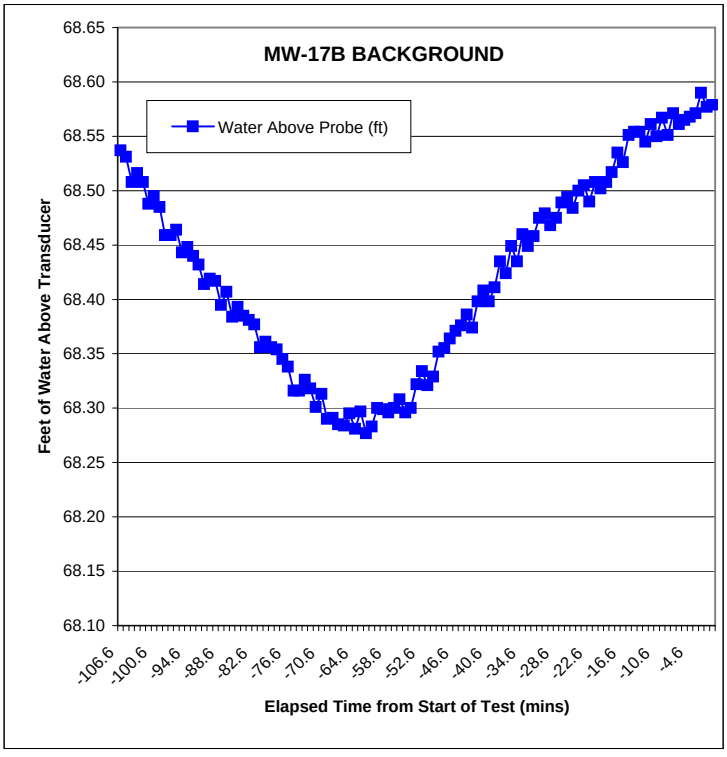
Appendix D

BACKGROUND PERIOD HYDROGRAPHS

Wally's CITGO
19200 Middletown Rd.
Parkton, MD



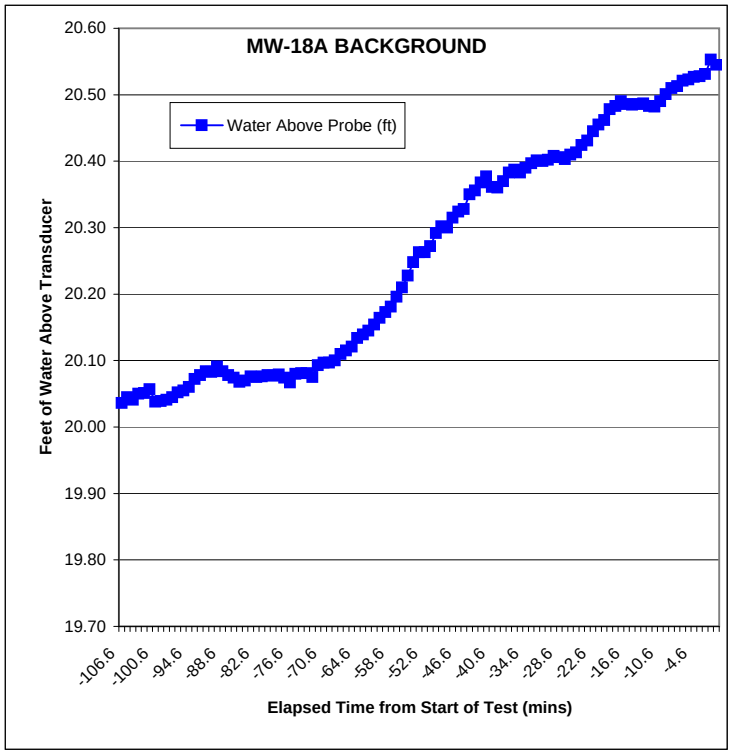


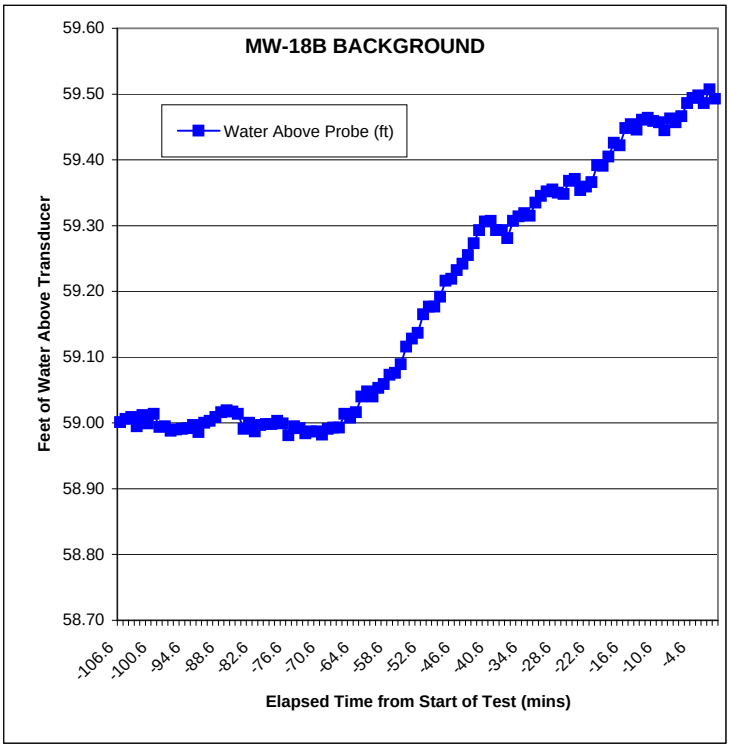


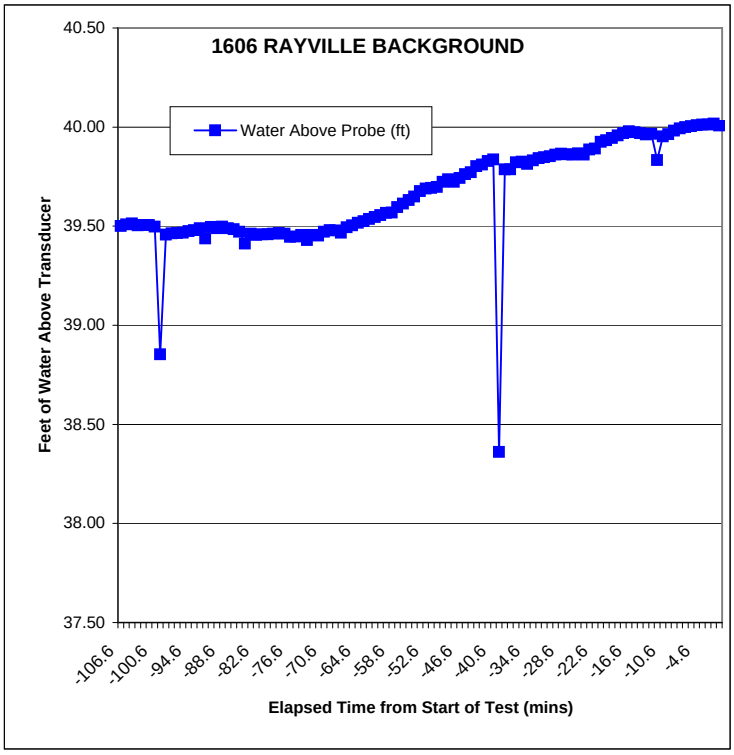
Appendix D

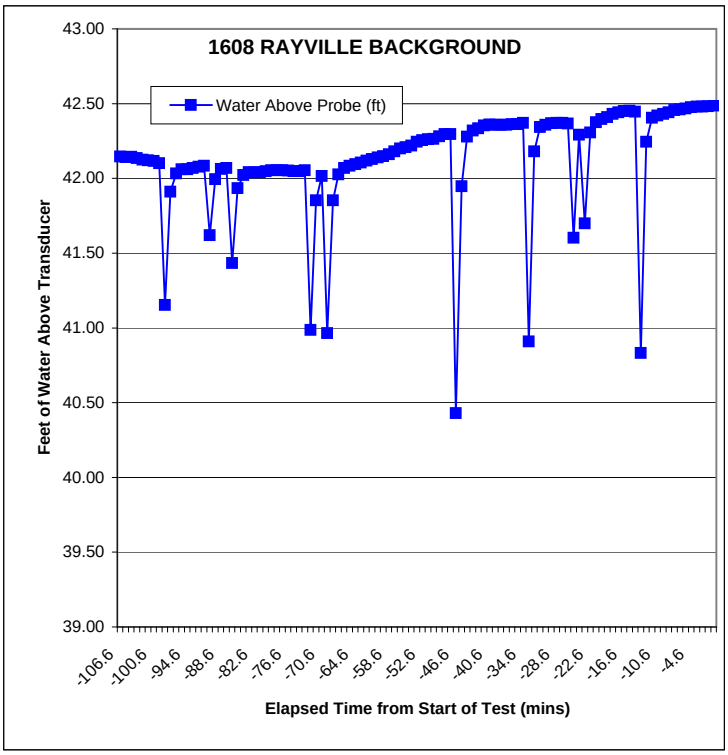
BACKGROUND PERIOD HYDROGRAPHS

Wally's CITGO
19200 Middletown Rd.
Parkton, MD





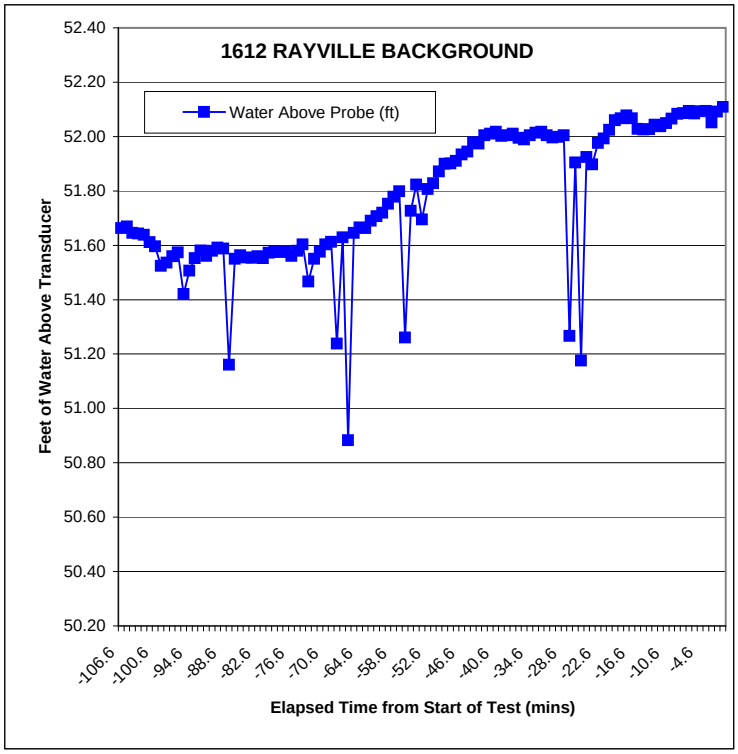




Appendix D

BACKGROUND PERIOD HYDROGRAPHS

Wally's CITGO
19200 Middletown Rd.
Parkton, MD

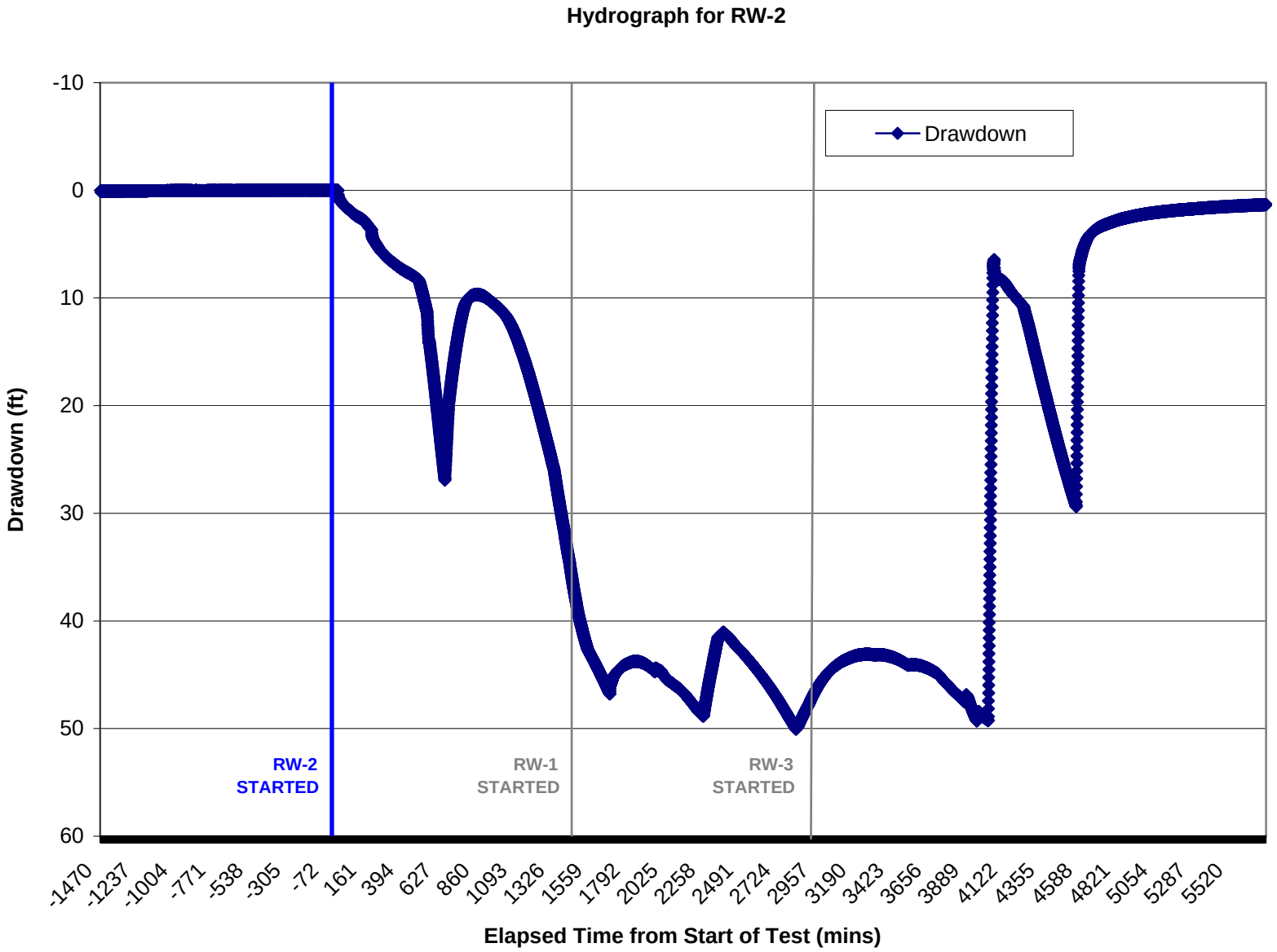


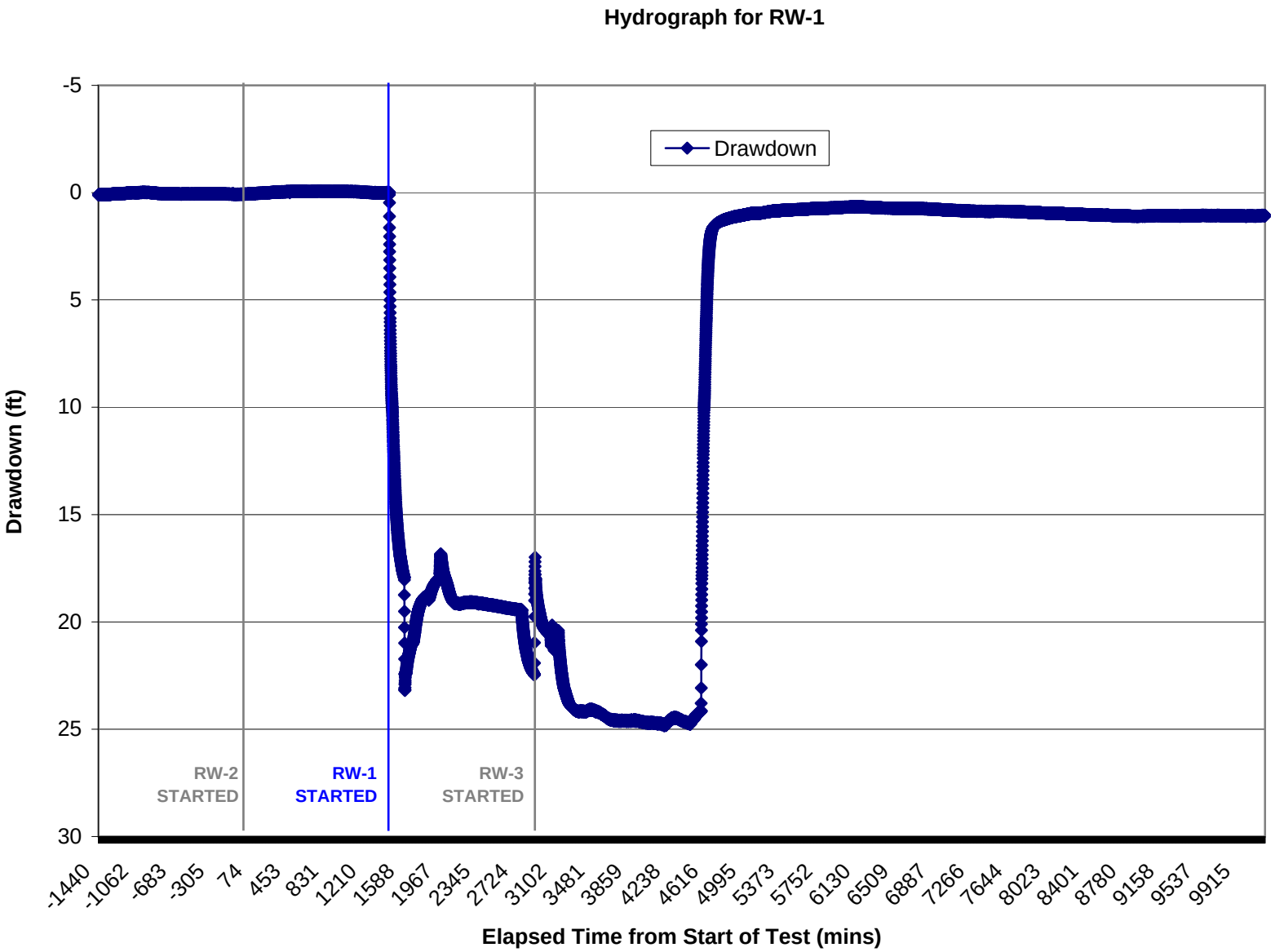
APPENDIX E

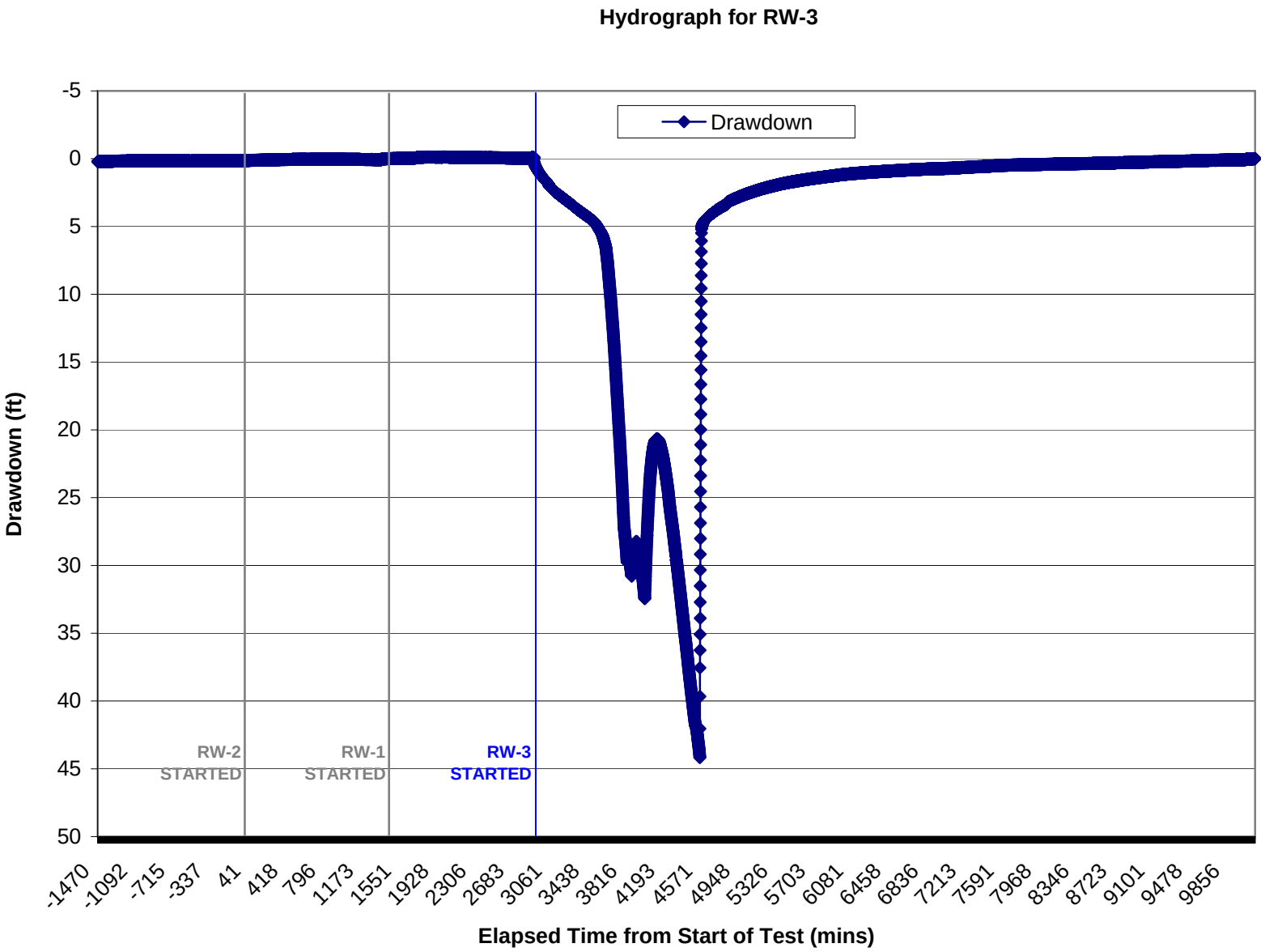
Pumping Test Data Tabulations (CD only)

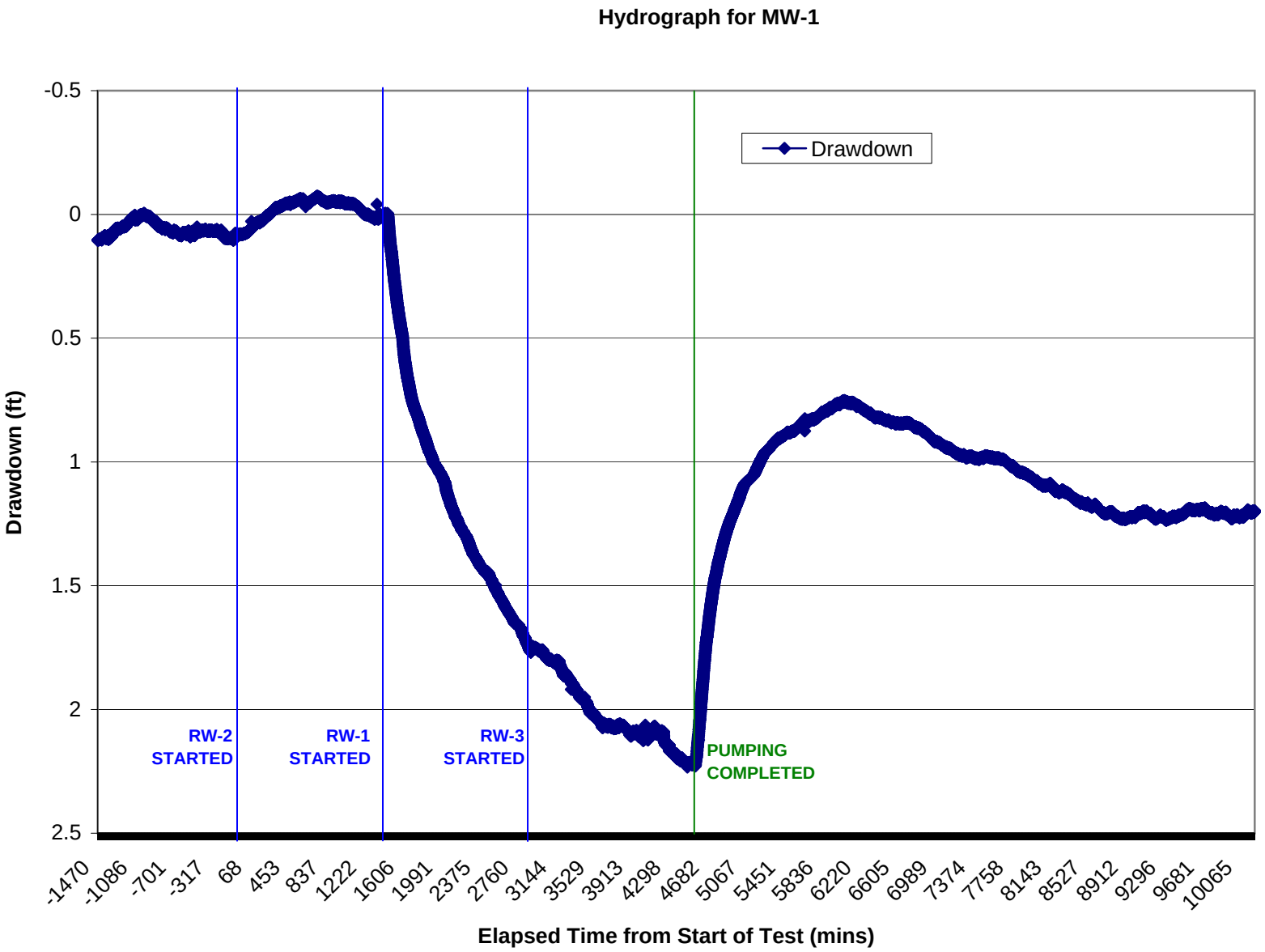
APPENDIX F

Pumping Well and Observation Well Hydrographs

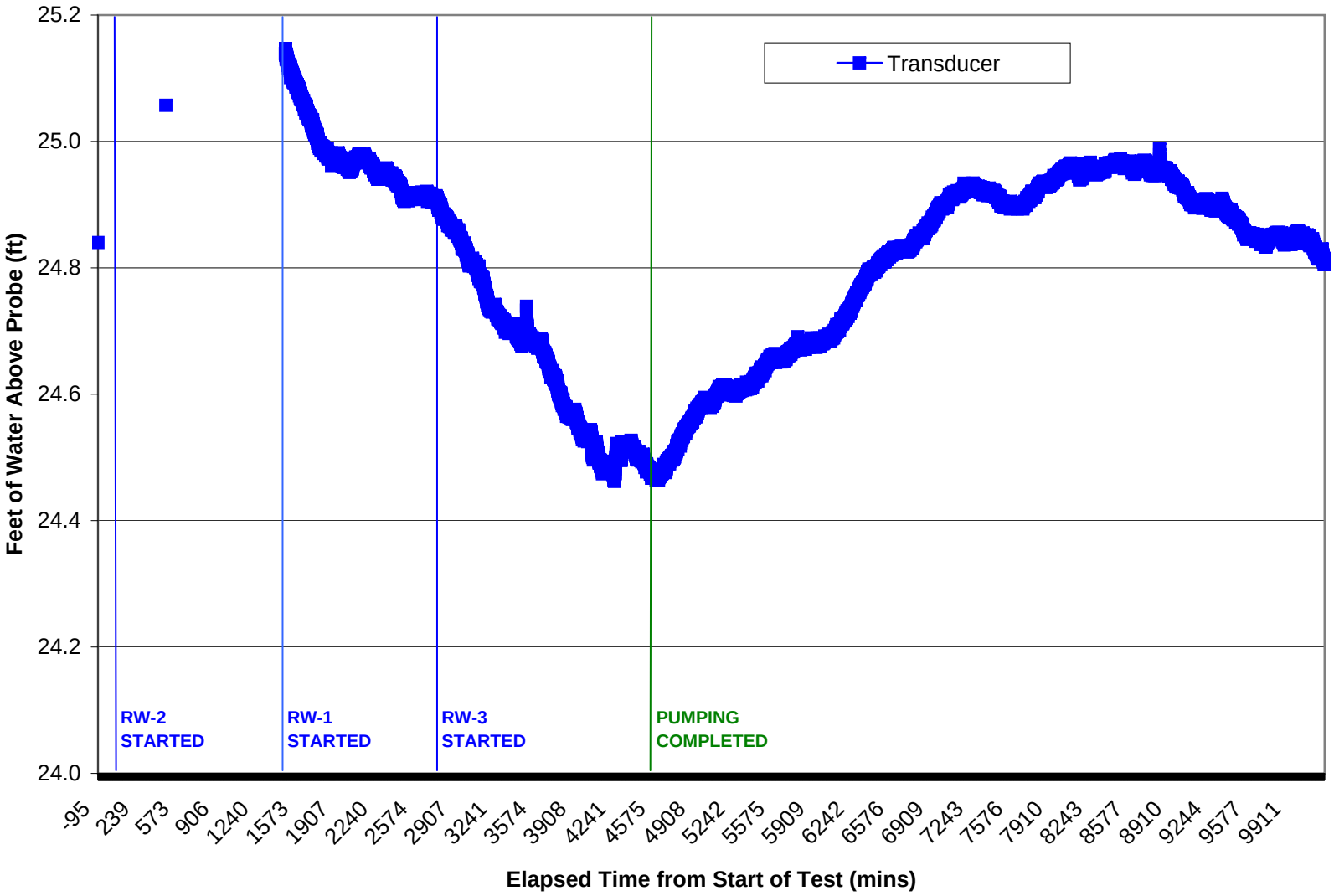

Hydrograph for RW-2
Drawdown
Drawdown (ft)
-10
0
10
20
30
40
50
60
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
-1470
-1237
-1004
-771
-538
-305
-72
161
394
627
860
1093
1326
1559
1792
2025
2258
2491
2724
2957
3190
3423
3656
3889
4122
4355
4588
4821
5054
5287
5520
Elapsed Time from Start of Test (mins)

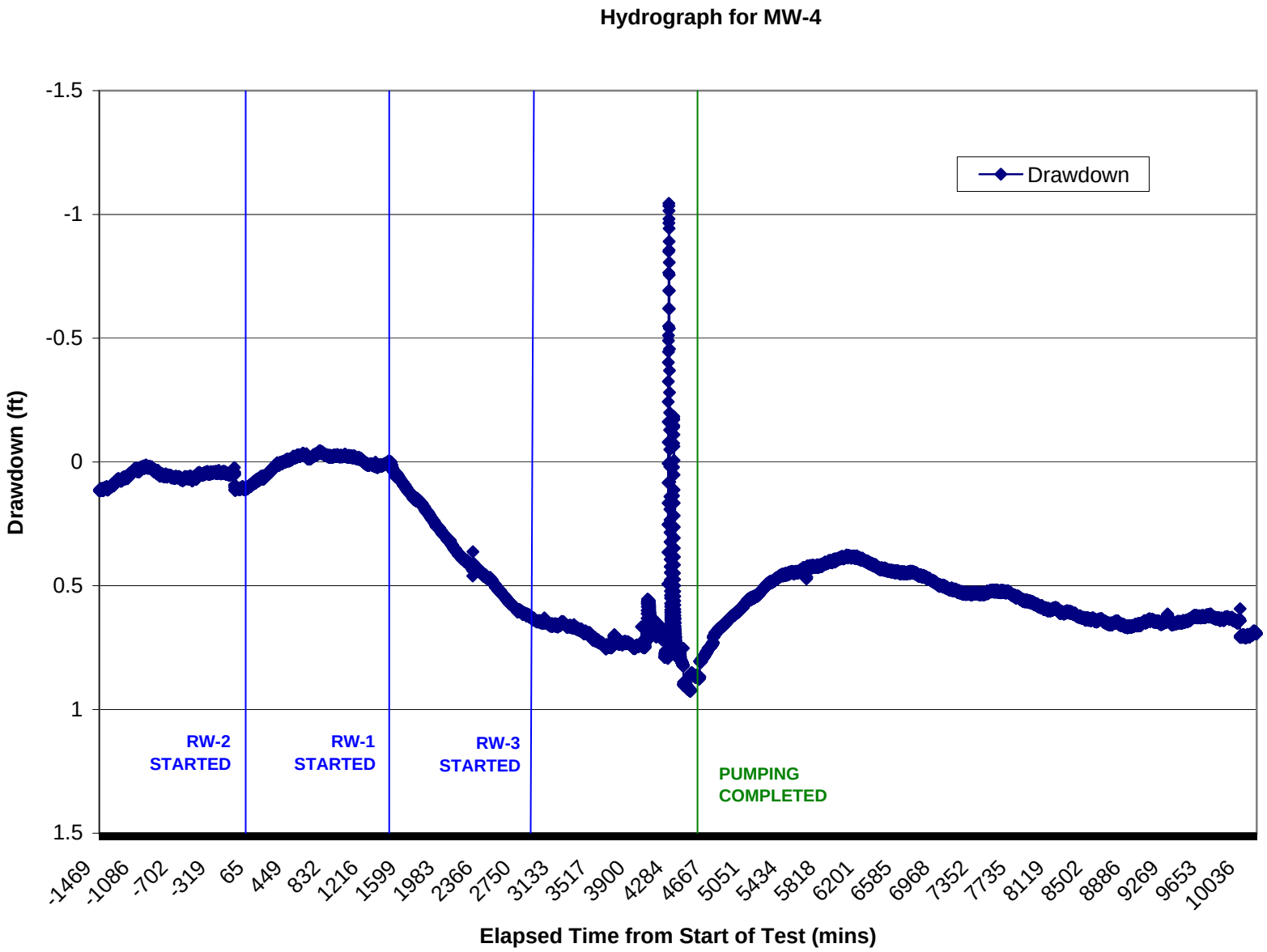

Hydrograph for RW-1
Drawdown
Drawdown (ft)
-5
0
5
10
15
20
25
30
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
-1440
-1062
-683
-305
74
453
831
1210
1588
1967
2345
2724
3102
3481
3859
4238
4616
4995
5373
5752
6130
6509
6887
7266
7644
8023
8401
8780
9158
9537
9915
Elapsed Time from Start of Test (mins)

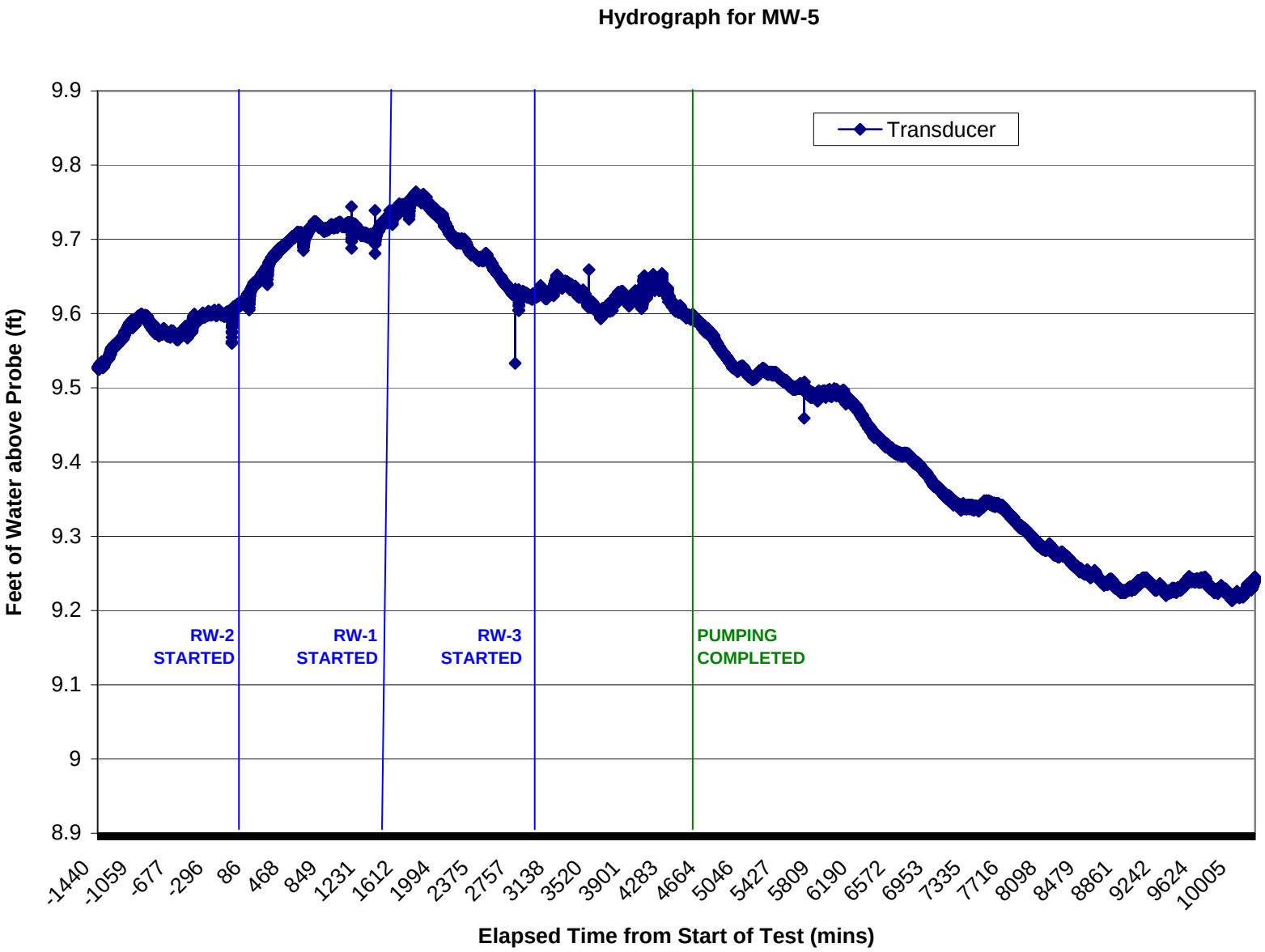

Hydrograph for RW-3
Drawdown
Drawdown (ft)
-5
0
5
10
15
20
25
30
35
40
45
50
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
-1470
-1092
-715
-337
41
418
796
1173
1551
1928
2306
2683
3061
3438
3816
4193
4571
4948
5326
5703
6081
6458
6836
7213
7591
7968
8346
8723
9101
9478
9856
Elapsed Time from Start of Test (mins)

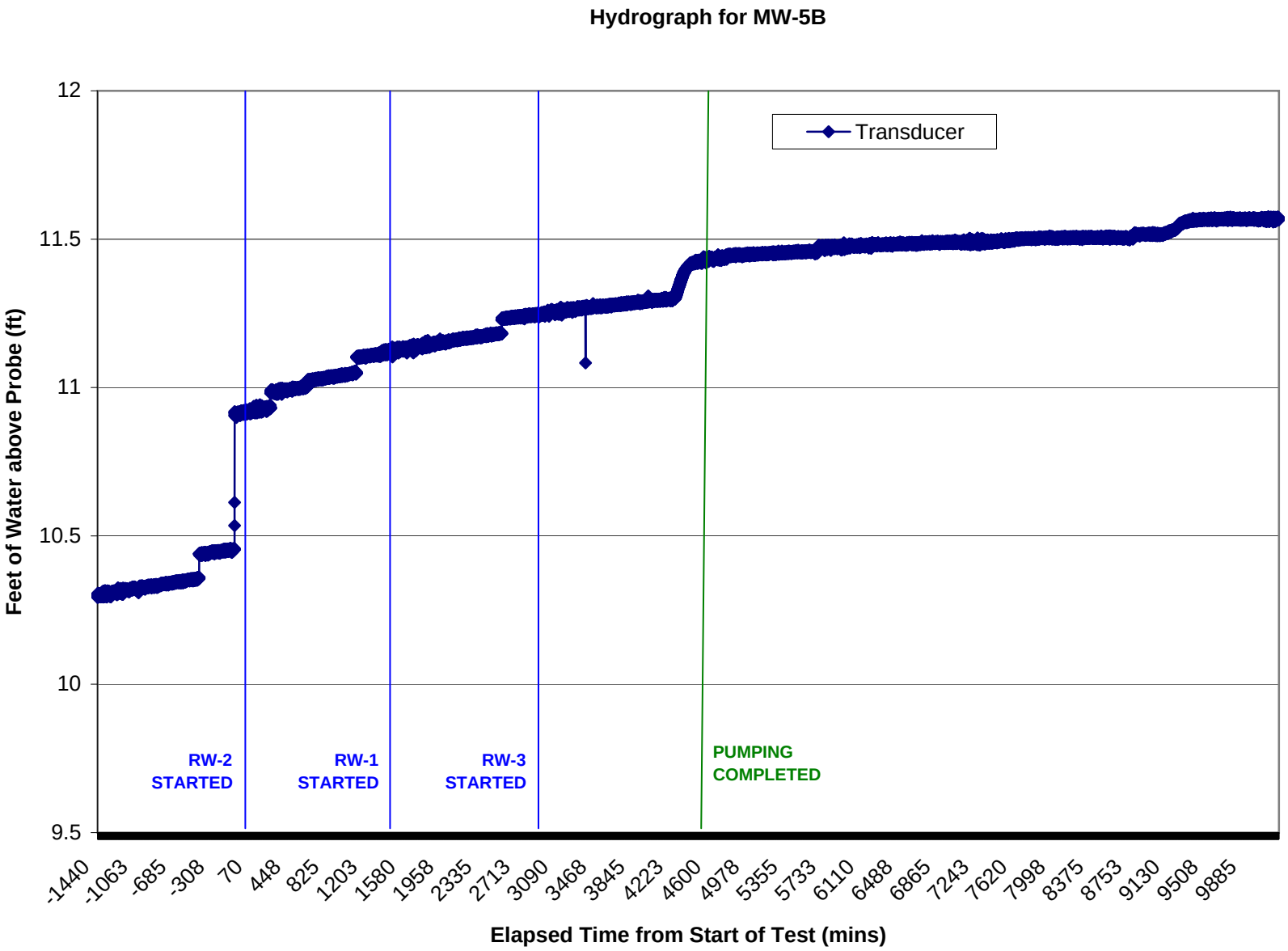

Hydrograph for MW-1
Drawdown
Drawdown (ft)
-0.5
0
0.5
1
1.5
2
2.5
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1470
-1086
-701
-317
68
453
837
1222
1606
1991
2375
2760
3144
3529
3913
4298
4682
5067
5451
5836
6220
6605
6989
7374
7758
8143
8527
8912
9296
9681
10065
Elapsed Time from Start of Test (mins)

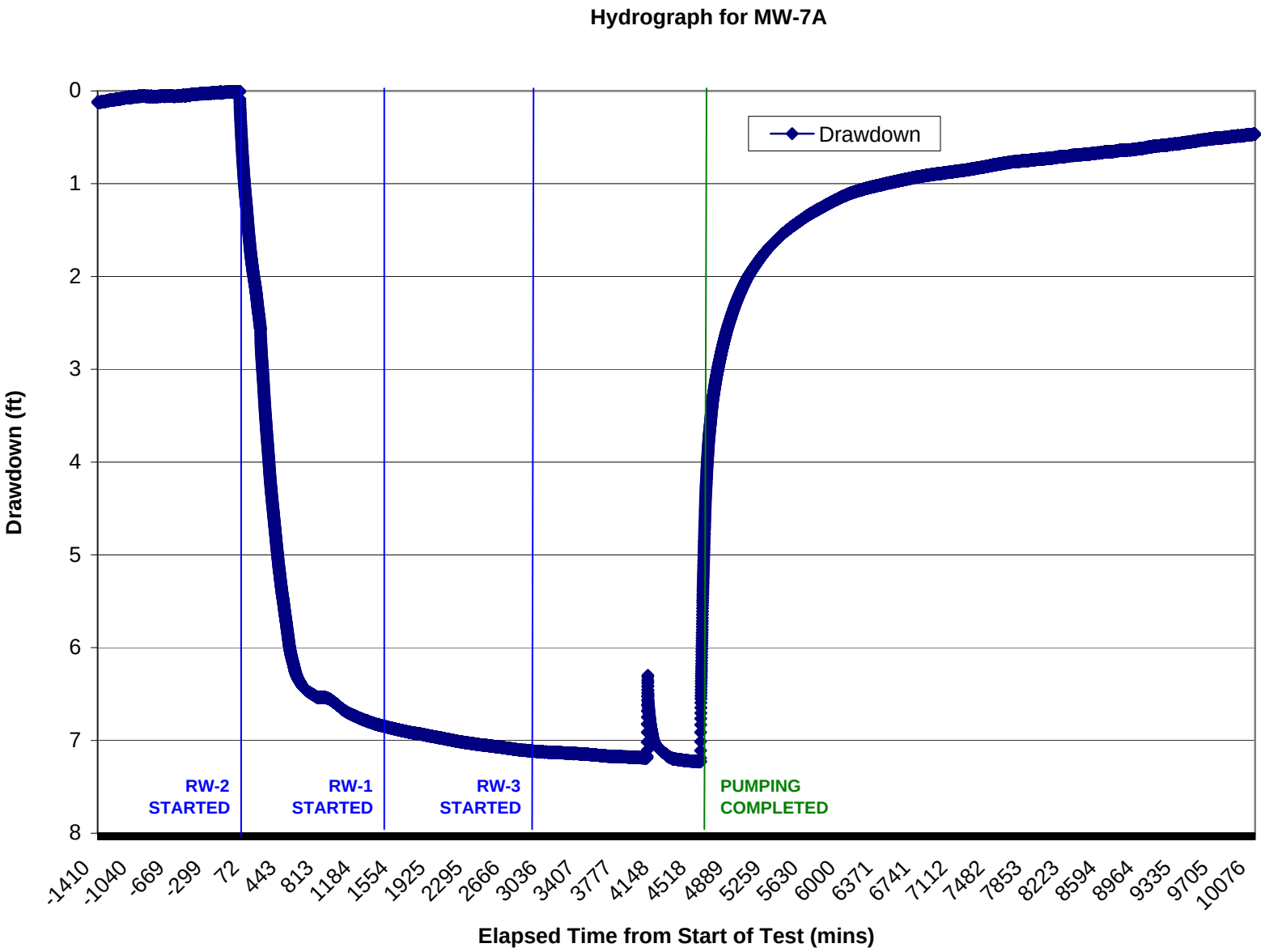
Hydrograph for MW-3



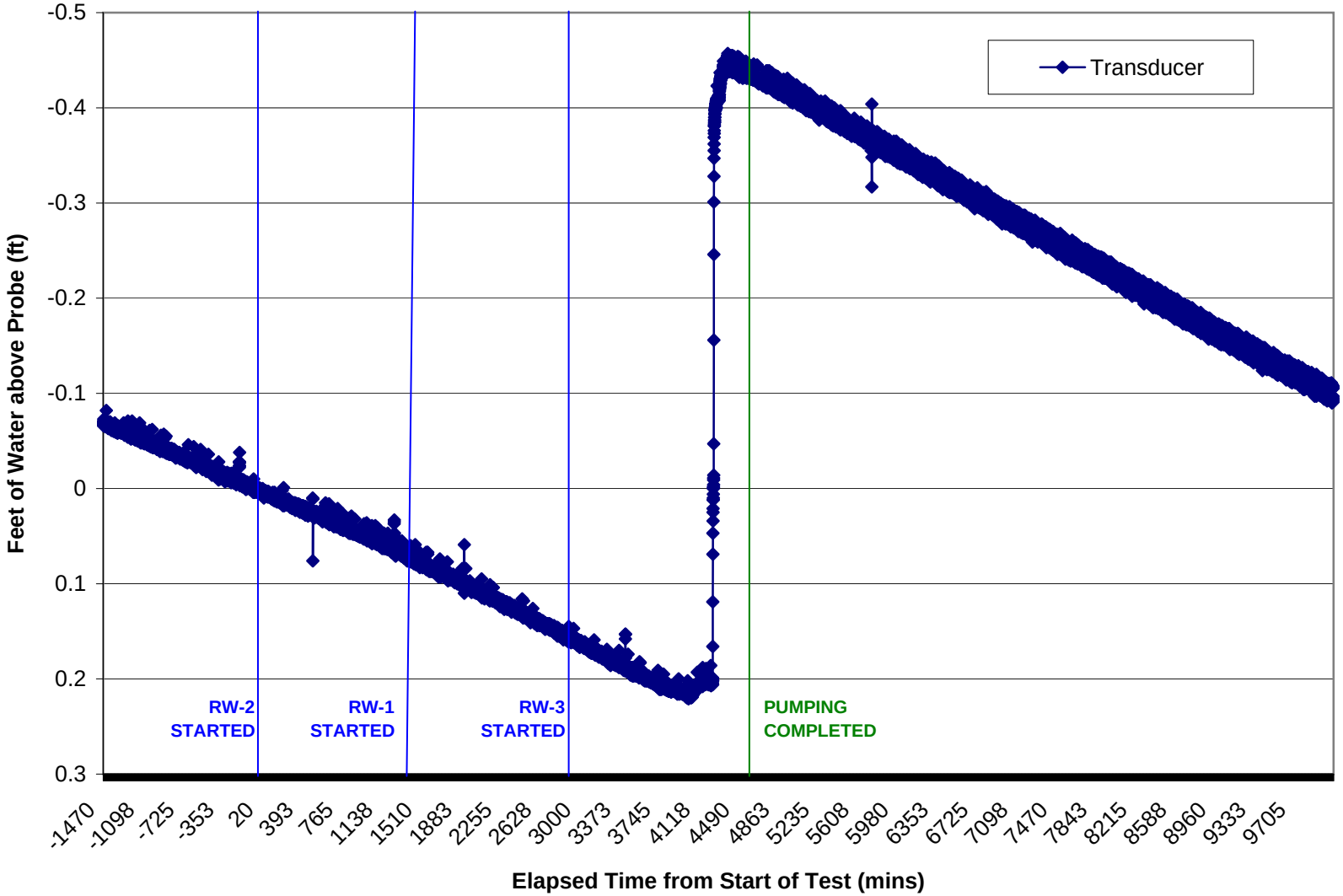

Hydrograph for MW-4
Drawdown
Drawdown (ft)
-1.5
-1
-0.5
0
0.5
1
1.5
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1469
-1086
-702
-319
65
449
832
1216
1599
1983
2366
2750
3133
3517
3900
4284
4667
5051
5434
5818
6201
6585
6968
7352
7735
8119
8502
8886
9269
9653
10036
Elapsed Time from Start of Test (mins)

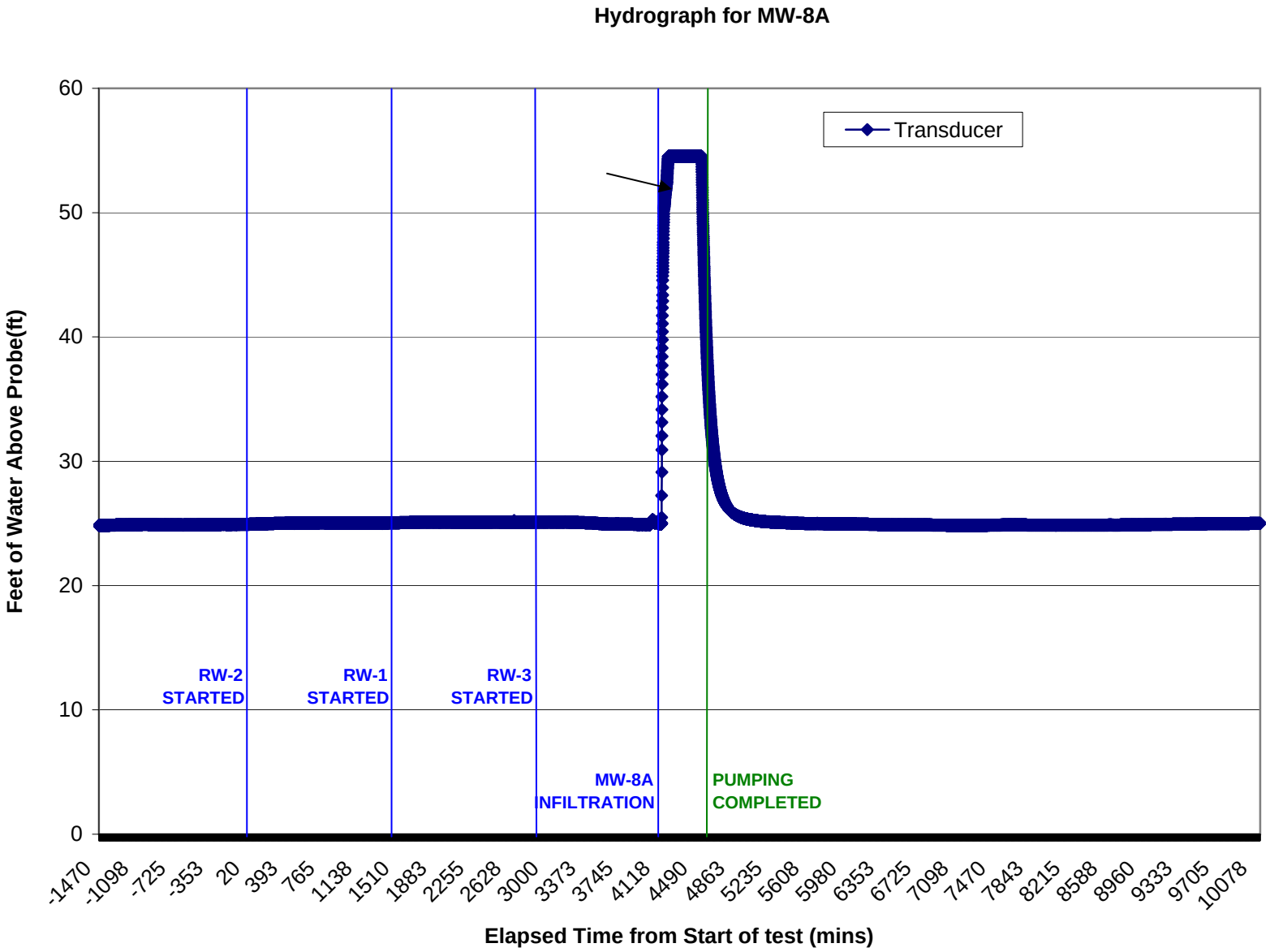

Hydrograph for MW-5
Transducer
Feet of Water above Probe (ft)
9.9
9.8
9.7
9.6
9.5
9.4
9.3
9.2
9.1
9
8.9
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1440
-1059
-677
-296
86
468
849
1231
1612
1994
2375
2757
3138
3520
3901
4283
4664
5046
5427
5809
6190
6572
6953
7335
7716
8098
8479
8861
9242
9624
10005
Elapsed Time from Start of Test (mins)

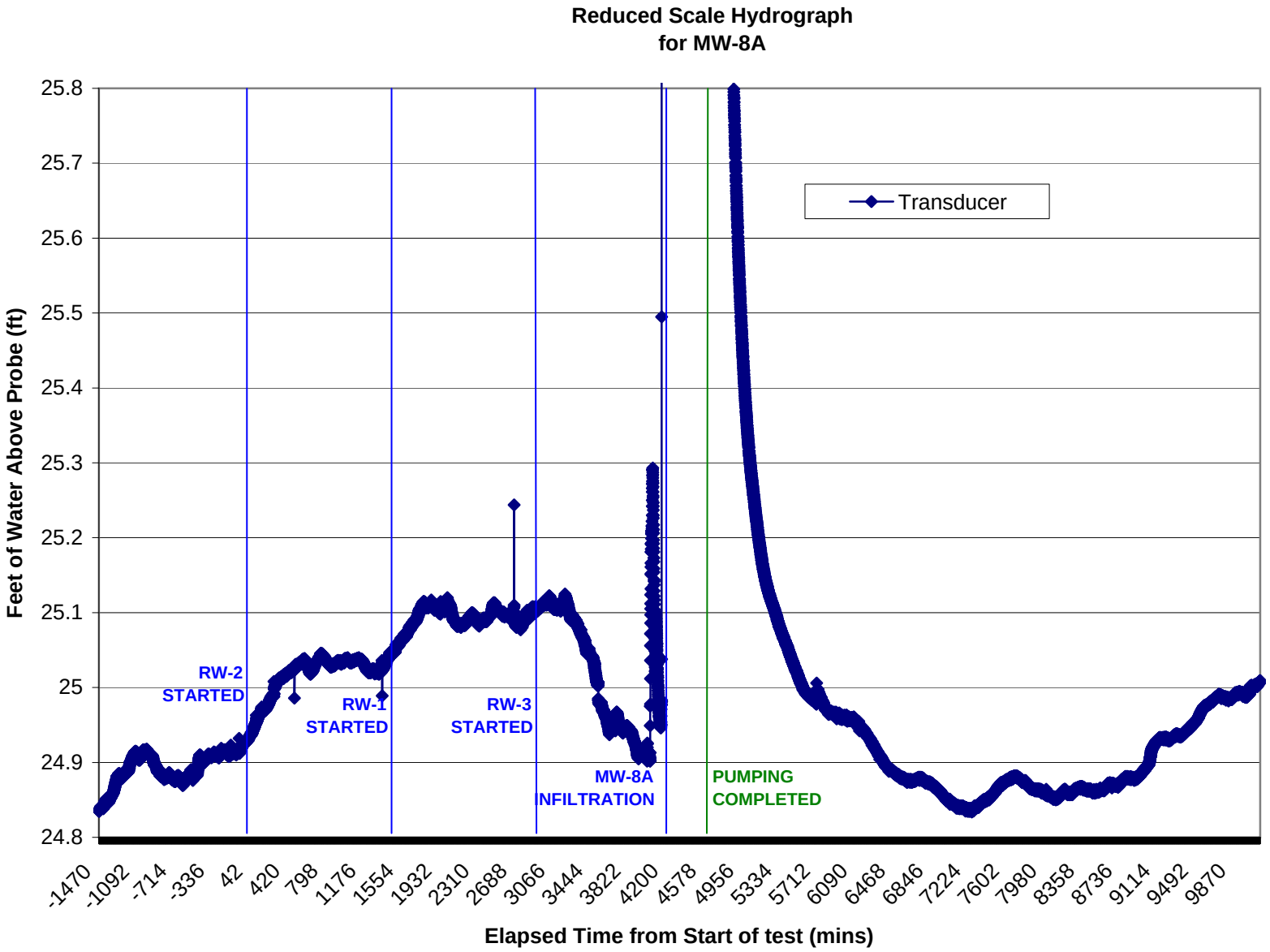

Hydrograph for MW-5B
Transducer
Feet of Water above Probe (ft)
12
11.5
11
10.5
10
9.5
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1440
-1063
-685
-308
70
448
825
1203
1580
1958
2335
2713
3090
3468
3845
4223
4600
4978
5355
5733
6110
6488
6865
7243
7620
7998
8375
8753
9130
9508
9885
Elapsed Time from Start of Test (mins)

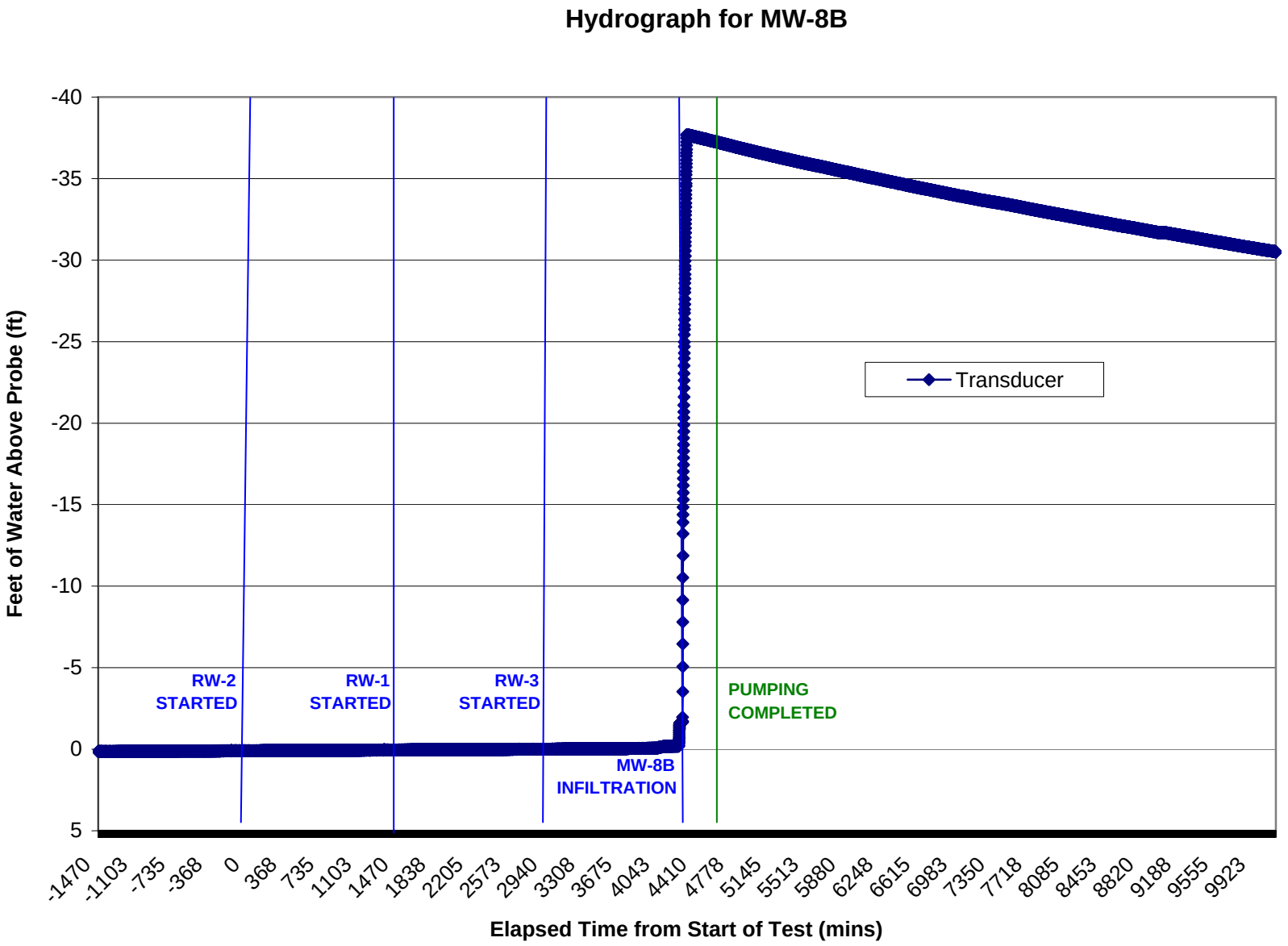

Hydrograph for MW-7A
Drawdown (ft)
0
1
2
3
4
5
6
7
8
Drawdown
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1410
-1040
-669
-299
72
443
813
1184
1554
1925
2295
2666
3036
3407
3777
4148
4518
4889
5259
5630
6000
6371
6741
7112
7482
7853
8223
8594
8964
9335
9705
10076
Elapsed Time from Start of Test (mins)

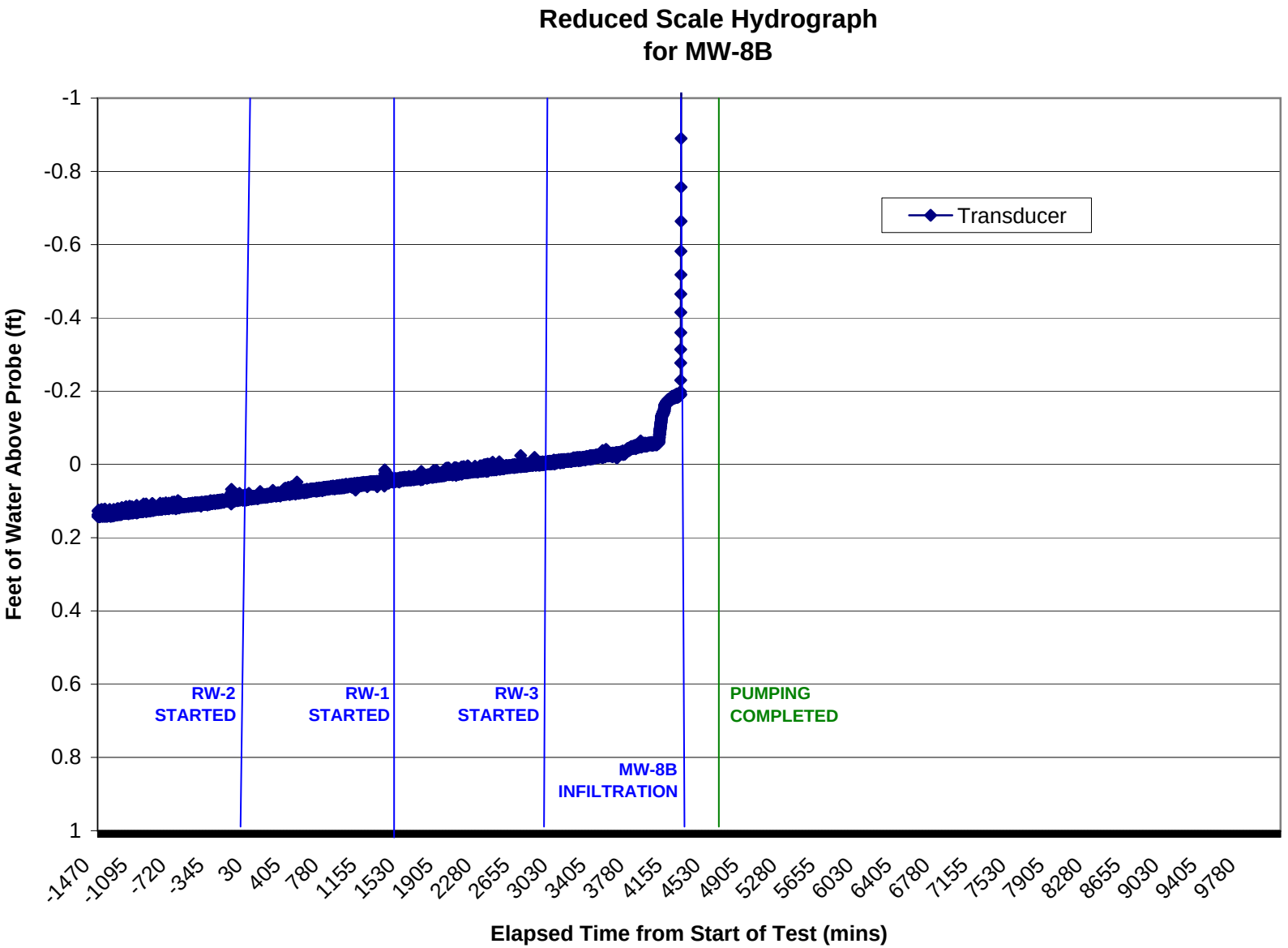
Hydrograph for MW-7B

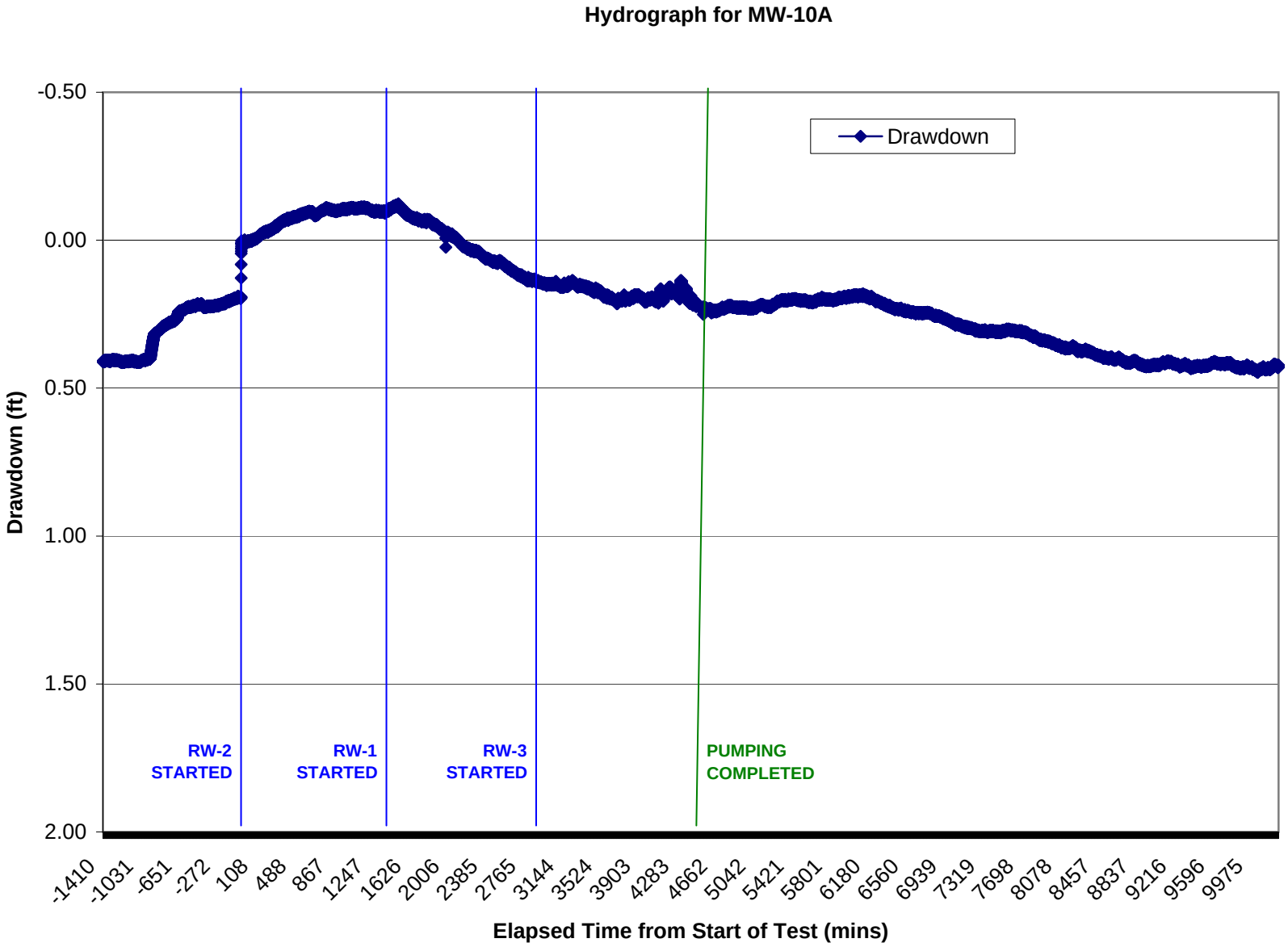



Hydrograph for MW-8A
Transducer
Feet of Water Above Probe(ft)
60
50
40
30
20
10
0
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
MW-8A INFILTRATION
PUMPING COMPLETED
-1470
-1098
-725
-353
20
393
765
1138
1510
1883
2255
2628
3000
3373
3745
4118
4490
4863
5235
5608
5980
6353
6725
7098
7470
7843
8215
8588
8960
9333
9705
10078
Elapsed Time from Start of test (mins)

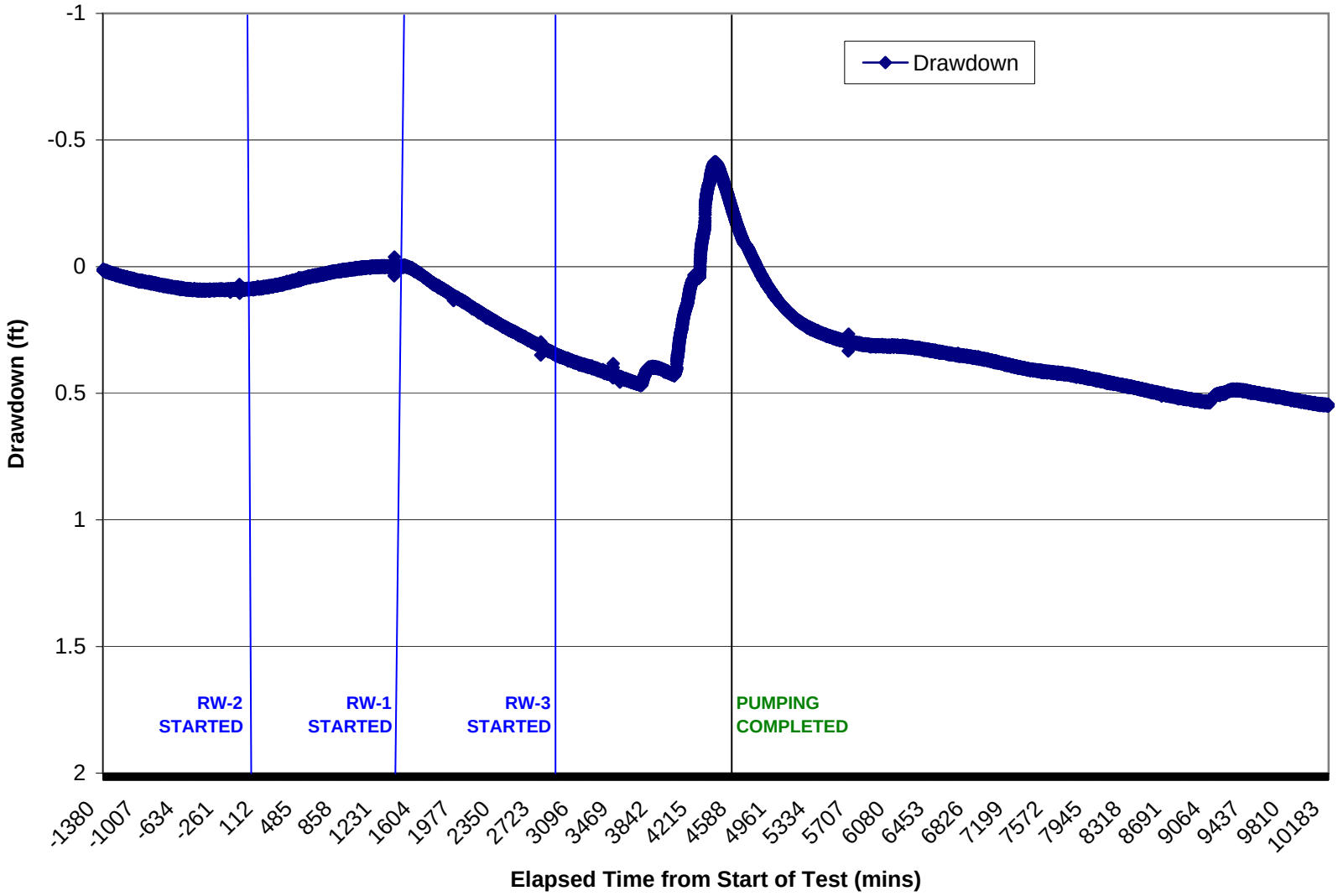

Reduced Scale Hydrograph
for MW-8A
Feet of Water Above Probe (ft)
25.8
25.7
25.6
25.5
25.4
25.3
25.2
25.1
25
24.9
24.8
Transducer
RW-2
STARTED
RW-1
STARTED
RW-3
STARTED
MW-8A
INFILTRATION
PUMPING
COMPLETED
-1470
-1092
-714
-336
42
420
798
1176
1554
1932
2310
2688
3066
3444
3822
4200
4578
4956
5334
5712
6090
6468
6846
7224
7602
7980
8358
8736
9114
9492
9870
Elapsed Time from Start of test (mins)


Hydrograph for MW-8B
Feet of Water Above Probe (ft)
-40
-35
-30
-25
-20
-15
-10
-5
0
5
Transducer
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
MW-8B INFILTRATION
PUMPING COMPLETED
-1470
-1103
-735
-368
0
368
735
1103
1470
1838
2205
2573
2940
3308
3675
4043
4410
4778
5145
5513
5880
6248
6615
6983
7350
7718
8085
8453
8820
9188
9555
9923
Elapsed Time from Start of Test (mins)

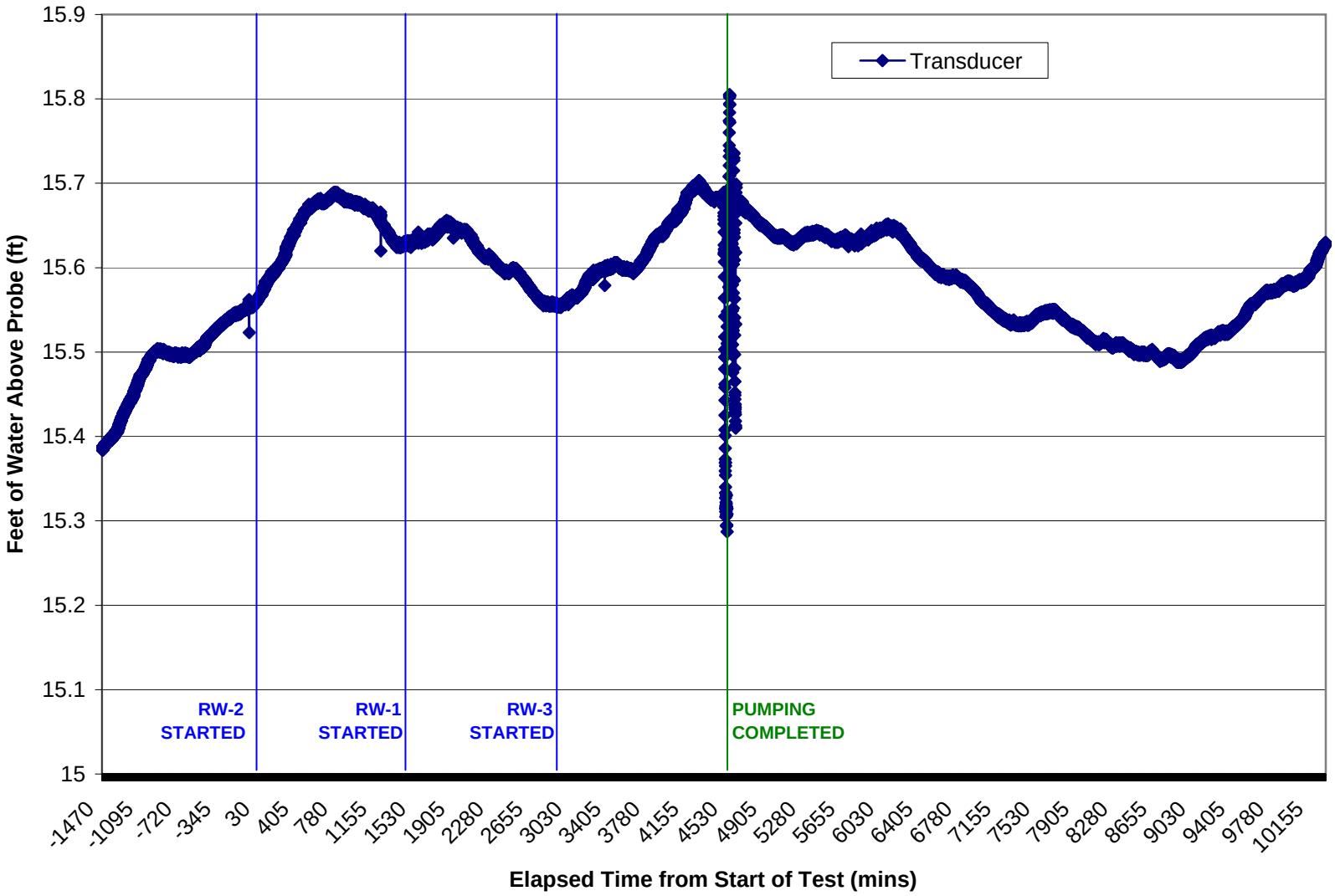

Reduced Scale Hydrograph
for MW-8B
Feet of Water Above Probe (ft)
-1
-0.8
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
0.8
1
Transducer
RW-2
STARTED
RW-1
STARTED
RW-3
STARTED
MW-8B
INFILTRATION
PUMPING
COMPLETED
-1470
-1095
-720
-345
30
405
780
1155
1530
1905
2280
2655
3030
3405
3780
4155
4530
4905
5280
5655
6030
6405
6780
7155
7530
7905
8280
8655
9030
9405
9780
Elapsed Time from Start of Test (mins)


Hydrograph for MW-10A
Drawdown
-0.50
0.00
0.50
1.00
1.50
2.00
Drawdown (ft)
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1410
-1031
-651
-272
108
488
867
1247
1626
2006
2385
2765
3144
3524
3903
4283
4662
5042
5421
5801
6180
6560
6939
7319
7698
8078
8457
8837
9216
9596
9975
Elapsed Time from Start of Test (mins)

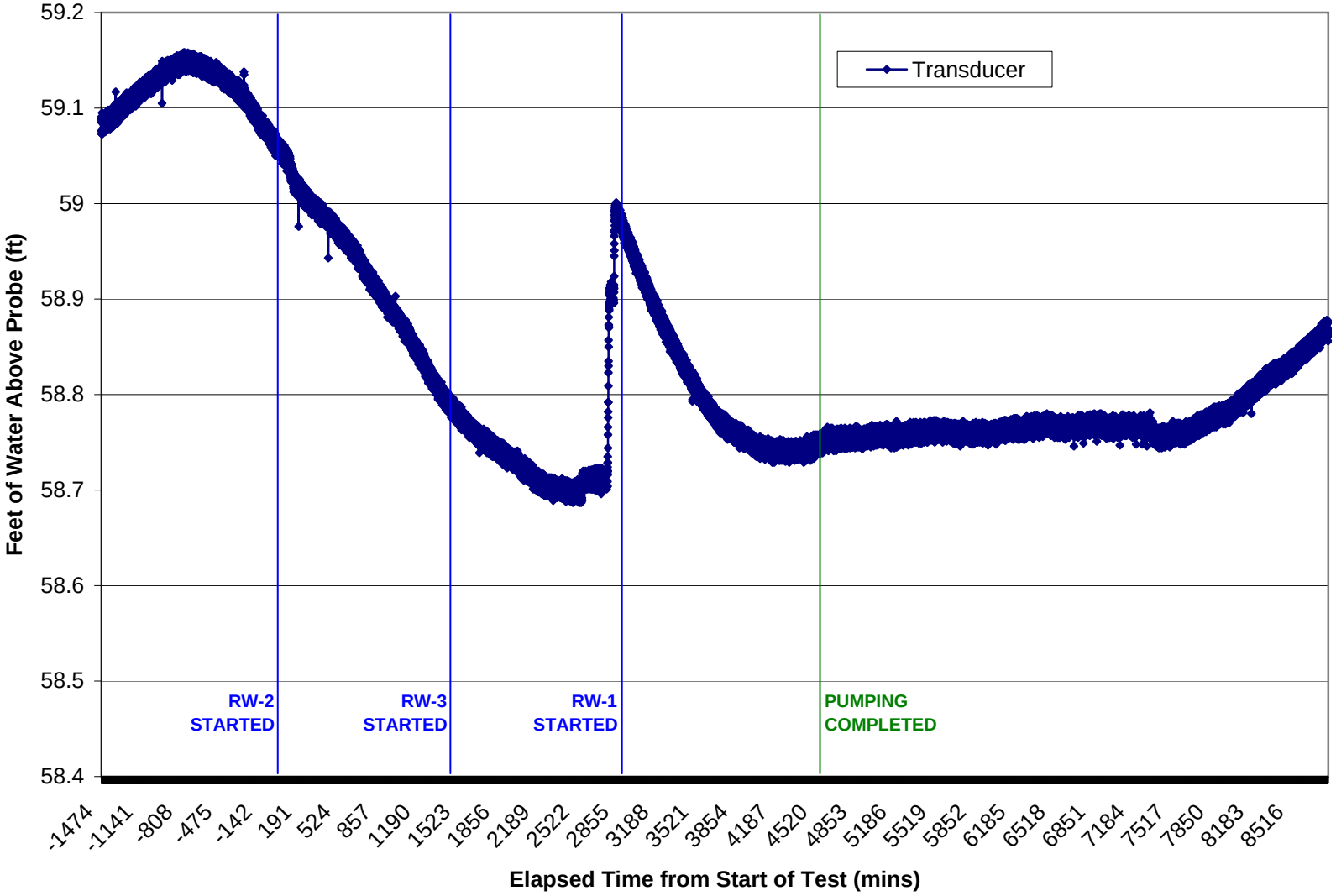
Hydrograph for MW-10B

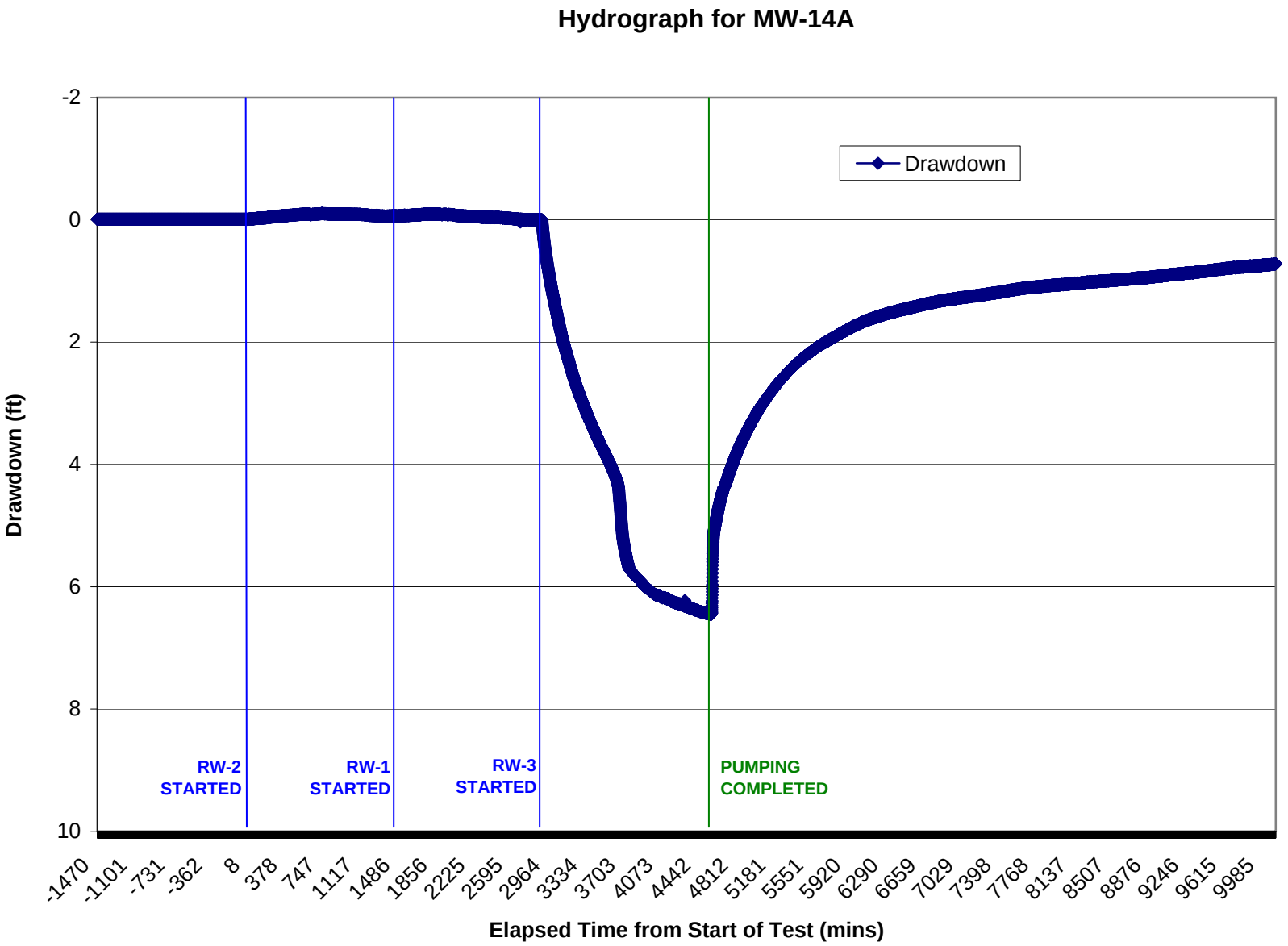


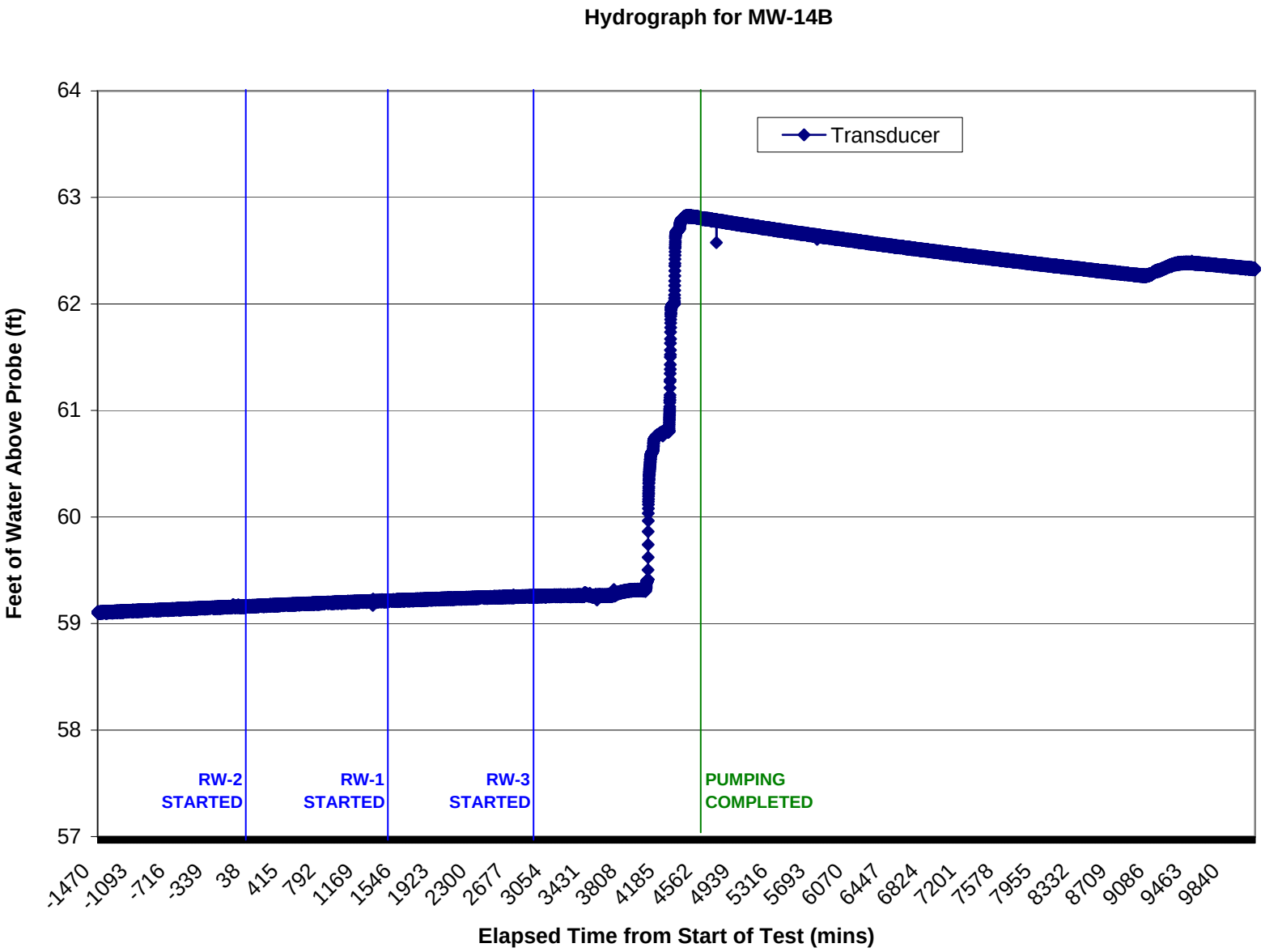
Hydrograph for MW-11A



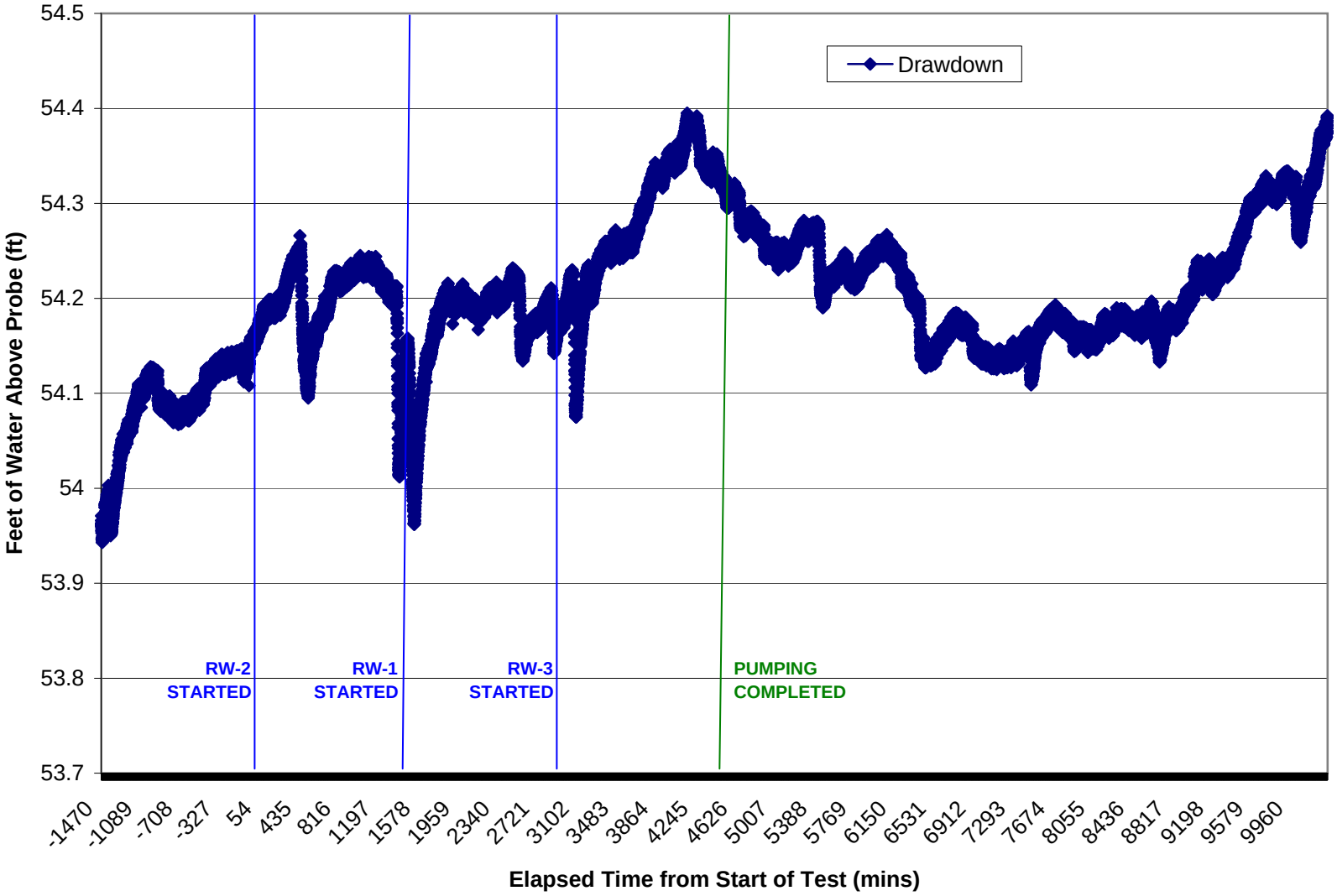
Hydrograph for MW-11B

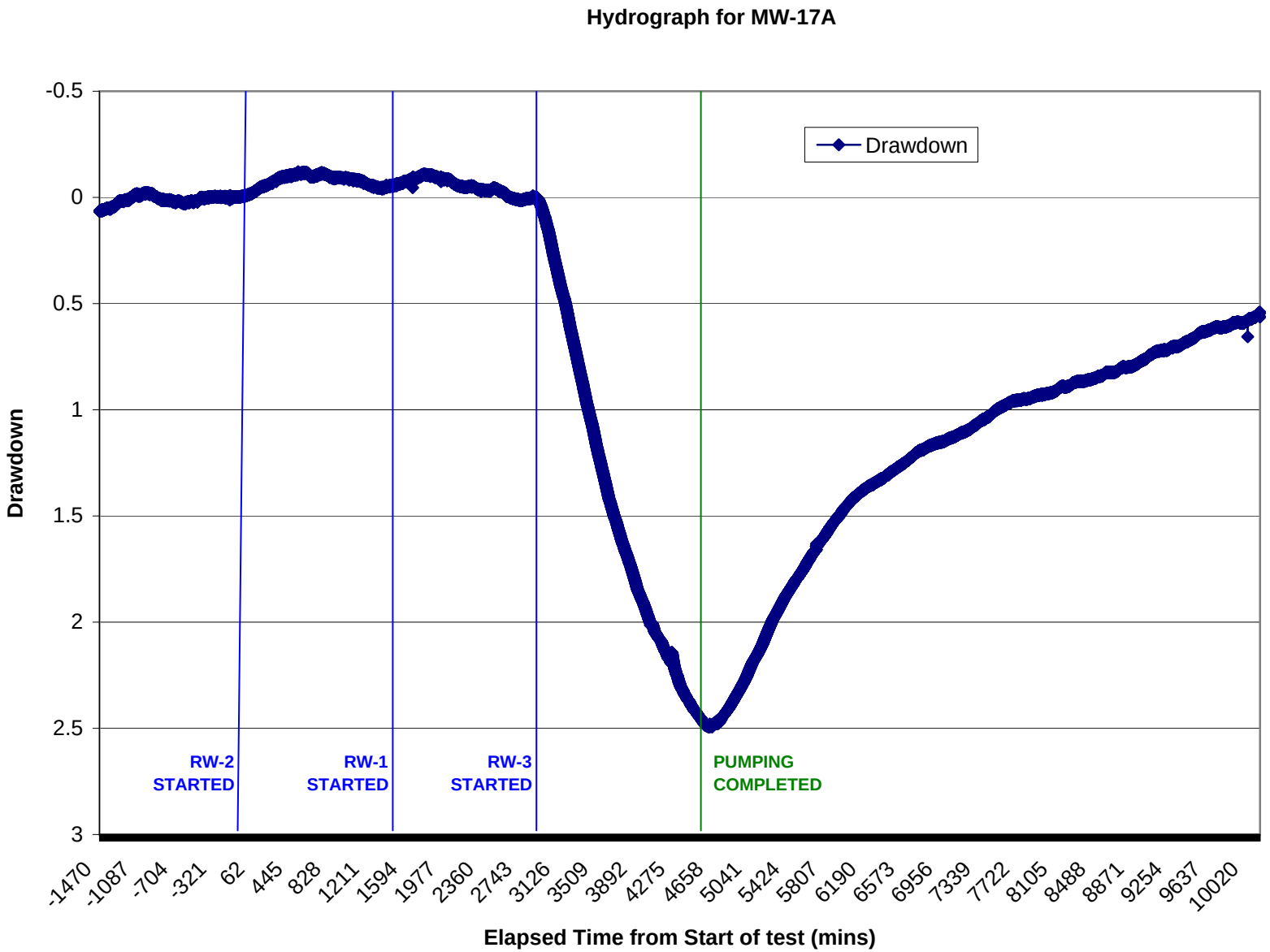


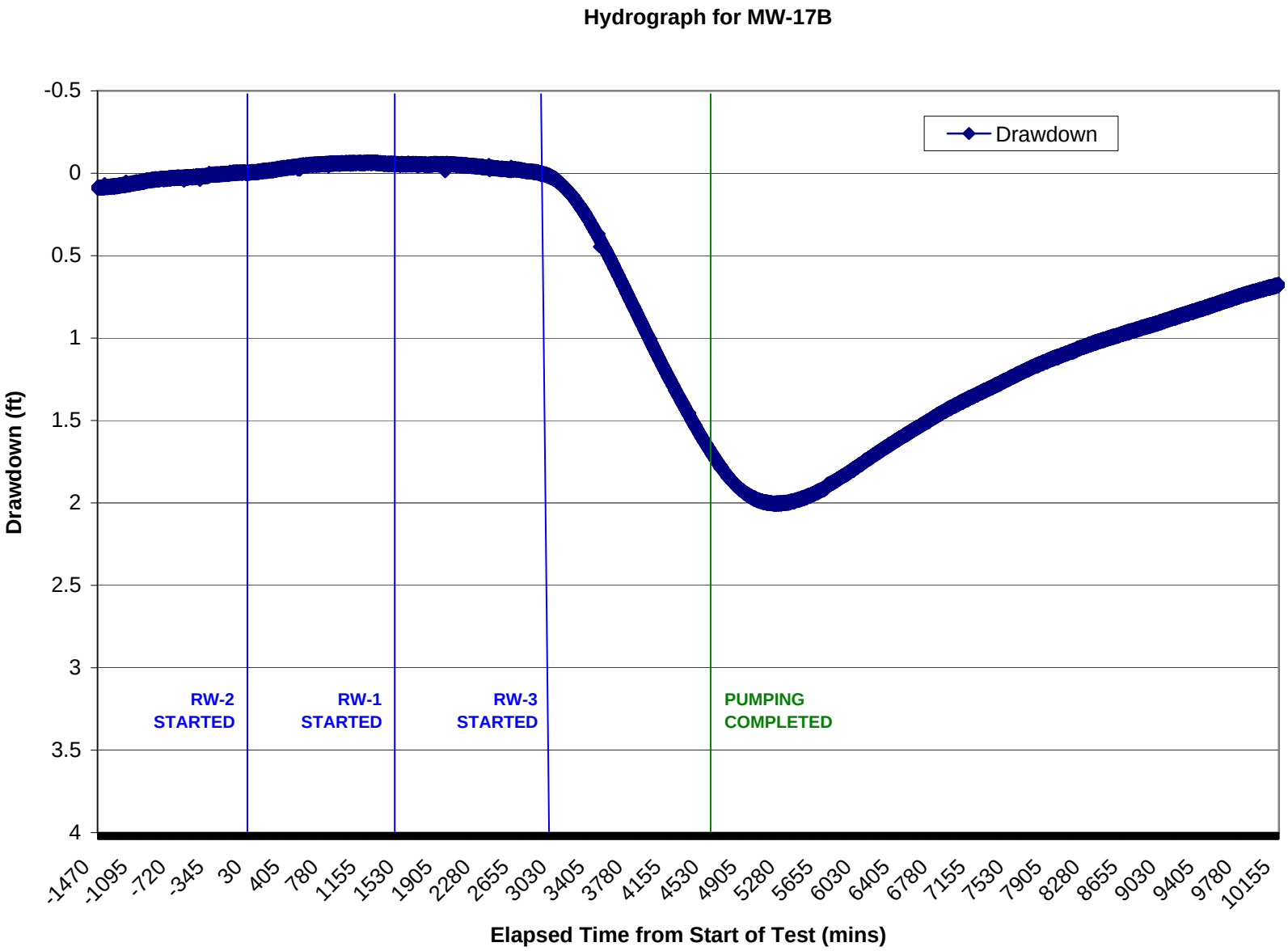

Hydrograph for MW-14A
Drawdown
Drawdown (ft)
-2
0
2
4
6
8
10
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1470
-1101
-731
-362
8
378
747
1117
1486
1856
2225
2595
2964
3334
3703
4073
4442
4812
5181
5551
5920
6290
6659
7029
7398
7768
8137
8507
8876
9246
9615
9985
Elapsed Time from Start of Test (mins)

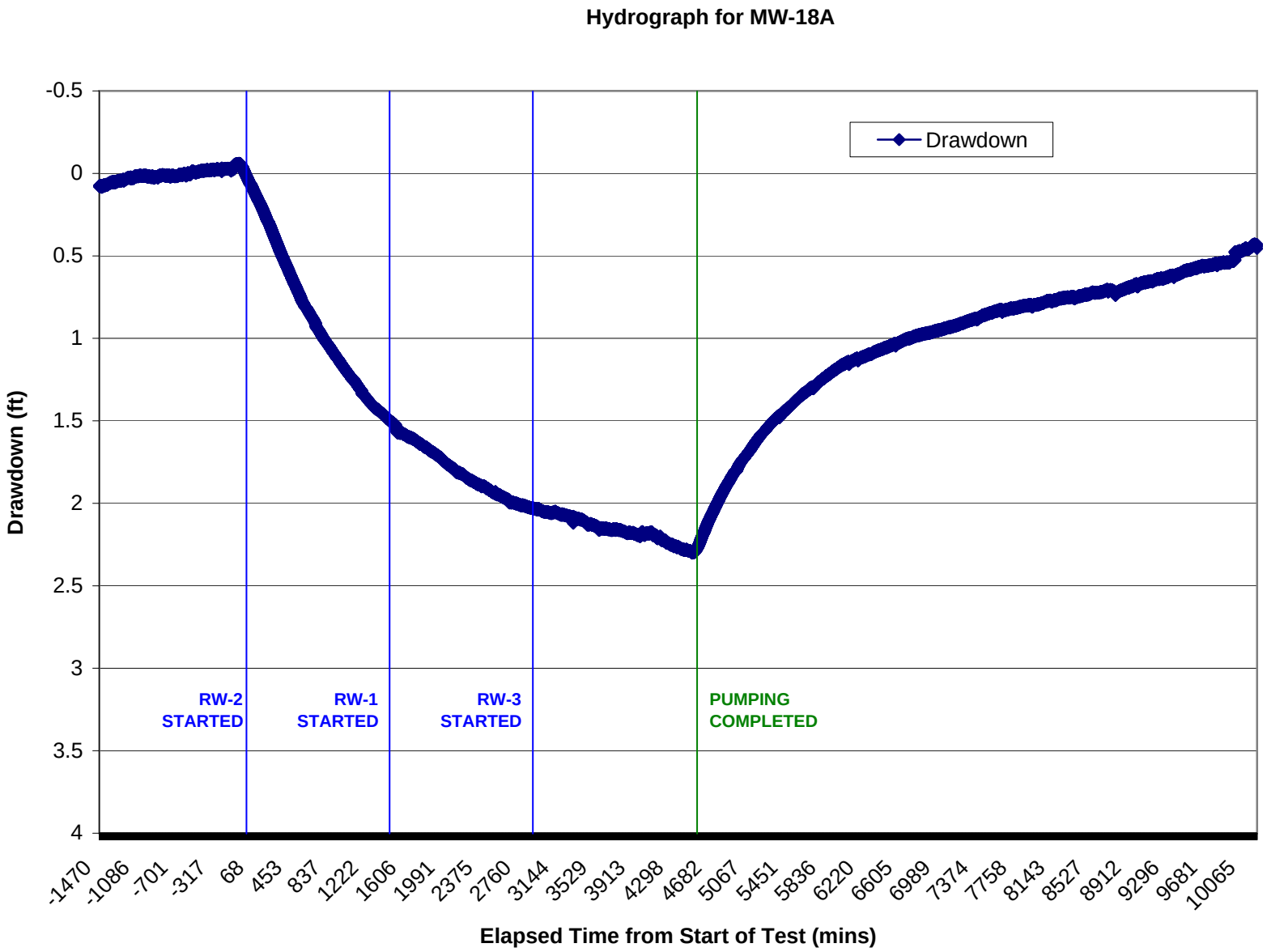

Hydrograph for MW-14B
Transducer
Feet of Water Above Probe (ft)
64
63
62
61
60
59
58
57
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1470
-1093
-716
-339
38
415
792
1169
1546
1923
2300
2677
3054
3431
3808
4185
4562
4939
5316
5693
6070
6447
6824
7201
7578
7955
8332
8709
9086
9463
9840
Elapsed Time from Start of Test (mins)

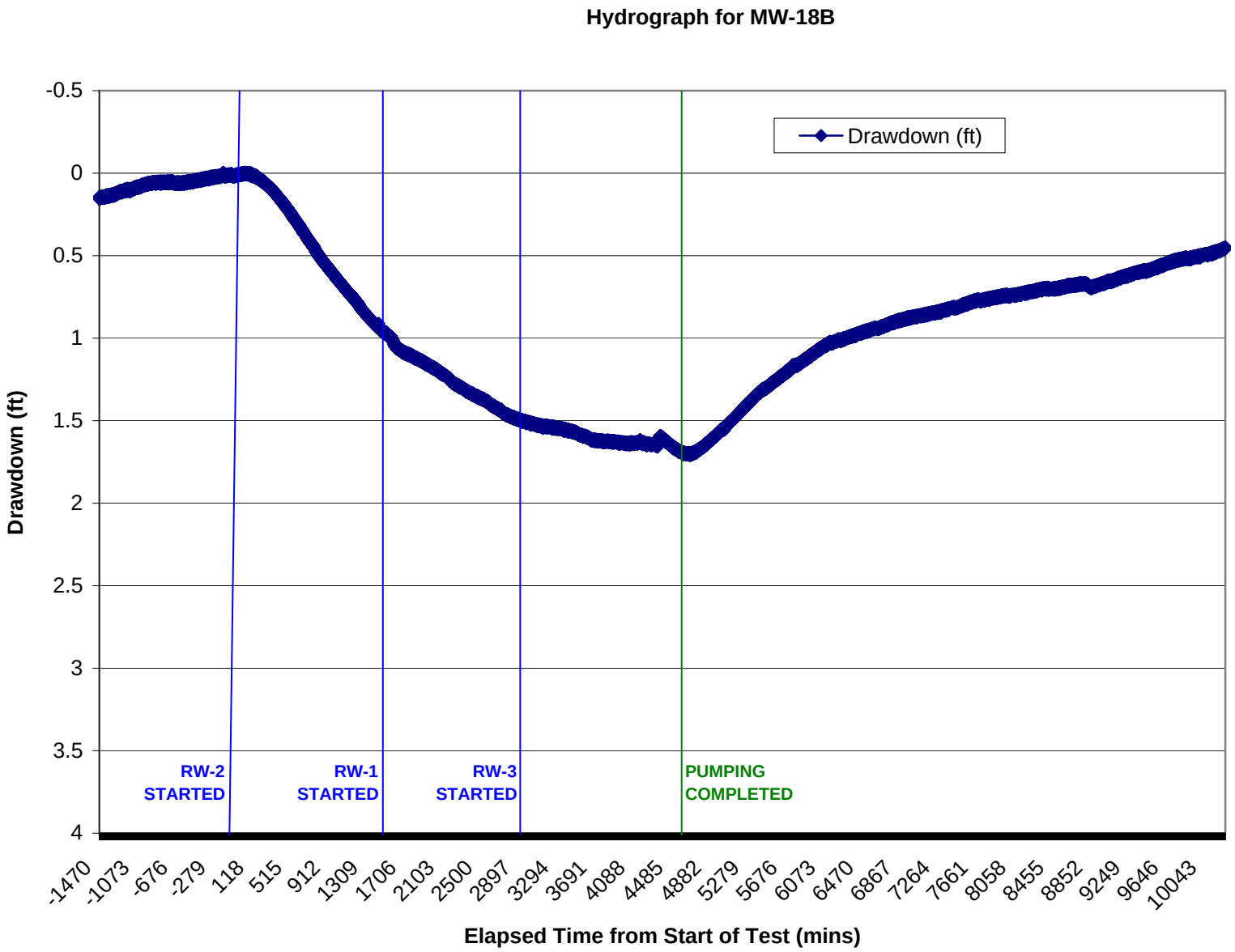
Hydrograph for MW-15



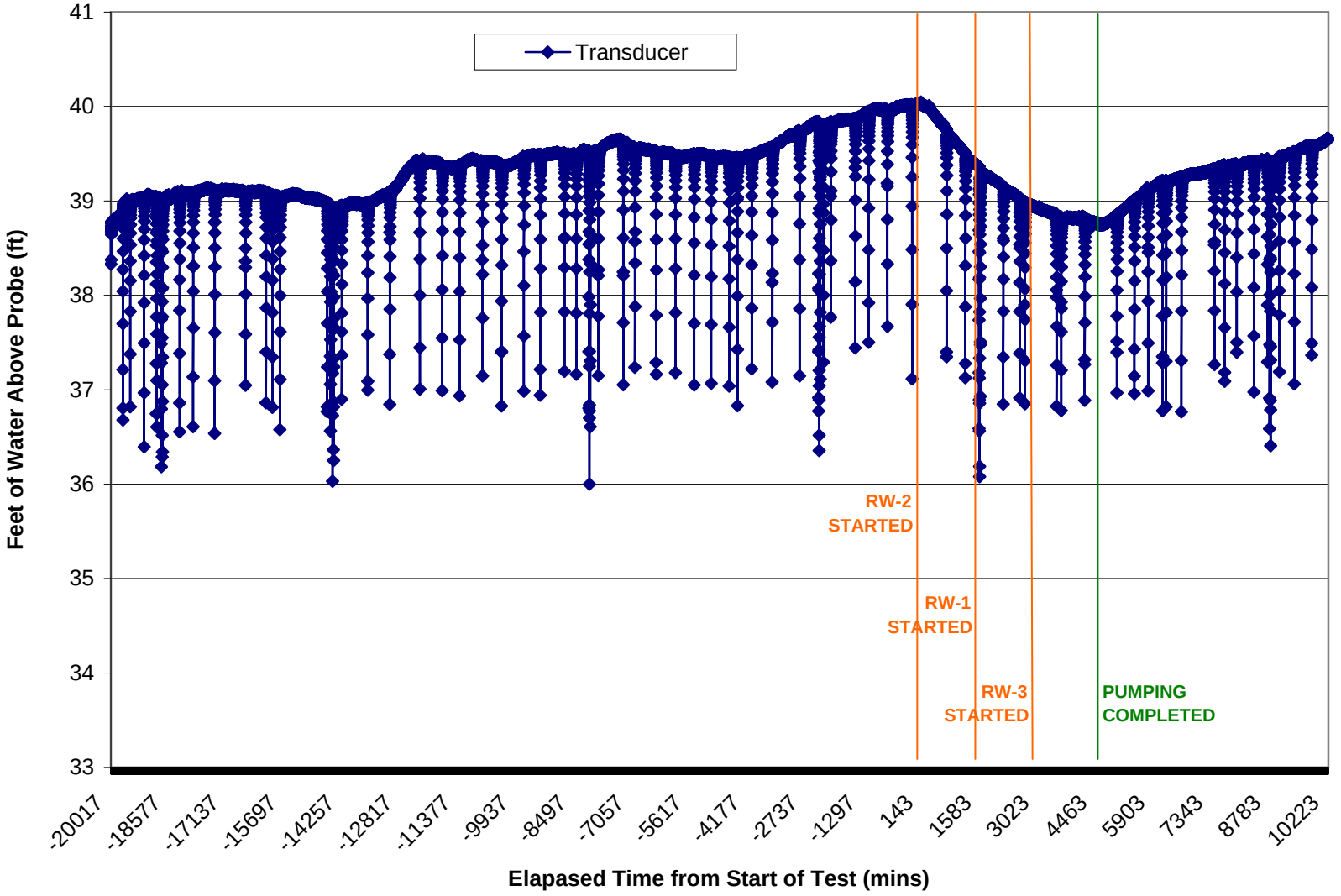

Hydrograph for MW-17A
Drawdown
-0.5
0
0.5
1
1.5
2
2.5
3
Drawdown
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1470
-1087
-704
-321
62
445
828
1211
1594
1977
2360
2743
3126
3509
3892
4275
4658
5041
5424
5807
6190
6573
6956
7339
7722
8105
8488
8871
9254
9637
10020
Elapsed Time from Start of test (mins)

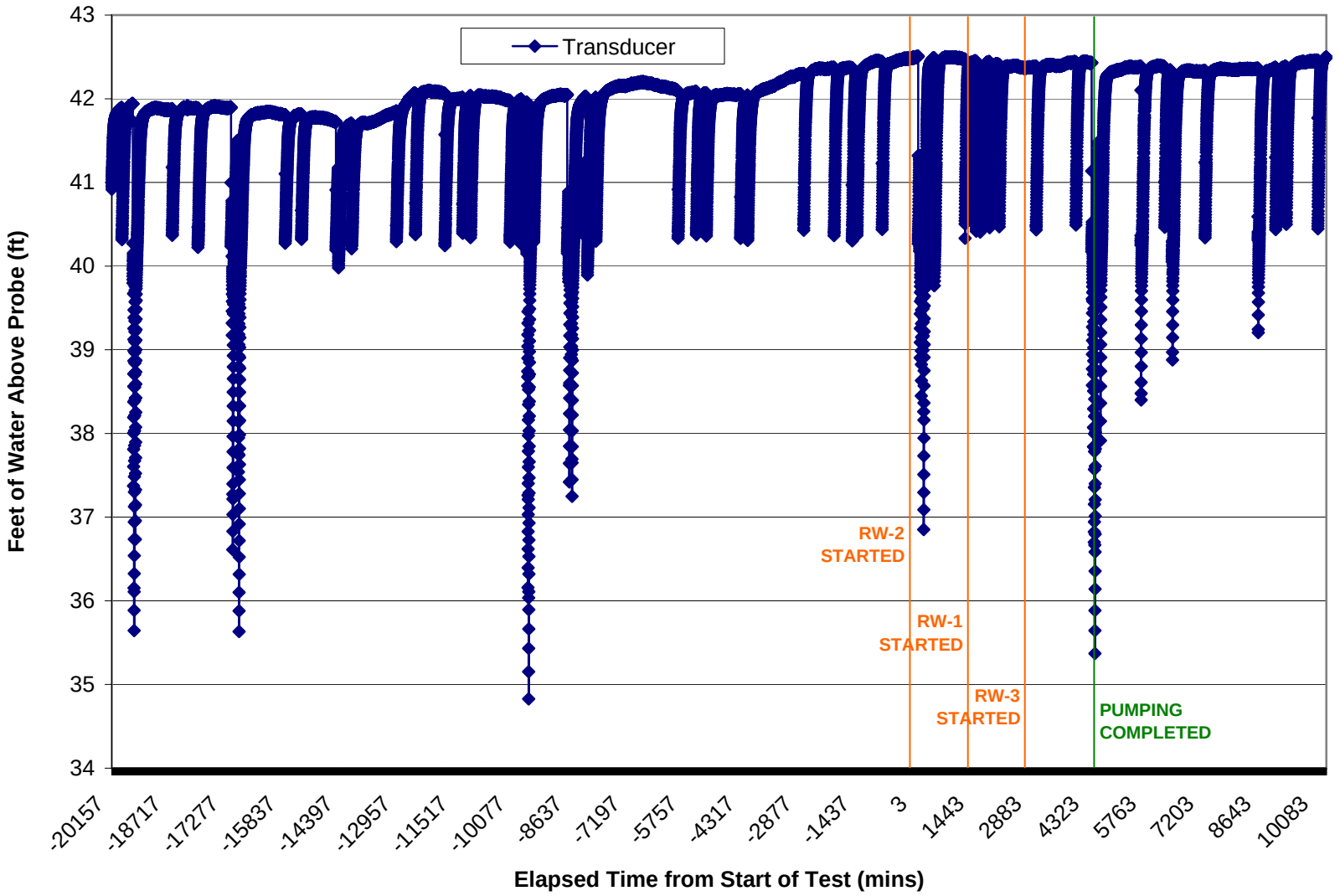

Hydrograph for MW-17B
Drawdown
-0.5
0
0.5
1
1.5
2
2.5
3
3.5
4
Drawdown (ft)
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1470
-1095
-720
-345
30
405
780
1155
1530
1905
2280
2655
3030
3405
3780
4155
4530
4905
5280
5655
6030
6405
6780
7155
7530
7905
8280
8655
9030
9405
9780
10155
Elapsed Time from Start of Test (mins)

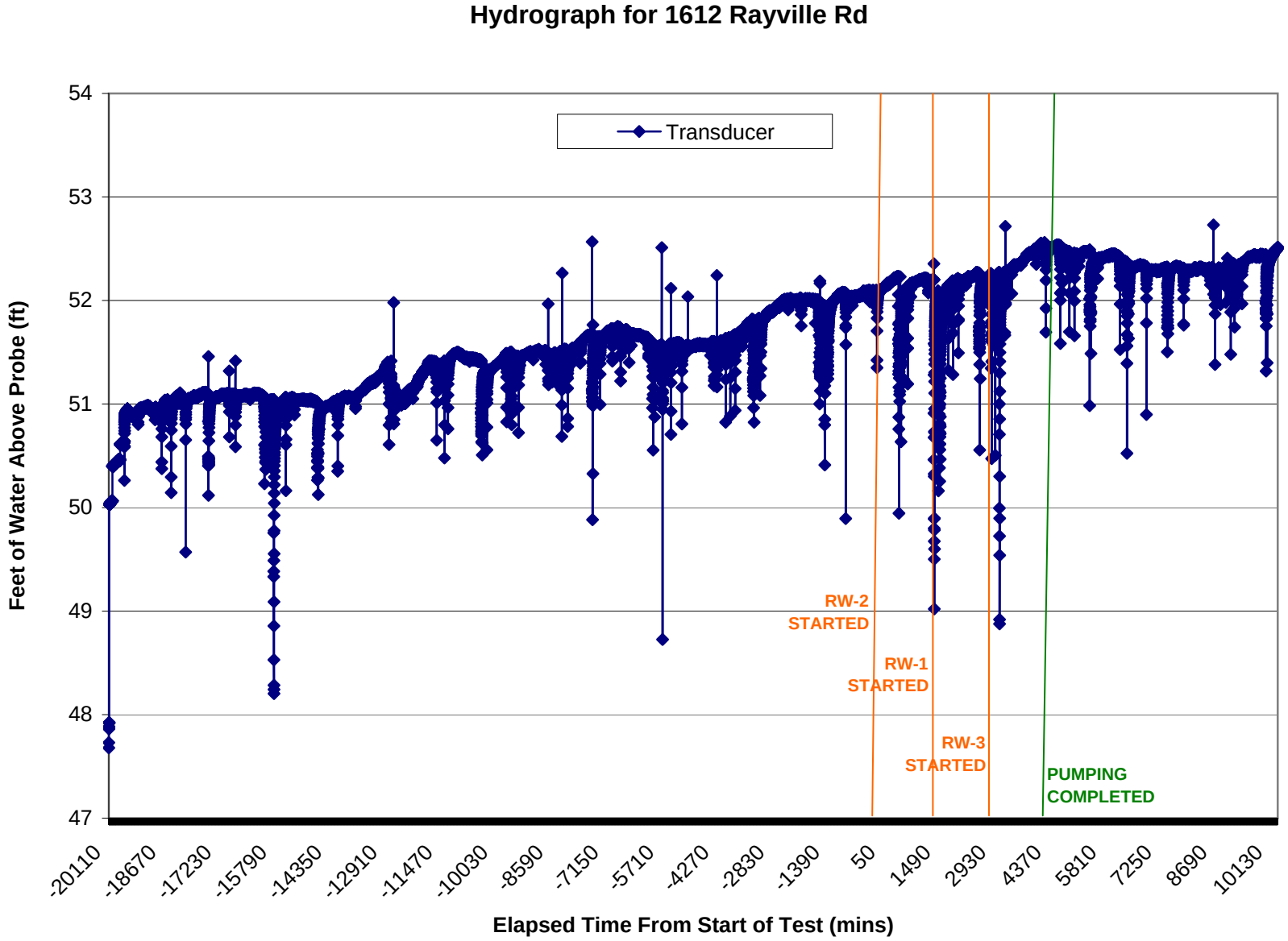

Hydrograph for MW-18A
Drawdown
Drawdown (ft)
-0.5
0
0.5
1
1.5
2
2.5
3
3.5
4
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1470
-1086
-701
-317
68
453
837
1222
1606
1991
2375
2760
3144
3529
3913
4298
4682
5067
5451
5836
6220
6605
6989
7374
7758
8143
8527
8912
9296
9681
10065
Elapsed Time from Start of Test (mins)


Hydrograph for MW-18B
Drawdown (ft)
-0.5
0
0.5
1
1.5
2
2.5
3
3.5
4
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-1470
-1073
-676
-279
118
515
912
1309
1706
2103
2500
2897
3294
3691
4088
4485
4882
5279
5676
6073
6470
6867
7264
7661
8058
8455
8852
9249
9646
10043
Elapsed Time from Start of Test (mins)

Hydrograph for 1606 Rayville Rd.




Hydrograph for 1608 Rayville Rd.
Transducer
Feet of Water Above Probe (ft)
43
42
41
40
39
38
37
36
35
34
RW-2 STARTED
RW-1 STARTED
RW-3 STARTED
PUMPING COMPLETED
-20157
-18717
-17277
-15837
-14397
-12957
-11517
-10077
-8637
-7197
-5757
-4317
-2877
-1437
3
1443
2883
4323
5763
7203
8643
10083
Elapsed Time from Start of Test (mins)


Hydrograph for 1612 Rayville Rd
Transducer
Feet of Water Above Probe (ft)
54
53
52
51
50
49
48
47
RW-2
STARTED
RW-1
STARTED
RW-3
STARTED
PUMPING
COMPLETED
-20110
-18670
-17230
-15790
-14350
-12910
-11470
-10030
-8590
-7150
-5710
-4270
-2830
-1390
50
1490
2930
4370
5810
7250
8690
10130
Elapsed Time From Start of Test (mins)

APPENDIX G

Laboratory Analytical Results (CD only)

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW-2 INF	1D21001-01	Water	04/20/11 11:15	04/20/11 18:30
RW-1 INF	1D21001-02	Water	04/20/11 14:05	04/20/11 18:30
EFFLUENT	1D21001-03	Water	04/20/11 14:10	04/20/11 18:30

DRO - Did not receive container. CB

Fairway Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Reviewed and Submitted by:

Michael P. Tyler
Laboratory Director

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **RW-2 INF** **Date/Time Sampled:** 04/20/11 11:15

Laboratory Sample ID: **1D21001-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	1040	100	ug/l	04/21/11 23:05	EPA 8015	mt	
Surrogate: a,a,a-Trifluorotoluene	*102 %*	*70-130*		*04/21/11 23:05*	*EPA 8015*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Methyl tert-butyl ether	5910	50.0	ug/l	04/21/11 19:59	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
tert- amyl alcohol	85.9	10.0	ug/l	04/21/11 18:01	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Tert-amyl methyl ether	116	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Tert-butyl alcohol	1640	250	ug/l	04/21/11 19:59	EPA 8260B	mf	
Diisopropylether (DIPE)	24.4	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/21/11 18:01	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **RW-2 INF** **Date/Time Sampled:** 04/20/11 11:15

Laboratory Sample ID: **1D21001-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Bromodichloromethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	V8
sec-Butylbenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	V8
Chloroform	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	V8
4-Chlorotoluene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/21/11 18:01	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	V8
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **RW-2 INF** **Date/Time Sampled:** 04/20/11 11:15

Laboratory Sample ID: **1D21001-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	V8
1,2-Dichloroethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,3-Dichloropropane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Methylene chloride	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **RW-2 INF** **Date/Time Sampled:** 04/20/11 11:15

Laboratory Sample ID: **1D21001-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Tetrachloroethene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	V8
o-Xylene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	04/21/11 18:01	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*100 %*	*70-130*		*04/21/11 18:01*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*70-130*		*04/21/11 18:01*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*107 %*	*70-130*		*04/21/11 18:01*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **RW-1 INF** **Date/Time Sampled:** 04/20/11 14:05

Laboratory Sample ID: **1D21001-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/21/11 23:36	EPA 8015	mt	
Surrogate: a,a,a-Trifluorotoluene	*100 %*	*70-130*		*04/21/11 23:36*	*EPA 8015*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Methyl tert-butyl ether	12.9	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
tert- amyl alcohol	<10.0	10.0	ug/l	04/21/11 17:22	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Tert-amyl methyl ether	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Tert-butyl alcohol	<10.0	10.0	ug/l	04/21/11 17:22	EPA 8260B	mf	
Diisopropylether (DIPE)	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/21/11 17:22	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **RW-1 INF** **Date/Time Sampled:** 04/20/11 14:05

Laboratory Sample ID: **1D21001-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Bromodichloromethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	V8
sec-Butylbenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	V8
Chloroform	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	V8
4-Chlorotoluene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/21/11 17:22	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	V8
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **RW-1 INF** **Date/Time Sampled:** 04/20/11 14:05

Laboratory Sample ID: **1D21001-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	V8
1,2-Dichloroethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,3-Dichloropropane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Methylene chloride	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **RW-1 INF** **Date/Time Sampled:** 04/20/11 14:05

Laboratory Sample ID: **1D21001-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Tetrachloroethene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	V8
o-Xylene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	04/21/11 17:22	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*99.2 %*	*70-130*		*04/21/11 17:22*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*70-130*		*04/21/11 17:22*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*105 %*	*70-130*		*04/21/11 17:22*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/20/11 14:10

Laboratory Sample ID: **1D21001-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/22/11 00:08	EPA 8015	mt	
Surrogate: a,a,a-Trifluorotoluene	*100 %*	*70-130*		*04/22/11 00:08*	*EPA 8015*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Benzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Toluene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Ethylbenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Isopropylbenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Methyl tert-butyl ether	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Naphthalene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
tert- amyl alcohol	<5.00	5.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
tert- amyl ethyl ether	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Tert-amyl methyl ether	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Tert-butyl alcohol	<5.00	5.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Diisopropylether (DIPE)	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Ethyl tert-butyl ether	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Acrylonitrile	<10.0	10.0	ug/l	04/21/11 21:16	EPA 8260B	mf	
Bromobenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Bromochloromethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/20/11 14:10

Laboratory Sample ID: **1D21001-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Bromodichloromethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Bromoform	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Bromomethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	V8
sec-Butylbenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
tert-Butylbenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
n-Butylbenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Carbon disulfide	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Chlorobenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Chloroethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	V8
Chloroform	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Chloromethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	V8
4-Chlorotoluene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
2-Chlorotoluene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<5.00	5.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Dibromochloromethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,2-Dibromoethane (EDB)	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Dibromomethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	V8
1,2-Dichlorobenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,4-Dichlorobenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/20/11 14:10

Laboratory Sample ID: **1D21001-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,3-Dichlorobenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Dichlorodifluoromethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	V8
1,2-Dichloroethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,1-Dichloroethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
trans-1,2-Dichloroethene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
cis-1,2-Dichloroethene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,1-Dichloroethene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
2,2-Dichloropropane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,3-Dichloropropane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,2-Dichloropropane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
trans-1,3-Dichloropropene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,1-Dichloropropene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
cis-1,3-Dichloropropene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Hexachlorobutadiene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
p-Isopropyltoluene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Methylene chloride	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
n-Propylbenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Styrene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	[none]	**Reported:**
Crofton MD, 21114	Collector:	GR	04/22/11 11:08
Project Manager: Greg Reichart	Number of Containers:	12	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/20/11 14:10

Laboratory Sample ID: **1D21001-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Tetrachloroethene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,1,1-Trichloroethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,1,2-Trichloroethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Trichloroethene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Trichlorofluoromethane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
1,2,3-Trichloropropane	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Vinyl chloride	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	V8
o-Xylene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
m,p-Xylene	<1.00	1.00	ug/l	04/21/11 21:16	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*99.0 %*	*70-130*		*04/21/11 21:16*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*70-130*		*04/21/11 21:16*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*103 %*	*70-130*		*04/21/11 21:16*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax

GES Maryland		Project:	CARROLL FUELS-WALLY'S
2142 Priest Bridge Ct Suite 1		Project Number:	[none] **Reported:**
Crofton MD, 21114		Collector:	GR 04/22/11 11:08
Project Manager:	Greg Reichart	Number of Containers:	12

Notes

V8 LCS value was outside the QC range. Data accepted based on acceptable check standard.

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/29/11 09:40
Project Manager: Steve Slatnick	Number of Containers:	8	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW-2	1D25088-01	Water	04/25/11 11:05	04/25/11 18:10

Fairway Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Reviewed and Submitted by:

Michael P. Tyler
Laboratory Director

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/29/11 09:40
Project Manager: Steve Slatnick	Number of Containers:	8	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/25/11 11:05

Laboratory Sample ID: **1D25088-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	1070	100	ug/l	04/27/11 17:01	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*98.7 %*	*70-130*		*04/27/11 17:01*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/27/11 19:03	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*63.3 %*	*40-140*		*04/27/11 19:03*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Methyl tert-butyl ether	6110	100	ug/l	04/26/11 20:10	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
tert- amyl alcohol	<10.0	10.0	ug/l	04/26/11 18:52	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Tert-amyl methyl ether	112	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Tert-butyl alcohol	544	10.0	ug/l	04/26/11 18:52	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/29/11 09:40
Project Manager: Steve Slatnick	Number of Containers:	8	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/25/11 11:05

Laboratory Sample ID: **1D25088-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	23.9	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/26/11 18:52	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	V4
4-Chlorotoluene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/26/11 18:52	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/29/11 09:40
Project Manager: Steve Slatnick	Number of Containers:	8	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/25/11 11:05

Laboratory Sample ID: **1D25088-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	V8
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,3-Dichloropropane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/29/11 09:40
Project Manager: Steve Slatnick	Number of Containers:	8	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/25/11 11:05

Laboratory Sample ID: **1D25088-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	04/26/11 18:52	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*97.6 %*	*70-130*		*04/26/11 18:52*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*110 %*	*70-130*		*04/26/11 18:52*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*108 %*	*70-130*		*04/26/11 18:52*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/29/11 09:40
Project Manager: Steve Slatnick	Number of Containers:	8	

Notes

V8 LCS value was outside the QC range. Data accepted based on acceptable check standard.

V4 Check standard was outside the QC range. Data accepted based on acceptable LCS.

1025088011

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

FAIRWAY LABORATORIES INC.

COC # 3 Page 1 of 1

Client Name:	Groundwater & Env. Services
Address:	2142 Priest Bridge Court
	Suite 1, Crofton, MD 21114
Contact:	Steve Slatnick
Phone #:	800-220-3606
Fax #:	410-721-3733
Project Name:	Carroll-Wally's Citgo Station
	19200 Middletown Rd., Parkton, MD
Quote/PO #:	0402643-
TAT:	5 day
Normal	
Rush	
Date Required:	

Receiving Info	Y	N
Custody Seals		
Seals Intact?		
Received on ice?		
COC/ Lavbels agree?		
Correct containers?		
Correct preservation?		
VOA head space		

Sample Temp: _____

Report to PADEP?

PWSID #:

FLI use only	Sample Description / Location	Sample Date	Sample Time	Grab or Composite	Soil	Water	Other? Explain	# of Containers	EPA 8260 - Full VOCs incl. fuel oxygenates (MTBE, TAA, TAEE, TAME, TBA, DIPE, ETBE) and Naphthalene	USEPA 8015B - TPH-GRO	USEPA 8015B - TPH-DRO			Comments
	RW-2	4-25-11	1105	G		X		8	X	X	X			6 VOA, 2 Amber

Analyses Requested

Signature	Date	Time	Remarks
Sampled by: David R Dayman	4/25/11	13:45	
Received by:	4/26/11	14:55	
Relinquished by: Thomas C. Hughes		K6:10	
Received by:			
Relinquished by:			
Received by: CR	4-27-11	18:00	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW-3	1D25089-01	Water	04/25/11 10:40	04/25/11 18:10
TANKER	1D25089-02	Water	04/25/11 11:40	04/25/11 18:10
INFLUENT	1D25089-03	Water	04/25/11 14:00	04/25/11 18:10
MID	1D25089-04	Water	04/25/11 14:02	04/25/11 18:10
EFFLUENT	1D25089-05	Water	04/25/11 14:05	04/25/11 18:10

Fairway Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Reviewed and Submitted by:

Michael P. Tyler
Laboratory Director

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/25/11 10:40

Laboratory Sample ID: **1D25089-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/26/11 20:03	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*102 %*	*70-130*		*04/26/11 20:03*	*EPA 8015*	bg	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Methyl tert-butyl ether	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
tert- amyl alcohol	<10.0	10.0	ug/l	04/26/11 17:34	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Tert-amyl methyl ether	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Tert-butyl alcohol	<10.0	10.0	ug/l	04/26/11 17:34	EPA 8260B	mf	
Diisopropylether (DIPE)	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/26/11 17:34	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/25/11 10:40

Laboratory Sample ID: **1D25089-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Bromodichloromethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	V4
4-Chlorotoluene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/26/11 17:34	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	V8
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/25/11 10:40

Laboratory Sample ID: **1D25089-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,3-Dichloropropane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Methylene chloride	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/25/11 10:40

Laboratory Sample ID: **1D25089-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Tetrachloroethene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	04/26/11 17:34	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*98.2 %*	*70-130*		*04/26/11 17:34*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*70-130*		*04/26/11 17:34*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*106 %*	*70-130*		*04/26/11 17:34*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **TANKER** **Date/Time Sampled:** 04/25/11 11:40

Laboratory Sample ID: **1D25089-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Purgeable Organic Compounds by EPA Method 524.2							
Ethyl tert-butyl ether	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Tert-amyl methyl ether	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
tert- amyl alcohol	<2.50	2.50	ug/l	04/26/11 15:16	EPA 524.2	wm	
tert- amyl ethyl ether	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Tert-butyl alcohol	<2.50	2.50	ug/l	04/26/11 15:16	EPA 524.2	wm	
Diisopropylether (DIPE)	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Benzene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Carbon tetrachloride	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Chlorobenzene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
1,2-Dichlorobenzene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
1,3-Dichlorobenzene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
1,2-Dichloroethane	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
1,1-Dichloroethene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
cis-1,2-Dichloroethene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
trans-1,2-Dichloroethene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
1,2-Dichloropropane	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Ethylbenzene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Methylene chloride	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Methyl tert-butyl ether	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Styrene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **TANKER** **Date/Time Sampled:** 04/25/11 11:40

Laboratory Sample ID: **1D25089-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Purgeable Organic Compounds by EPA Method 524.2							
Tetrachloroethene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Toluene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
1,2,4-Trichlorobenzene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
1,1,2-Trichloroethane	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
1,1,1-Trichloroethane	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Trichloroethene	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Vinyl chloride	<0.500	0.500	ug/l	04/26/11 15:16	EPA 524.2	wm	
Xylenes (total)	<1.00	1.00	ug/l	04/26/11 15:16	EPA 524.2	wm	
Surrogate: 4-Bromofluorobenzene	*82.7 %*	*70-130*		*04/26/11 15:16*	*EPA 524.2*	wm	
Surrogate: 1,2-Dichlorobenzene-d4	*83.1 %*	*70-130*		*04/26/11 15:16*	*EPA 524.2*	wm	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **INFLUENT** **Date/Time Sampled:** 04/25/11 14:00

Laboratory Sample ID: **1D25089-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	3470	100	ug/l	04/26/11 20:35	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*103 %*	*70-130*		*04/26/11 20:35*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	622	150	ug/l	04/27/11 12:40	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*63.8 %*	*40-140*		*04/27/11 12:40*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	30.8	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,2,4-Trimethylbenzene	108	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Benzene	279	100	ug/l	04/26/11 21:28	EPA 8260B	mf	
Toluene	557	100	ug/l	04/26/11 21:28	EPA 8260B	mf	
Ethylbenzene	117	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Isopropylbenzene	4.68	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Methyl tert-butyl ether	1820	100	ug/l	04/26/11 21:28	EPA 8260B	mf	
Naphthalene	24.0	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
tert- amyl alcohol	<10.0	10.0	ug/l	04/26/11 18:13	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Tert-amyl methyl ether	33.9	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Tert-butyl alcohol	<10.0	10.0	ug/l	04/26/11 18:13	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **INFLUENT** **Date/Time Sampled:** 04/25/11 14:00

Laboratory Sample ID: **1D25089-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	12.0	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/26/11 18:13	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	V4
4-Chlorotoluene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
2-Chlorotoluene	14.7	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/26/11 18:13	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **INFLUENT** **Date/Time Sampled:** 04/25/11 14:00

Laboratory Sample ID: **1D25089-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	V8
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,3-Dichloropropane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **INFLUENT** **Date/Time Sampled:** 04/25/11 14:00

Laboratory Sample ID: **1D25089-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
n-Propylbenzene	13.7	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Trichloroethene	2.10	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
o-Xylene	179	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
m,p-Xylene	316	2.00	ug/l	04/26/11 18:13	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*102 %*	*70-130*		*04/26/11 18:13*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*70-130*		*04/26/11 18:13*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*105 %*	*70-130*		*04/26/11 18:13*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **MID** **Date/Time Sampled:** 04/25/11 14:02

Laboratory Sample ID: **1D25089-04 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/26/11 21:07	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*100 %*	*70-130*		*04/26/11 21:07*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/27/11 14:18	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*65.6 %*	*40-140*		*04/27/11 14:18*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Benzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Toluene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Ethylbenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Isopropylbenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Methyl tert-butyl ether	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Naphthalene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
tert- amyl alcohol	<5.00	5.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
tert- amyl ethyl ether	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Tert-amyl methyl ether	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Tert-butyl alcohol	<5.00	5.00	ug/l	04/26/11 22:45	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **MID** **Date/Time Sampled:** 04/25/11 14:02

Laboratory Sample ID: **1D25089-04 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Ethyl tert-butyl ether	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Acrylonitrile	<10.0	10.0	ug/l	04/26/11 22:45	EPA 8260B	mf	
Bromobenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Bromochloromethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Bromodichloromethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Bromoform	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Bromomethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
sec-Butylbenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
tert-Butylbenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
n-Butylbenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Carbon disulfide	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Chlorobenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Chloroethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Chloroform	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Chloromethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	V4
4-Chlorotoluene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
2-Chlorotoluene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<5.00	5.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Dibromochloromethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **MID** **Date/Time Sampled:** 04/25/11 14:02

Laboratory Sample ID: **1D25089-04 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Dibromomethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	V8
1,2-Dichlorobenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,4-Dichlorobenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,3-Dichlorobenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Dichlorodifluoromethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,2-Dichloroethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,1-Dichloroethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
trans-1,2-Dichloroethene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
cis-1,2-Dichloroethene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,1-Dichloroethene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
2,2-Dichloropropane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,3-Dichloropropane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,2-Dichloropropane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
trans-1,3-Dichloropropene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,1-Dichloropropene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
cis-1,3-Dichloropropene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Hexachlorobutadiene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
p-Isopropyltoluene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **MID** **Date/Time Sampled:** 04/25/11 14:02

Laboratory Sample ID: **1D25089-04 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
n-Propylbenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Styrene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Tetrachloroethene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,1,1-Trichloroethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,1,2-Trichloroethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Trichloroethene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Trichlorofluoromethane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
1,2,3-Trichloropropane	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Vinyl chloride	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
o-Xylene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
m,p-Xylene	<1.00	1.00	ug/l	04/26/11 22:45	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*96.7 %*	*70-130*		*04/26/11 22:45*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*70-130*		*04/26/11 22:45*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*103 %*	*70-130*		*04/26/11 22:45*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/25/11 14:05

Laboratory Sample ID: **1D25089-05 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/26/11 21:38	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*100 %*	*70-130*		*04/26/11 21:38*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/27/11 15:54	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*62.6 %*	*40-140*		*04/27/11 15:54*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Benzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Toluene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Ethylbenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Isopropylbenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Methyl tert-butyl ether	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Naphthalene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
tert- amyl alcohol	<5.00	5.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
tert- amyl ethyl ether	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Tert-amyl methyl ether	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Tert-butyl alcohol	<5.00	5.00	ug/l	04/27/11 00:00	EPA 8260B	mf	MS

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/25/11 14:05

Laboratory Sample ID: **1D25089-05 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Ethyl tert-butyl ether	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Acrylonitrile	<10.0	10.0	ug/l	04/27/11 00:00	EPA 8260B	mf	
Bromobenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Bromochloromethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Bromodichloromethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Bromoform	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Bromomethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
sec-Butylbenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
tert-Butylbenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
n-Butylbenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Carbon disulfide	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Chlorobenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Chloroethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Chloroform	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Chloromethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	V4
4-Chlorotoluene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
2-Chlorotoluene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<5.00	5.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Dibromochloromethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/25/11 14:05

Laboratory Sample ID: **1D25089-05 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Dibromomethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	MS, V8
1,2-Dichlorobenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,4-Dichlorobenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,3-Dichlorobenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Dichlorodifluoromethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	MS
1,2-Dichloroethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,1-Dichloroethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
trans-1,2-Dichloroethene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
cis-1,2-Dichloroethene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,1-Dichloroethene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
2,2-Dichloropropane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,3-Dichloropropane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,2-Dichloropropane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
trans-1,3-Dichloropropene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,1-Dichloropropene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
cis-1,3-Dichloropropene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Hexachlorobutadiene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
p-Isopropyltoluene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	DD	04/28/11 09:08
Project Manager: Steve Slatnick	Number of Containers:	27	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/25/11 14:05

Laboratory Sample ID: **1D25089-05 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
n-Propylbenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Styrene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Tetrachloroethene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,1,1-Trichloroethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,1,2-Trichloroethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Trichloroethene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Trichlorofluoromethane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
1,2,3-Trichloropropane	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Vinyl chloride	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	MS
o-Xylene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
m,p-Xylene	<1.00	1.00	ug/l	04/27/11 00:00	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*97.1 %*	*70-130*		*04/27/11 00:00*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*70-130*		*04/27/11 00:00*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*104 %*	*70-130*		*04/27/11 00:00*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland		Project:	CARROLL FUELS-WALLY'S
2142 Priest Bridge Ct Suite 1		Project Number:	0402643 **Reported:**
Crofton MD, 21114		Collector:	DD 04/28/11 09:08
Project Manager:	Steve Slatnick	Number of Containers:	27

Notes

V8	LCS value was outside the QC range. Data accepted based on acceptable check standard.
V4	Check standard was outside the QC range. Data accepted based on acceptable LCS.
MS	The spike recovery was outside acceptance limits for the MS and/or MSD due to sample matrix interferences. The batch was accepted based on acceptable CCV recovery.

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

FAIRWAY LABORATORIES INC.

COC # 2 Page 1 of 1

Client Name:	Groundwater & Env. Services
Address:	2142 Priest Bridge Court
	Suite 1, Crofton, MD 21114
Contact:	Steve Slatnick
Phone #:	800-220-3606
Fax #:	410-721-3733
Project Name:	Carroll-Wally's Citgo Station
	19200 Middletown Rd., Parkton, MD
Quote/PO #:	0402643-

TAT: 24 hr.

Normal / Rush / Date Required: CR 1D2508901

Receiving Info	Y	N
Custody Seals		
Seals Intact?		
Received on ice?		
COC/ Lavbels agree?		
Correct containers?		
Correct preservation?		
VOA head space		
Sample Temp:		
Report to PADEP?		
PWSID #:		

FLI use only	Sample Description / Location	Sample Date	Sample Time	Grab or Composite	Soil	Water	Other? Explain	# of Containers	EPA 8260 - Full VOCs incl. fuel oxygenates (MTBE, TAA, TAEE, TAME, TBA, DIPE, ETBE) and Naphthalene	USEPA 8015B - TPH-GRO	USEPA 8015B - TPH-DRO	EPA 524 - VOCs		Comments
1	RW-3	4-25-11	1040	G		X		6	X	X				6 VOA
2	Tanker	↓	1140	↓		↓		3				X		3 VOA
3	Influent		1400					6	X	X	X			4 VOA, 2 Amber
4	Mid		1402					6	X	X	X			4 VOA, 2 Amber
5	Effluent	↓	1405	↓		↓		6	X	X	X			4 VOA, 2 Amber

Signature	Date	Time
Sampled by: Dan Dunivan	4-25-11	13:45
Received by:	4-25-11	14:55
Relinquished by: Thomas C. Hughes		16:10
Received by:		
Relinquished by:		
Received by: CR	4-25-11	1840

Remarks

Chain of Custody Receiving Document

Receiver: CL Page ___ of ___

Date/Time of this check: 4-25-11 18:40 Sample Temperature: 1.7 Client: GES Lab # 1102508902

Received at Lab on ICE ? Y ☐ * **Sample Temperature when arrived at Lab:** 1.7 **Acceptable?** Y ☐ * **or In cool down process?** ☐ *

Custody Seals? Y Intact? Y

COC/Labels on bottles agree? Y ☐ * Correct containers for all the analysis requested? Y ☐ * Matrix: water

COC #	Number and Type of BOTTLES										Comments
	Poly Non-Pres.	Poly H2SO4	Poly HNO3	Amber ~~H2SO4~~ HCl	Amber Non-Pres.	Poly NaOH	VOCS (Head space?) N	Bacti	Other ☐ *	Properly Preserved ☑ *	
1							6-HCl				
2							3-HCl				
3				2			4-HCl				
4				2			4-HCl				
5				2			4-HCl				

☐ * **Any "NO" Client to be contacted:**

Client contacted by: _____ Date/Time: _____ Name of Client spoken to: _____

Discussion and Outcome:

This is a date sensitive document and may not be current after April 1, 2011.

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW-3	1D27100-01	Water	04/27/11 11:36	04/27/11 18:00
RW-2	1D27100-02	Water	04/27/11 11:39	04/27/11 18:00
RW-1	1D27100-03	Water	04/27/11 11:48	04/27/11 18:00

Fairway Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Reviewed and Submitted by:

Michael P. Tyler
Laboratory Director

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/27/11 11:36

Laboratory Sample ID: **1D27100-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/28/11 11:53	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*99.8 %*	*70-130*		*04/28/11 11:53*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/29/11 13:18	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*60.4 %*	*40-140*		*04/29/11 13:18*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Methyl tert-butyl ether	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
tert- amyl alcohol	<10.0	10.0	ug/l	04/28/11 13:05	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Tert-amyl methyl ether	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Tert-butyl alcohol	<10.0	10.0	ug/l	04/28/11 13:05	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/27/11 11:36

Laboratory Sample ID: **1D27100-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/28/11 13:05	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
4-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/28/11 13:05	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/27/11 11:36

Laboratory Sample ID: **1D27100-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	V4
1,3-Dichloropropane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/27/11 11:36

Laboratory Sample ID: **1D27100-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	04/28/11 13:05	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*95.9 %*	*70-130*		*04/28/11 13:05*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*70-130*		*04/28/11 13:05*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*107 %*	*70-130*		*04/28/11 13:05*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/27/11 11:39

Laboratory Sample ID: **1D27100-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	1070	100	ug/l	04/28/11 12:56	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*101 %*	*70-130*		*04/28/11 12:56*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	154	150	ug/l	04/29/11 14:48	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*65.1 %*	*40-140*		*04/29/11 14:48*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Benzene	2.92	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Methyl tert-butyl ether	9210	100	ug/l	04/28/11 20:15	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
tert- amyl alcohol	144	10.0	ug/l	04/28/11 15:04	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Tert-amyl methyl ether	222	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Tert-butyl alcohol	3090	500	ug/l	04/28/11 20:15	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/27/11 11:39

Laboratory Sample ID: **1D27100-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	51.8	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/28/11 15:04	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
4-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/28/11 15:04	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/27/11 11:39

Laboratory Sample ID: **1D27100-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	V4
1,3-Dichloropropane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/27/11 11:39

Laboratory Sample ID: **1D27100-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	04/28/11 15:04	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*96.8 %*	*70-130*		*04/28/11 15:04*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*70-130*		*04/28/11 15:04*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*106 %*	*70-130*		*04/28/11 15:04*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/27/11 11:48

Laboratory Sample ID: **1D27100-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	187	100	ug/l	04/28/11 14:00	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*99.9 %*	*70-130*		*04/28/11 14:00*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/29/11 15:34	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*56.1 %*	*40-140*		*04/29/11 15:34*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Methyl tert-butyl ether	325	10.0	ug/l	04/28/11 21:34	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
tert- amyl alcohol	<10.0	10.0	ug/l	04/28/11 13:45	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Tert-amyl methyl ether	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Tert-butyl alcohol	<10.0	10.0	ug/l	04/28/11 13:45	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/27/11 11:48

Laboratory Sample ID: **1D27100-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/28/11 13:45	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
4-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/28/11 13:45	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/27/11 11:48

Laboratory Sample ID: **1D27100-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	V4
1,3-Dichloropropane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/27/11 11:48

Laboratory Sample ID: **1D27100-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	04/28/11 13:45	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*95.2 %*	*70-130*		*04/28/11 13:45*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*70-130*		*04/28/11 13:45*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*107 %*	*70-130*		*04/28/11 13:45*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/02/11 11:18
Project Manager: Steve Slatnick	Number of Containers:	18	

Notes

V4 Check standard was outside the QC range. Data accepted based on acceptable LCS.

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

FAIRWAY LABORATORIES INC.

COC # 2 Page 1 of 1

Client Name:	Groundwater & Env. Services
Address:	2142 Priest Bridge Court
	Suite 1, Crofton, MD 21114
Contact:	Steve Slatnick
Phone #:	800-220-3606
Fax #:	410-721-3733
Project Name:	Carroll-Wally's Citgo Station
	19200 Middletown Rd., Parkton, MD
Quote/PO #:	0402643-
TAT:	5 day
Normal	
Rush	
Date Required:	

Receiving Info	Y	N
Custody Seals		
Seals Intact?		
Received on ice?	Y	
COC/ Lavbels agree?	Y	
Correct containers?		
Correct preservation?		
VOA head space		
Sample Temp: 2.4		
Report to PADEP?		
PWSID #:		

Analyses Requested

FLI use only	Sample Description / Location	Sample Date	Sample Time	Grab or Composite	Soil	Water	Other? Explain	# of Containers	EPA 8260 - Full VOCs incl. fuel oxygenates (MTBE, TAA, TAEE, TAME, TBA, DIPE, ETBE) and Naphthalene	USEPA 8015B - TPH-GRO	USEPA 8015B - TPH-DRO			Comments
1027/00	RW-3	4-27-11	1136	G		X		6	X	X	X			4 VOA, 2 Amber
01	RW-2	↓	1139	↓		↓		6	X	X	X			4 VOA, 2 Amber
	RW-1	↓	1148	↓		↓		6	X	X	X			4 VOA, 2 Amber

Signature		Date	Time	Remarks
Sampled by:	D Lauber	4-27-11	1515	
Received by:	Gary Sinkelbaugh	4/28/11	1515	
Relinquished by:			1810	
Received by:				
Relinquished by:				
Received by:		4-27-11	1810	

Chain of Custody Receiving Document

Receiver: CR Page ___ of ___

Date/Time of this check: 4-27-11 19:35 Sample Temperature: 2.4 Client: GES Lab # 1027100-02

Received at Lab on ICE ? Y ☐ * **Sample Temperature when arrived at Lab:** 2.4 **Acceptable?** Y ☐ * **or In cool down process?** ☐ *

Custody Seals? Y Intact? Y

COC/Labels on bottles agree? Y ☐ * Correct containers for all the analysis requested? Y ☐ * Matrix: water

COC #	Number and Type of BOTTLES										Comments
	Poly Non-Pres.	Poly H2SO4	Poly HNO3	Amber ~~H2SO4~~ HCl	Amber Non-Pres.	Poly NaOH	VOCS (Head space?)	Bacti	Other ☐ *	Properly Preserved ☒ *	
RW-3				3			~~Y~~ HCl				
RW-2				2			1				
RW-1				2							

☐ * **Any "NO" Client to be contacted:**

Client contacted by: _____ Date/Time: _____ Name of Client spoken to: _____

Discussion and Outcome:

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MID	1D27101-01	Water	04/27/11 12:55	04/27/11 18:00
EFFLUENT	1D27101-02	Water	04/27/11 13:00	04/27/11 18:00

Fairway Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Reviewed and Submitted by:

Michael P. Tyler
Laboratory Director

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **MID** **Date/Time Sampled:** 04/27/11 12:55

Laboratory Sample ID: **1D27101-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/28/11 14:31	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*100 %*	*70-130*		*04/28/11 14:31*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/29/11 11:01	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*62.9 %*	*40-140*		*04/29/11 11:01*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Benzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Toluene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Ethylbenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Isopropylbenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Methyl tert-butyl ether	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Naphthalene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
tert- amyl alcohol	<5.00	5.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
tert- amyl ethyl ether	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Tert-amyl methyl ether	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Tert-butyl alcohol	825	50.0	ug/l	04/28/11 20:49	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **MID** **Date/Time Sampled:** 04/27/11 12:55

Laboratory Sample ID: **1D27101-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Ethyl tert-butyl ether	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Acrylonitrile	<10.0	10.0	ug/l	04/28/11 13:15	EPA 8260B	mf	
Bromobenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Bromochloromethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Bromodichloromethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Bromoform	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Bromomethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
sec-Butylbenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
tert-Butylbenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
n-Butylbenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Carbon disulfide	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Chlorobenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Chloroethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Chloroform	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Chloromethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
4-Chlorotoluene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
2-Chlorotoluene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<5.00	5.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Dibromochloromethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **MID** **Date/Time Sampled:** 04/27/11 12:55

Laboratory Sample ID: **1D27101-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Dibromomethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,2-Dichlorobenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,4-Dichlorobenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,3-Dichlorobenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Dichlorodifluoromethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	V8
1,2-Dichloroethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,1-Dichloroethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
trans-1,2-Dichloroethene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
cis-1,2-Dichloroethene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,1-Dichloroethene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
2,2-Dichloropropane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,3-Dichloropropane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,2-Dichloropropane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
trans-1,3-Dichloropropene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,1-Dichloropropene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
cis-1,3-Dichloropropene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Hexachlorobutadiene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
p-Isopropyltoluene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **MID** **Date/Time Sampled:** 04/27/11 12:55

Laboratory Sample ID: **1D27101-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
n-Propylbenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Styrene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Tetrachloroethene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,1,1-Trichloroethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,1,2-Trichloroethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Trichloroethene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Trichlorofluoromethane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
1,2,3-Trichloropropane	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Vinyl chloride	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
o-Xylene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
m,p-Xylene	<1.00	1.00	ug/l	04/28/11 13:15	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*99.8 %*	*70-130*		*04/28/11 13:15*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*70-130*		*04/28/11 13:15*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*103 %*	*70-130*		*04/28/11 13:15*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/27/11 13:00

Laboratory Sample ID: **1D27101-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/28/11 15:03	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*99.7 %*	*70-130*		*04/28/11 15:03*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/29/11 11:47	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*64.3 %*	*40-140*		*04/29/11 11:47*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Benzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Toluene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Ethylbenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Isopropylbenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Methyl tert-butyl ether	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Naphthalene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
tert- amyl alcohol	<5.00	5.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
tert- amyl ethyl ether	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Tert-amyl methyl ether	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Tert-butyl alcohol	47.0	5.00	ug/l	04/28/11 15:10	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/27/11 13:00

Laboratory Sample ID: **1D27101-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Ethyl tert-butyl ether	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Acrylonitrile	<10.0	10.0	ug/l	04/28/11 15:10	EPA 8260B	mf	
Bromobenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Bromochloromethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Bromodichloromethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Bromoform	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Bromomethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
sec-Butylbenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
tert-Butylbenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
n-Butylbenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Carbon disulfide	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Chlorobenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Chloroethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Chloroform	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Chloromethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
4-Chlorotoluene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
2-Chlorotoluene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<5.00	5.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Dibromochloromethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/27/11 13:00

Laboratory Sample ID: **1D27101-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Dibromomethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,2-Dichlorobenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,4-Dichlorobenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,3-Dichlorobenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Dichlorodifluoromethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	V8
1,2-Dichloroethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,1-Dichloroethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
trans-1,2-Dichloroethene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
cis-1,2-Dichloroethene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,1-Dichloroethene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
2,2-Dichloropropane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,3-Dichloropropane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,2-Dichloropropane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
trans-1,3-Dichloropropene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,1-Dichloropropene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
cis-1,3-Dichloropropene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Hexachlorobutadiene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
p-Isopropyltoluene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/27/11 13:00

Laboratory Sample ID: **1D27101-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
n-Propylbenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Styrene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Tetrachloroethene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,1,1-Trichloroethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,1,2-Trichloroethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Trichloroethene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Trichlorofluoromethane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
1,2,3-Trichloropropane	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Vinyl chloride	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
o-Xylene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
m,p-Xylene	<1.00	1.00	ug/l	04/28/11 15:10	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*101 %*	*70-130*		*04/28/11 15:10*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*70-130*		*04/28/11 15:10*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*104 %*	*70-130*		*04/28/11 15:10*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	04/29/11 15:16
Project Manager: Steve Slatnick	Number of Containers:	12	

Notes

V8 LCS value was outside the QC range. Data accepted based on acceptable check standard.

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

FAIRWAY LABORATORIES INC.

COC # 1 Page 1 of 1

Client Name:	Groundwater & Env. Services
Address:	2142 Priest Bridge Court
	Suite 1, Crofton, MD 21114
Contact:	Steve Slatnick
Phone #:	800-220-3606
Fax #:	410-721-3733
Project Name:	Carroll-Wally's Citgo Station
	19200 Middletown Rd., Parkton, MD
Quote/PO #:	0402643-
TAT:	24-hr
Normal	
Rush	
Date Required:	1D27101-01

Receiving Info	Y	N
Custody Seals		
Seals Intact?		
Received on ice?	Y	
COC/ Lavbels agree?		
Correct containers?		
Correct preservation?		
VOA head space		
Sample Temp:	2.4	
Report to PADEP?		
PWSID #:		

Analyses Requested

FLI use only	Sample Description / Location	Sample Date	Sample Time	Grab or Composite	Soil	Water	Other? Explain	# of Containers	EPA 8260 - Full VOCs incl. fuel oxygenates (MTBE, TAA, TAEE, TAME, TBA, DIPE, ETBE) and Naphthalene	USEPA 8015B - TPH-GRO	USEPA 8015B - TPH-DRO			Comments
	Mid	4-27-11	1255	G		X		6	X	X	X			4 VOA, 2 Amber
	Effluent	↓	1300	↓		↓		6	X	X	X			4 VOA, 2 Amber

Signature	Date	Time	Remarks
Sampled by:	4-27-11	1515	
Received by:	4/27/11	15:10	
Relinquished by:		18:00	
Received by:			
Relinquished by:			
Received by:	4-27-11	18:00	

Chain of Custody Receiving Document

Receiver: CR Page ___ of ___

Date/Time of this check: 4/21/11 19:35 Sample Temperature: 2.4 Client: GES Lab # 1D2110102

Received at Lab on ICE ? Y ☐ * **Sample Temperature when arrived at Lab:** 2.4 **Acceptable?** Y ☐ * **or In cool down process?** ☐ *

Custody Seals? Y Intact? Y

COC/Labels on bottles agree? Y ☐ * Correct containers for all the analysis requested? Y ☐ * Matrix: water

COC #	Number and Type of BOTTLES										Comments
	Poly Non-Pres.	Poly H2SO4	Poly HNO3	Amber ~~H2SO4~~ HCl	Amber Non-Pres.	Poly NaOH	VOCS (Head space?)	Bacti	Other ☐ *	Properly Preserved ☒*	
MD				2			4 HCl				
EPA				2			4 HCl				

☐ * **Any "NO" Client to be contacted:**

Client contacted by: _____ Date/Time: _____ Name of Client spoken to: _____

Discussion and Outcome:

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW-1	1D27102-01	Water	04/26/11 11:27	04/27/11 18:00
RW-2	1D27102-02	Water	04/26/11 11:29	04/27/11 18:00

Fairway Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Reviewed and Submitted by:

Michael P. Tyler
Laboratory Director

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/26/11 11:27

Laboratory Sample ID: **1D27102-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	04/28/11 19:49	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*99.2 %*	*70-130*		*04/28/11 19:49*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/29/11 17:04	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*64.6 %*	*40-140*		*04/29/11 17:04*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Benzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Toluene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Ethylbenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Isopropylbenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Methyl tert-butyl ether	81.3	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Naphthalene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
tert- amyl alcohol	<10.0	10.0	ug/l	04/28/11 14:24	EPA 8260B	wm	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Tert-amyl methyl ether	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Tert-butyl alcohol	<10.0	10.0	ug/l	04/28/11 14:24	EPA 8260B	wm	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/26/11 11:27

Laboratory Sample ID: **1D27102-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Acrylonitrile	<20.0	20.0	ug/l	04/28/11 14:24	EPA 8260B	wm	
Bromobenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Bromochloromethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Bromodichloromethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Bromoform	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Bromomethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
sec-Butylbenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
tert-Butylbenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
n-Butylbenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Carbon disulfide	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Chlorobenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Chloroethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Chloroform	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Chloromethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
4-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
2-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/28/11 14:24	EPA 8260B	wm	
Dibromochloromethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/26/11 11:27

Laboratory Sample ID: **1D27102-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Dibromomethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,2-Dichloroethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	V4
1,3-Dichloropropane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/26/11 11:27

Laboratory Sample ID: **1D27102-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
n-Propylbenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Styrene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Tetrachloroethene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Trichloroethene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Vinyl chloride	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
o-Xylene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
m,p-Xylene	<2.00	2.00	ug/l	04/28/11 14:24	EPA 8260B	wm	
Surrogate: 4-Bromofluorobenzene	*95.9 %*	*70-130*		*04/28/11 14:24*	*EPA 8260B*	wm	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*70-130*		*04/28/11 14:24*	*EPA 8260B*	wm	
Surrogate: Fluorobenzene	*106 %*	*70-130*		*04/28/11 14:24*	*EPA 8260B*	wm	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/26/11 11:29

Laboratory Sample ID: **1D27102-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	1120	100	ug/l	04/28/11 20:21	EPA 8015	bg	
Surrogate: a,a,a-Trifluorotoluene	*98.3 %*	*70-130*		*04/28/11 20:21*	*EPA 8015*	bg	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	04/29/11 17:49	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*62.2 %*	*40-140*		*04/29/11 17:49*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Benzene	2.76	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Methyl tert-butyl ether	10200	100	ug/l	04/28/11 20:54	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
tert- amyl alcohol	163	10.0	ug/l	04/28/11 15:43	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Tert-amyl methyl ether	210	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Tert-butyl alcohol	3240	500	ug/l	04/28/11 20:54	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/26/11 11:29

Laboratory Sample ID: **1D27102-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	49.1	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	04/28/11 15:43	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
4-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	04/28/11 15:43	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/26/11 11:29

Laboratory Sample ID: **1D27102-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,2-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	V4
1,3-Dichloropropane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/26/11 11:29

Laboratory Sample ID: **1D27102-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	04/28/11 15:43	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*94.3 %*	*70-130*		*04/28/11 15:43*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*99.8 %*	*70-130*		*04/28/11 15:43*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*101 %*	*70-130*		*04/28/11 15:43*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/05/11 09:35
Project Manager: Steve Slatnick	Number of Containers:	12	

Notes

V4 Check standard was outside the QC range. Data accepted based on acceptable LCS.

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

FAIRWAY LABORATORIES INC.

COC # 3 Page 1 of 1

Client Name:	Groundwater & Env. Services
Address:	2142 Priest Bridge Court
	Suite 1, Crofton, MD 21114
Contact:	Steve Slatnick
Phone #:	800-220-3606
Fax #:	410-721-3733
Project Name:	Carroll-Wally's Citgo Station
	19200 Middletown Rd., Parkton, MD
Quote/PO #:	0402643-
TAT: 5 day	
Normal	
Rush	
Date Required:	IN2N102-01

Receiving Info	Y	N
Custody Seals		
Seals Intact?		
Received on ice?	Y	
COC/ Lavbels agree?		
Correct containers?		
Correct preservation?		
VOA head space		
Sample Temp: 2.4		
Report to PADEP?		
PWSID #:		

Analyses Requested

FLI use only	Sample Description / Location	Sample Date	Sample Time	Grab or Composite	Soil	Water	Other? Explain	# of Containers	EPA 8260 - Full VOCs incl. fuel oxygenates (MTBE, TAA, TAEE, TAME, TBA, DIPE, ETBE) and Naphthalene	USEPA 8015B - TPH-GRO	USEPA 8015B - TPH-DRO			Comments
	RW-1	4-26-11	1127	G		X		6	X	X	X			4 VOA, 2 Amber
	RW-2	↓	1129	↓		↓		6	X	X	X			4 VOA, 2 Amber

Signature	Date	Time	Remarks
Sampled by:	4-27-11	1515	
Received by:	4/28/11	15:15	
Relinquished by:	4/28/11	1800	
Received by:			
Relinquished by:			
Received by:	4/28/11	1800	

Chain of Custody Receiving Document

Receiver: CR

Page ___ of ___

Date/Time of this check: 4-29-11 Sample Temperature: 2.4 Client: CES Lab # 1102160-02

Received at Lab on ICE ? Y ☐ * **Sample Temperature when arrived at Lab:** 2.4 **Acceptable?** Y ☐ * **or In cool down process?** ☐ *

Custody Seals? N Intact? Y

COC/Labels on bottles agree? Y ☐ * Correct containers for all the analysis requested? Y ☐ * Matrix: water

COC #	Number and Type of BOTTLES										Comments
42611	Poly Non-Pres.	Poly H2SO4	Poly HNO3	Amber ~~H2SO4~~ HCl	Amber Non-Pres.	Poly NaOH	VOCS (Head space?) N	Bacti	Other ☐ *	Properly Preserved ☒ *	
RW-1				2			4-HCl				
RW-2				2			4-HCl				

☐ * **Any "NO" Client to be contacted:**

Client contacted by: _____ Date/Time: _____ Name of Client spoken to: _____

Discussion and Outcome:

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFFLUENT	1D29062-01	Water	04/28/11 13:20	04/29/11 14:15
MID	1D29062-02	Water	04/28/11 13:25	04/29/11 14:15
RW-1	1D29062-03	Water	04/28/11 13:35	04/29/11 14:15
RW-2	1D29062-04	Water	04/28/11 13:40	04/29/11 14:15
RW-3	1D29062-05	Water	04/28/11 13:45	04/29/11 14:15

Fairway Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Reviewed and Submitted by:

Michael P. Tyler
Laboratory Director

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/28/11 13:20

Laboratory Sample ID: **1D29062-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	05/04/11 16:22	EPA 8015	mf	
Surrogate: a,a,a-Trifluorotoluene	*93.9 %*	*70-130*		*05/04/11 16:22*	*EPA 8015*	mf	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	05/04/11 16:49	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*61.7 %*	*40-140*		*05/04/11 16:49*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Benzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Toluene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Ethylbenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Isopropylbenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Methyl tert-butyl ether	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Naphthalene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
tert- amyl alcohol	<5.00	5.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
tert- amyl ethyl ether	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Tert-amyl methyl ether	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Tert-butyl alcohol	349	5.00	ug/l	05/03/11 07:59	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/28/11 13:20

Laboratory Sample ID: **1D29062-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Ethyl tert-butyl ether	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Acrylonitrile	<10.0	10.0	ug/l	05/03/11 07:59	EPA 8260B	mf	
Bromobenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Bromochloromethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Bromodichloromethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Bromoform	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Bromomethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
sec-Butylbenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
tert-Butylbenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
n-Butylbenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Carbon disulfide	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Chlorobenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Chloroethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Chloroform	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Chloromethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
4-Chlorotoluene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
2-Chlorotoluene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<5.00	5.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Dibromochloromethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/28/11 13:20

Laboratory Sample ID: **1D29062-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Dibromomethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,2-Dichlorobenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,4-Dichlorobenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,3-Dichlorobenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Dichlorodifluoromethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,2-Dichloroethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,1-Dichloroethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
trans-1,2-Dichloroethene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
cis-1,2-Dichloroethene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,1-Dichloroethene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
2,2-Dichloropropane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,3-Dichloropropane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,2-Dichloropropane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
trans-1,3-Dichloropropene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,1-Dichloropropene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
cis-1,3-Dichloropropene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Hexachlorobutadiene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
p-Isopropyltoluene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **EFFLUENT** **Date/Time Sampled:** 04/28/11 13:20

Laboratory Sample ID: **1D29062-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
n-Propylbenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Styrene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Tetrachloroethene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,1,1-Trichloroethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,1,2-Trichloroethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Trichloroethene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Trichlorofluoromethane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
1,2,3-Trichloropropane	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Vinyl chloride	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
o-Xylene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
m,p-Xylene	<1.00	1.00	ug/l	05/03/11 07:59	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*98.3 %*	*70-130*		*05/03/11 07:59*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*70-130*		*05/03/11 07:59*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*103 %*	*70-130*		*05/03/11 07:59*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **MID** **Date/Time Sampled:** 04/28/11 13:25

Laboratory Sample ID: **1D29062-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	05/04/11 16:54	EPA 8015	mf	
Surrogate: a,a,a-Trifluorotoluene	*93.0 %*	*70-130*		*05/04/11 16:54*	*EPA 8015*	mf	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	05/04/11 17:37	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*62.8 %*	*40-140*		*05/04/11 17:37*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Benzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Toluene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Ethylbenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Isopropylbenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Methyl tert-butyl ether	11.5	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Naphthalene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
tert- amyl alcohol	<5.00	5.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
tert- amyl ethyl ether	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Tert-amyl methyl ether	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Tert-butyl alcohol	518	5.00	ug/l	05/03/11 08:37	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **MID** **Date/Time Sampled:** 04/28/11 13:25

Laboratory Sample ID: **1D29062-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Ethyl tert-butyl ether	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Acrylonitrile	<10.0	10.0	ug/l	05/03/11 08:37	EPA 8260B	mf	
Bromobenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Bromochloromethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Bromodichloromethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Bromoform	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Bromomethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
sec-Butylbenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
tert-Butylbenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
n-Butylbenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Carbon disulfide	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Chlorobenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Chloroethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Chloroform	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Chloromethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
4-Chlorotoluene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
2-Chlorotoluene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<5.00	5.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Dibromochloromethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **MID** **Date/Time Sampled:** 04/28/11 13:25

Laboratory Sample ID: **1D29062-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Dibromomethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,2-Dichlorobenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,4-Dichlorobenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,3-Dichlorobenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Dichlorodifluoromethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,2-Dichloroethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,1-Dichloroethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
trans-1,2-Dichloroethene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
cis-1,2-Dichloroethene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,1-Dichloroethene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
2,2-Dichloropropane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,3-Dichloropropane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,2-Dichloropropane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
trans-1,3-Dichloropropene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,1-Dichloropropene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
cis-1,3-Dichloropropene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Hexachlorobutadiene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
p-Isopropyltoluene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **MID** **Date/Time Sampled:** 04/28/11 13:25

Laboratory Sample ID: **1D29062-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
n-Propylbenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Styrene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Tetrachloroethene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,1,1-Trichloroethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,1,2-Trichloroethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Trichloroethene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Trichlorofluoromethane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
1,2,3-Trichloropropane	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Vinyl chloride	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
o-Xylene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
m,p-Xylene	<1.00	1.00	ug/l	05/03/11 08:37	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*97.8 %*	*70-130*		*05/03/11 08:37*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*70-130*		*05/03/11 08:37*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*102 %*	*70-130*		*05/03/11 08:37*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/28/11 13:35

Laboratory Sample ID: **1D29062-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	213	100	ug/l	05/04/11 17:25	EPA 8015	mf	
Surrogate: a,a,a-Trifluorotoluene	*92.8 %*	*70-130*		*05/04/11 17:25*	*EPA 8015*	mf	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	05/04/11 18:25	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*55.7 %*	*40-140*		*05/04/11 18:25*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Methyl tert-butyl ether	284	20.0	ug/l	05/03/11 17:42	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
tert- amyl alcohol	<10.0	10.0	ug/l	05/02/11 20:19	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Tert-amyl methyl ether	4.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Tert-butyl alcohol	61.4	10.0	ug/l	05/02/11 20:19	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/28/11 13:35

Laboratory Sample ID: **1D29062-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	05/02/11 20:19	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
4-Chlorotoluene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	05/02/11 20:19	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/28/11 13:35

Laboratory Sample ID: **1D29062-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,2-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	V4
1,3-Dichloropropane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-1** **Date/Time Sampled:** 04/28/11 13:35

Laboratory Sample ID: **1D29062-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	05/02/11 20:19	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*95.9 %*	*70-130*		*05/02/11 20:19*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*70-130*		*05/02/11 20:19*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*106 %*	*70-130*		*05/02/11 20:19*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/28/11 13:40

Laboratory Sample ID: **1D29062-04 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	1120	100	ug/l	05/04/11 17:57	EPA 8015	mf	
Surrogate: a,a,a-Trifluorotoluene	*94.1 %*	*70-130*		*05/04/11 17:57*	*EPA 8015*	mf	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	171	150	ug/l	05/04/11 19:13	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*62.7 %*	*40-140*		*05/04/11 19:13*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Methyl tert-butyl ether	4720	100	ug/l	05/03/11 18:59	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
tert- amyl alcohol	84.8	10.0	ug/l	05/02/11 20:58	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Tert-amyl methyl ether	133	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Tert-butyl alcohol	1320	400	ug/l	05/03/11 18:21	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/28/11 13:40

Laboratory Sample ID: **1D29062-04 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	30.1	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	05/02/11 20:58	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
4-Chlorotoluene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	05/02/11 20:58	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/28/11 13:40

Laboratory Sample ID: **1D29062-04 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,2-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	V4
1,3-Dichloropropane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-2** **Date/Time Sampled:** 04/28/11 13:40

Laboratory Sample ID: **1D29062-04 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	05/02/11 20:58	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*96.8 %*	*70-130*		*05/02/11 20:58*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*70-130*		*05/02/11 20:58*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*108 %*	*70-130*		*05/02/11 20:58*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/28/11 13:45

Laboratory Sample ID: **1D29062-05 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Petroleum Hydrocarbons by 8015 GRO							
Gasoline	<100	100	ug/l	05/04/11 18:29	EPA 8015	mf	
Surrogate: a,a,a-Trifluorotoluene	*92.9 %*	*70-130*		*05/04/11 18:29*	*EPA 8015*	mf	
Extractable Petroleum Hydrocarbons by 8015							
Diesel	<150	150	ug/l	05/04/11 20:01	EPA 8015B-Mod	mt	
Surrogate: o-Terphenyl	*68.6 %*	*40-140*		*05/04/11 20:01*	*EPA 8015B-Mod*	mt	
Volatile Organic Compounds by EPA Method 8260B							
1,3,5-Trimethylbenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,2,4-Trimethylbenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Benzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Toluene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Ethylbenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Isopropylbenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Methyl tert-butyl ether	3.64	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Naphthalene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
tert- amyl alcohol	<10.0	10.0	ug/l	05/02/11 19:40	EPA 8260B	mf	
tert- amyl ethyl ether	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Tert-amyl methyl ether	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Tert-butyl alcohol	<10.0	10.0	ug/l	05/02/11 19:40	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/28/11 13:45

Laboratory Sample ID: **1D29062-05 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Diisopropylether (DIPE)	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Ethyl tert-butyl ether	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Acrylonitrile	<20.0	20.0	ug/l	05/02/11 19:40	EPA 8260B	mf	
Bromobenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Bromochloromethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Bromodichloromethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Bromoform	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Bromomethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
sec-Butylbenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
tert-Butylbenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
n-Butylbenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Carbon disulfide	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Chlorobenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Chloroethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Chloroform	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Chloromethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
4-Chlorotoluene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
2-Chlorotoluene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,2-Dibromo-3-chloropropane	<10.0	10.0	ug/l	05/02/11 19:40	EPA 8260B	mf	
Dibromochloromethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/28/11 13:45

Laboratory Sample ID: **1D29062-05 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
1,2-Dibromoethane (EDB)	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Dibromomethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
trans-1,4-Dichloro-2-butene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,2-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,4-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,3-Dichlorobenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Dichlorodifluoromethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,2-Dichloroethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,1-Dichloroethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
trans-1,2-Dichloroethene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
cis-1,2-Dichloroethene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,1-Dichloroethene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
2,2-Dichloropropane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	V4
1,3-Dichloropropane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,2-Dichloropropane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
trans-1,3-Dichloropropene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,1-Dichloropropene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
cis-1,3-Dichloropropene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Hexachlorobutadiene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
p-Isopropyltoluene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643	**Reported:**
Crofton MD, 21114	Collector:	CLIENT	05/19/11 09:47
Project Manager: Steve Slatnick	Number of Containers:	30	

Client Sample ID: **RW-3** **Date/Time Sampled:** 04/28/11 13:45

Laboratory Sample ID: **1D29062-05 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Volatile Organic Compounds by EPA Method 8260B							
Methylene chloride	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
n-Propylbenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Styrene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,1,2,2-Tetrachloroethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,1,1,2-Tetrachloroethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Tetrachloroethene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,2,4-Trichlorobenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,2,3-Trichlorobenzene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,1,1-Trichloroethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,1,2-Trichloroethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Trichloroethene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Trichlorofluoromethane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
1,2,3-Trichloropropane	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Vinyl chloride	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
o-Xylene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
m,p-Xylene	<2.00	2.00	ug/l	05/02/11 19:40	EPA 8260B	mf	
Surrogate: 4-Bromofluorobenzene	*95.9 %*	*70-130*		*05/02/11 19:40*	*EPA 8260B*	mf	
Surrogate: 1,2-Dichloroethane-d4	*110 %*	*70-130*		*05/02/11 19:40*	*EPA 8260B*	mf	
Surrogate: Fluorobenzene	*105 %*	*70-130*		*05/02/11 19:40*	*EPA 8260B*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland		Project:	CARROLL FUELS-WALLY'S
2142 Priest Bridge Ct Suite 1		Project Number:	0402643 **Reported:**
Crofton MD, 21114		Collector:	CLIENT 05/19/11 09:47
Project Manager:	Steve Slatnick	Number of Containers:	30

Notes

V4 Check standard was outside the QC range. Data accepted based on acceptable LCS.

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

FAIRWAY LABORATORIES INC.

COC #_____ Page 1 of 1

Client Name:	Groundwater & Env. Services
Address:	2142 Priest Bridge Court
	Suite 1, Crofton, MD 21114
Contact:	Steve Slatnick
Phone #:	800-220-3606
Fax #:	410-721-3733
Project Name:	Carroll-Wally's Citgo Station
	19200 Middletown Rd., Parkton, MD
Quote/PO #:	0402643-

TAT:

Normal
Rush
Date Required: 1A29062-01

Receiving Info	Y	N
Custody Seals		
Seals Intact?		
Received on ice?		
COC/ Lavbels agree?		
Correct containers?		
Correct preservation?		
VOA head space		

Sample Temp:_____

Report to PADEP?
PWSID #:

Analyses Requested

FLI use only	Sample Description / Location	Sample Date	Sample Time	Grab or Composite	Soil	Water	Other? Explain	# of Containers	EPA 8260 - Full VOCs incl. fuel oxygenates (MTBE, TAA, TAEE, TAME, TBA, DIPE, ETBE) and Naphthalene	USEPA 8015B - TPH-GRO	USEPA 8015B - TPH-DRO			Comments
1	Effluent	4-28-11	1320	G		X		6	X	X	X			
2	MID	↓	1325	↓		↓		↓	↓	↓	↓			
3	RW-1		1335											
4	RW-2		1340											
5	RW-3	4-28-11	1345	G		X		6	X	X	X			

Signature		Date	Time
Sampled by:		42811	
Received by:			
Relinquished by:		4/29/11	11:35
Received by:		4-29-11	1135
Relinquished by:		4-29-11	1415
Received by:		4/29	14:15

Remarks

Chain of Custody Receiving Document

Page ___ of ___

Receiver: CLB

Date/Time of this check: 4/29 15:36 Sample Temperature: 1.6 Client: GES Lab # ID29062-02

Received at Lab on ICE ? Y ☐ * **Sample Temperature when arrived at Lab:** 1.6 **Acceptable?** Y ☐ * **or In cool down process?** ☐ *

Custody Seals? Y Intact? Y

COC/Labels on bottles agree? Y ☐* Correct containers for all the analysis requested? Y ☐ * Matrix: WATER

COC #	Number and Type of BOTTLES										Comments
	Poly Non-Pres.	Poly H2SO4	Poly HNO3	Amber H2SO4	Amber Non-Pres.	Poly NaOH	VOCS (Head space?)	Bacti	Other ☐ *	Properly Preserved ☐ * N/A	
1							4 HCL		2-1L AMBER	HCL	
2							↓		↓		
3											
4											
5											

☐ * **Any "NO" Client to be contacted:**

Client contacted by: _____ Date/Time: _____ Name of Client spoken to: _____

Discussion and Outcome:

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643-05-242	**Reported:**
Crofton MD, 21114	Collector:	JP	05/12/11 09:54
Project Manager: Steve Slatnick	Number of Containers:	6	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1606 RAYVILLE INF	1E04059-01	Water	05/02/11 17:55	05/04/11 15:40
1608 RAYVILLE INF	1E04059-02	Water	05/02/11 18:05	05/04/11 15:40
1612 RAYVILLE INF	1E04059-03	Water	05/02/11 18:20	05/04/11 15:40

Fairway Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Reviewed and Submitted by:

Michael P. Tyler
Laboratory Director

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643-05-242	**Reported:**
Crofton MD, 21114	Collector:	JP	05/12/11 09:54
Project Manager: Steve Slatnick	Number of Containers:	6	

Client Sample ID: **1606 RAYVILLE INF** **Date/Time Sampled:** 05/02/11 17:55

Laboratory Sample ID: **1E04059-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Purgeable Organic Compounds by EPA Method 524.2							
Ethyl tert-butyl ether	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Tert-amyl methyl ether	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
tert- amyl alcohol	<2.50	2.50	ug/l	05/05/11 14:30	EPA 524.2	mf	
tert- amyl ethyl ether	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Tert-butyl alcohol	<2.50	2.50	ug/l	05/05/11 14:30	EPA 524.2	mf	
Diisopropylether (DIPE)	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Benzene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Carbon tetrachloride	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Chlorobenzene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Naphthalene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
1,2-Dichlorobenzene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
1,3-Dichlorobenzene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
1,2-Dichloroethane	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
1,1-Dichloroethene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
cis-1,2-Dichloroethene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
trans-1,2-Dichloroethene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
1,2-Dichloropropane	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Ethylbenzene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Methylene chloride	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Methyl tert-butyl ether	12.7	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643-05-242	**Reported:**
Crofton MD, 21114	Collector:	JP	05/12/11 09:54
Project Manager: Steve Slatnick	Number of Containers:	6	

Client Sample ID: **1606 RAYVILLE INF** **Date/Time Sampled:** 05/02/11 17:55

Laboratory Sample ID: **1E04059-01 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Purgeable Organic Compounds by EPA Method 524.2							
Styrene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Tetrachloroethene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	V4
Toluene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
1,2,4-Trichlorobenzene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
1,1,2-Trichloroethane	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
1,1,1-Trichloroethane	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Trichloroethene	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Vinyl chloride	<0.500	0.500	ug/l	05/05/11 14:30	EPA 524.2	mf	
Xylenes (total)	<1.00	1.00	ug/l	05/05/11 14:30	EPA 524.2	mf	
Surrogate: 4-Bromofluorobenzene	*76.1 %*	*70-130*		*05/05/11 14:30*	*EPA 524.2*	mf	
Surrogate: 1,2-Dichlorobenzene-d4	*79.3 %*	*70-130*		*05/05/11 14:30*	*EPA 524.2*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643-05-242	**Reported:**
Crofton MD, 21114	Collector:	JP	05/12/11 09:54
Project Manager: Steve Slatnick	Number of Containers:	6	

Client Sample ID: **1608 RAYVILLE INF** **Date/Time Sampled:** 05/02/11 18:05

Laboratory Sample ID: **1E04059-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Purgeable Organic Compounds by EPA Method 524.2							
Ethyl tert-butyl ether	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Tert-amyl methyl ether	517	50.0	ug/l	05/05/11 11:55	EPA 524.2	mf	
tert- amyl alcohol	132	2.50	ug/l	05/05/11 15:09	EPA 524.2	mf	
tert- amyl ethyl ether	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Tert-butyl alcohol	3970	250	ug/l	05/05/11 11:55	EPA 524.2	mf	
Diisopropylether (DIPE)	43.2	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Benzene	5.76	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Carbon tetrachloride	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Chlorobenzene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Naphthalene	0.580	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
1,2-Dichlorobenzene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
1,3-Dichlorobenzene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
1,2-Dichloroethane	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
1,1-Dichloroethene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
cis-1,2-Dichloroethene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
trans-1,2-Dichloroethene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
1,2-Dichloropropane	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Ethylbenzene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Methylene chloride	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Methyl tert-butyl ether	15000	250	ug/l	05/05/11 19:00	EPA 524.2	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643-05-242	**Reported:**
Crofton MD, 21114	Collector:	JP	05/12/11 09:54
Project Manager: Steve Slatnick	Number of Containers:	6	

Client Sample ID: **1608 RAYVILLE INF** **Date/Time Sampled:** 05/02/11 18:05

Laboratory Sample ID: **1E04059-02 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Purgeable Organic Compounds by EPA Method 524.2							
Styrene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Tetrachloroethene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	V4
Toluene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
1,2,4-Trichlorobenzene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
1,1,2-Trichloroethane	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
1,1,1-Trichloroethane	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Trichloroethene	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Vinyl chloride	<0.500	0.500	ug/l	05/05/11 15:09	EPA 524.2	mf	
Xylenes (total)	6.77	1.00	ug/l	05/05/11 15:09	EPA 524.2	mf	
Surrogate: 4-Bromofluorobenzene	*93.3 %*	*70-130*		*05/05/11 15:09*	*EPA 524.2*	mf	
Surrogate: 1,2-Dichlorobenzene-d4	*90.5 %*	*70-130*		*05/05/11 15:09*	*EPA 524.2*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643-05-242	**Reported:**
Crofton MD, 21114	Collector:	JP	05/12/11 09:54
Project Manager: Steve Slatnick	Number of Containers:	6	

Client Sample ID: **1612 RAYVILLE INF** **Date/Time Sampled:** 05/02/11 18:20

Laboratory Sample ID: **1E04059-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Purgeable Organic Compounds by EPA Method 524.2							
Ethyl tert-butyl ether	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Tert-amyl methyl ether	1.90	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
tert- amyl alcohol	<2.50	2.50	ug/l	05/05/11 13:51	EPA 524.2	mf	
tert- amyl ethyl ether	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Tert-butyl alcohol	<2.50	2.50	ug/l	05/05/11 13:51	EPA 524.2	mf	
Diisopropylether (DIPE)	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Benzene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Carbon tetrachloride	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Chlorobenzene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Naphthalene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
1,2-Dichlorobenzene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
1,3-Dichlorobenzene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
1,2-Dichloroethane	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
1,1-Dichloroethene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
cis-1,2-Dichloroethene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
trans-1,2-Dichloroethene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
1,2-Dichloropropane	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Ethylbenzene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Methylene chloride	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Methyl tert-butyl ether	57.5	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643-05-242	**Reported:**
Crofton MD, 21114	Collector:	JP	05/12/11 09:54
Project Manager: Steve Slatnick	Number of Containers:	6	

Client Sample ID: **1612 RAYVILLE INF** **Date/Time Sampled:** 05/02/11 18:20

Laboratory Sample ID: **1E04059-03 (Water)**

Analyte	Result	Laboratory Reporting Limit	Units	Date / Time Analyzed	Method	Analyst	Note
Purgeable Organic Compounds by EPA Method 524.2							
Styrene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Tetrachloroethene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	V4
Toluene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
1,2,4-Trichlorobenzene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
1,1,2-Trichloroethane	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
1,1,1-Trichloroethane	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Trichloroethene	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Vinyl chloride	<0.500	0.500	ug/l	05/05/11 13:51	EPA 524.2	mf	
Xylenes (total)	<1.00	1.00	ug/l	05/05/11 13:51	EPA 524.2	mf	
Surrogate: 4-Bromofluorobenzene	*73.8 %*	*70-130*		*05/05/11 13:51*	*EPA 524.2*	mf	
Surrogate: 1,2-Dichlorobenzene-d4	*80.1 %*	*70-130*		*05/05/11 13:51*	*EPA 524.2*	mf	

FAIRWAY LABORATORIES
2019 Ninth Avenue
PO Box 1925
Altoona, Pennsylvania 16603
(814) 946-4306 (814) 946-8791 - Fax
PaDep Certification is PA 07-062

www.fairwaylaboratories.com

GES Maryland	Project:	CARROLL FUELS-WALLY'S	
2142 Priest Bridge Ct Suite 1	Project Number:	0402643-05-242	**Reported:**
Crofton MD, 21114	Collector:	JP	05/12/11 09:54
Project Manager: Steve Slatnick	Number of Containers:	6	

Notes

V4 Check standard was outside the QC range. Data accepted based on acceptable LCS.

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

FAIRWAY LABORATORIES INC.

COC #_____ Page 1 of 1

Client Name:	Groundwater & Env. Services
Address:	2142 Priest Bridge Court
	Suite 1, Crofton, MD 21114
Contact:	Steve Slatnick
Phone #:	800-220-3606
Fax #:	410-721-3733
Project Name:	Carroll-Wally's Citgo Station
	19200 Middletown Rd., Parkton, MD
Quote/PO #:	0402643- 05-242
TAT:	
(Normal)	
Rush	
Date Required:	

Receiving Info	Y	N
Custody Seals		
Seals Intact?		
Received on ice?		
COC/ Lavbels agree?		
Correct containers?		
Correct preservation?		
VOA head space		
Sample Temp:_____		
Report to PADEP?		
PWSID #:		

Analyses Requested

FLI use only	Sample Description / Location	Sample Date	Sample Time	Grab or Composite	Soil	Water	Other? Explain	# of Containers	EPA 8260 - Full VOCs incl. fuel oxygenates (MTBE, TAA, TAEE, TAME, TBA, DIPE, ETBE) and Naphthalene	USEPA 8015B - TPH-GRO	USEPA 8015B - TPH-DRO	Full VOCs (524.2) including fuel oxygenates and naphthalene via 524.2		Comments
1 LE04059	1606 Rayville INF	5-2-11	1755	G		X		2				X		
2 01	1608 Rayville INF	5-2-11	1805	G		X		2				X		
3	1612 Rayville INF	5-2-11	1820	G		X		2				X		

Signature	Date	Time	Remarks
Sampled by: Jeff Plummer			
Received by: Stamp			
Relinquished by: Jonathan Matzko	5/4/11	12:20pm	
Received by: C Swanson	5 4 11	1220	
Relinquished by: C Eng	5 4 11	1540	
Received by: —	5/4	15:40	

Chain of Custody Receiving Document

Page ___ of ___

Receiver: CLB

Date/Time of this check: 5/4 16:00 Sample Temperature: 0.5 Client: GES Lab # 1E0405902

Received at Lab on ICE ? Y ☐ * **Sample Temperature when arrived at Lab:** 0.5 **Acceptable?** Y ☐ * **or In cool down process?** ☐ *

Custody Seals? Y Intact? Y

COC/Labels on bottles agree? Y ☐ * Correct containers for all the analysis requested? Y ☐ * Matrix: WATER

COC #	Number and Type of BOTTLES										Comments
	Poly Non-Pres.	Poly H2SO4	Poly HNO3	Amber H2SO4	Amber Non-Pres.	Poly NaOH	VOCS (Head space?)	Bacti	Other ☐ *	Properly Preserved ☐ *	
1							2 HCl			N/A	
2							2 HCl			↓	
3							2 HCl				

☐ * **Any "NO" Client to be contacted:**

Client contacted by: _____ Date/Time: _____ Name of Client spoken to: _____

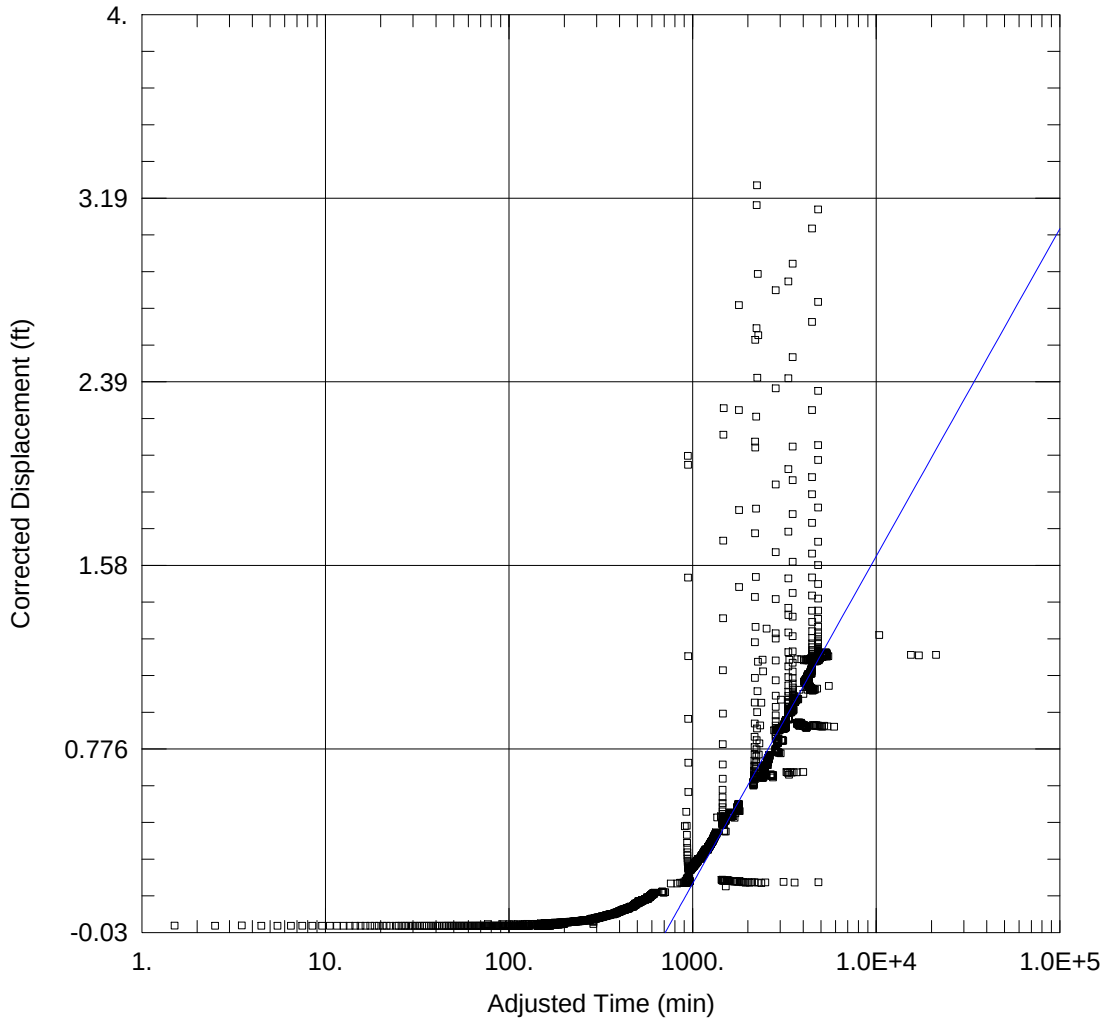
Discussion and Outcome:

This is a date sensitive document and may not be current after April 1, 2011.

APPENDIX H

Pump Test Solution Curves

1606 Rayville Rd. Potable Well - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\1606 Rayville - Cooper-Jacob.aqt
Date: 05/17/11 Time: 16:48:56

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-2
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 79. ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

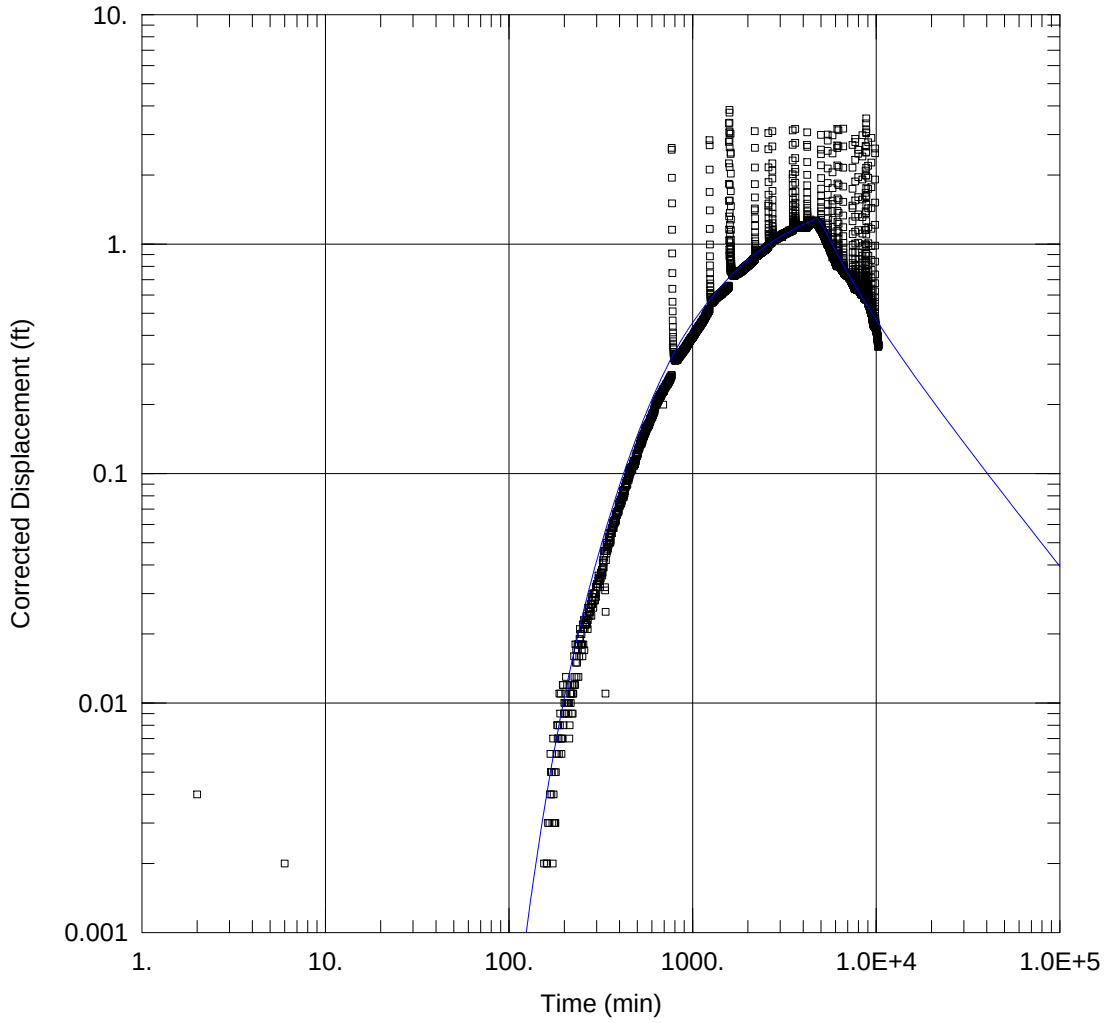
Well Name	X (ft)	Y (ft)
▫ 1606 Rayville	-84	-194

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 53.98 ft^2/day S = 0.001401

1606 Rayville Rd. Potable Well - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\1606 Rayville - Theis.aqt
Date: 05/17/11 Time: 16:46:28

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-2
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

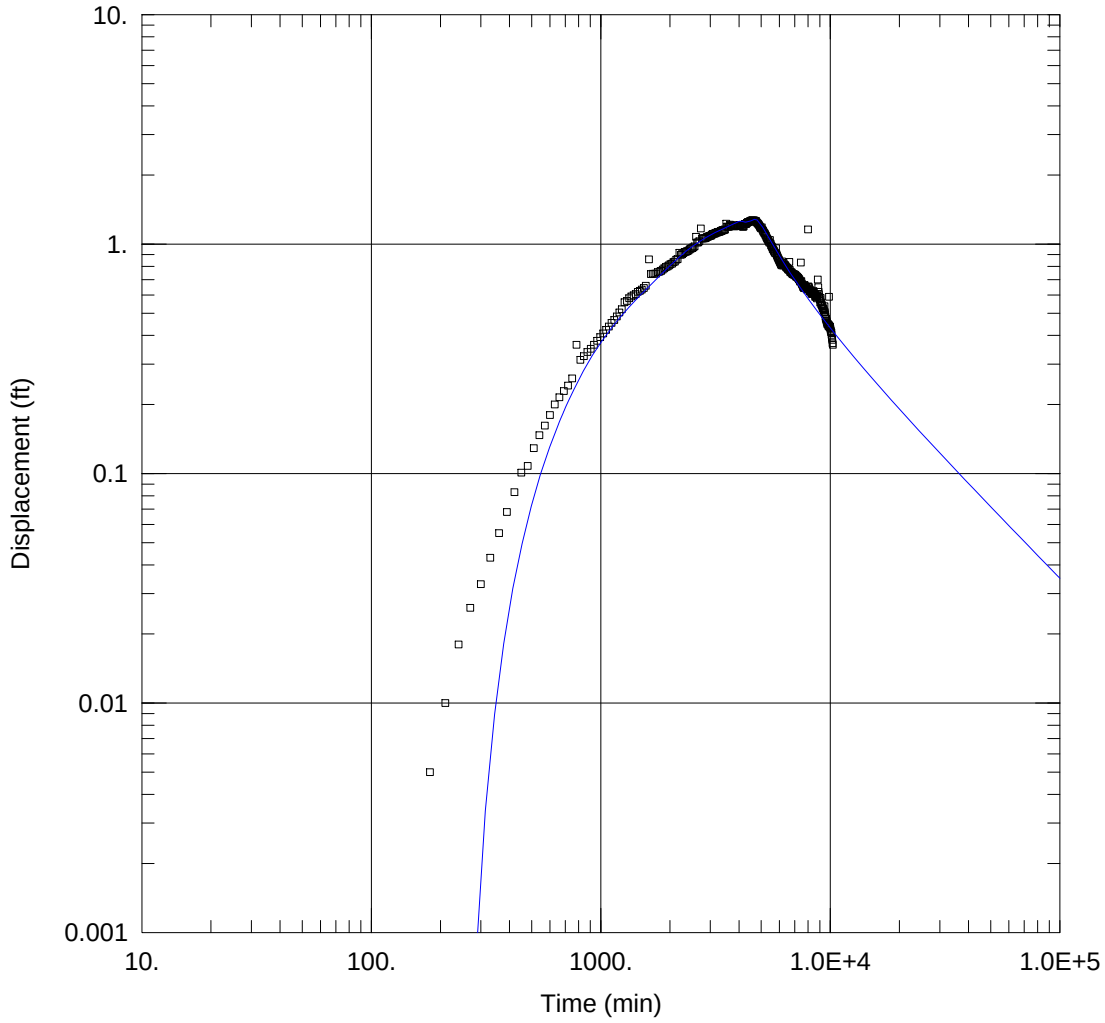
Well Name	X (ft)	Y (ft)
▫ 1606 Rayville	-84	-194

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 45.05 ft^2/day
S = 0.001724
Kz/Kr = 0.5
b = 79. ft

1606 Rayville Rd. Potable Well - Neuman Solution



WELL TEST ANALYSIS

Data Set: L:\...\1606 Rayville - Neuman_reduced dataset.aqt
Date: 05/17/11 Time: 17:08:28

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-2
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 79. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

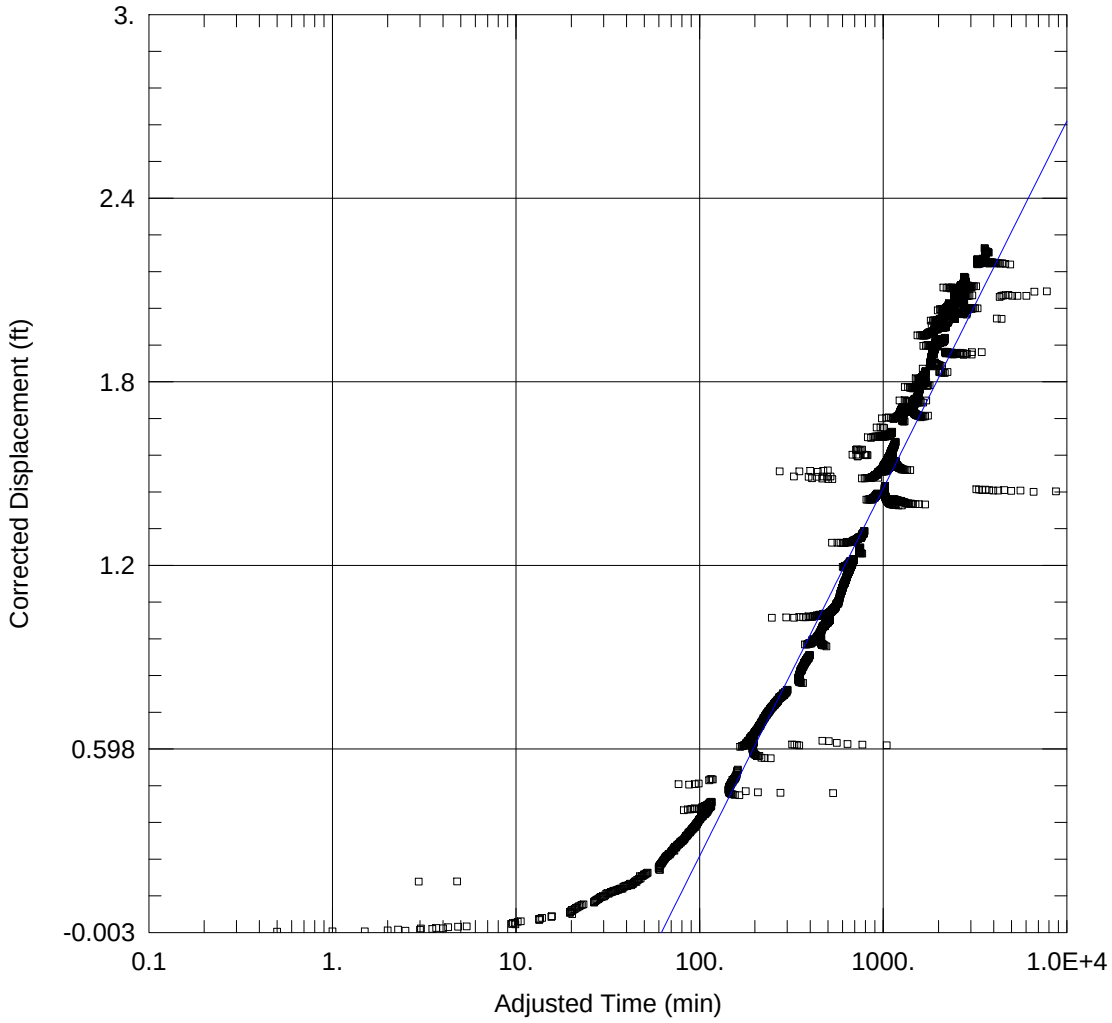
Well Name	X (ft)	Y (ft)
▫ 1606 Rayville	-84	-194

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 46.92 ft^2/day
S = 0.001541
Sy = 0.001
ß = 1.0E-5

MW-1 - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-1_Cooper-Jacob.aqt
Date: 05/19/11 Time: 07:51:09

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 84.5 ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

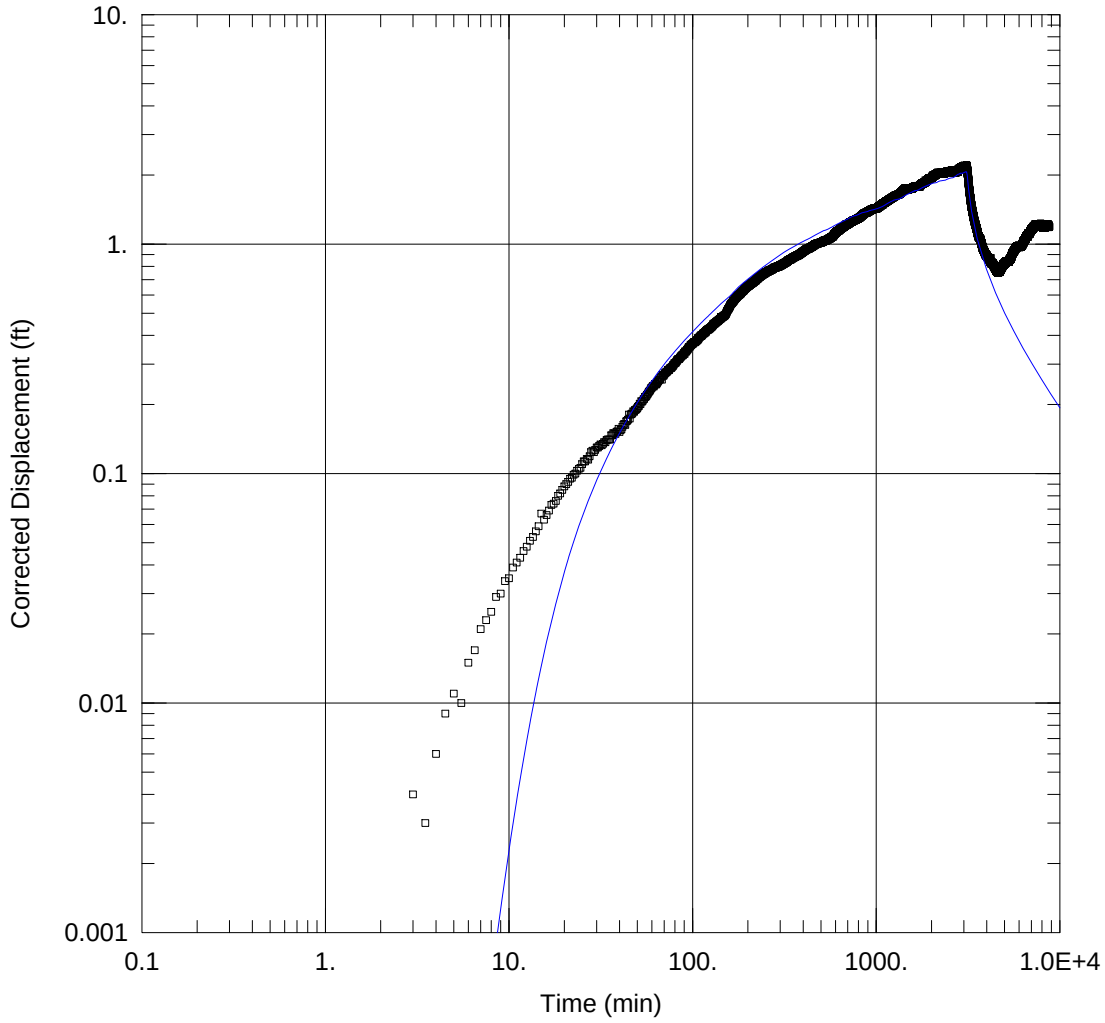
Well Name	X (ft)	Y (ft)
MW-1	70	29

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 29.34 ft^2/day S = 0.0004963

MW-1 - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-1_Theis.aqt
Date: 05/19/11 Time: 07:52:12

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

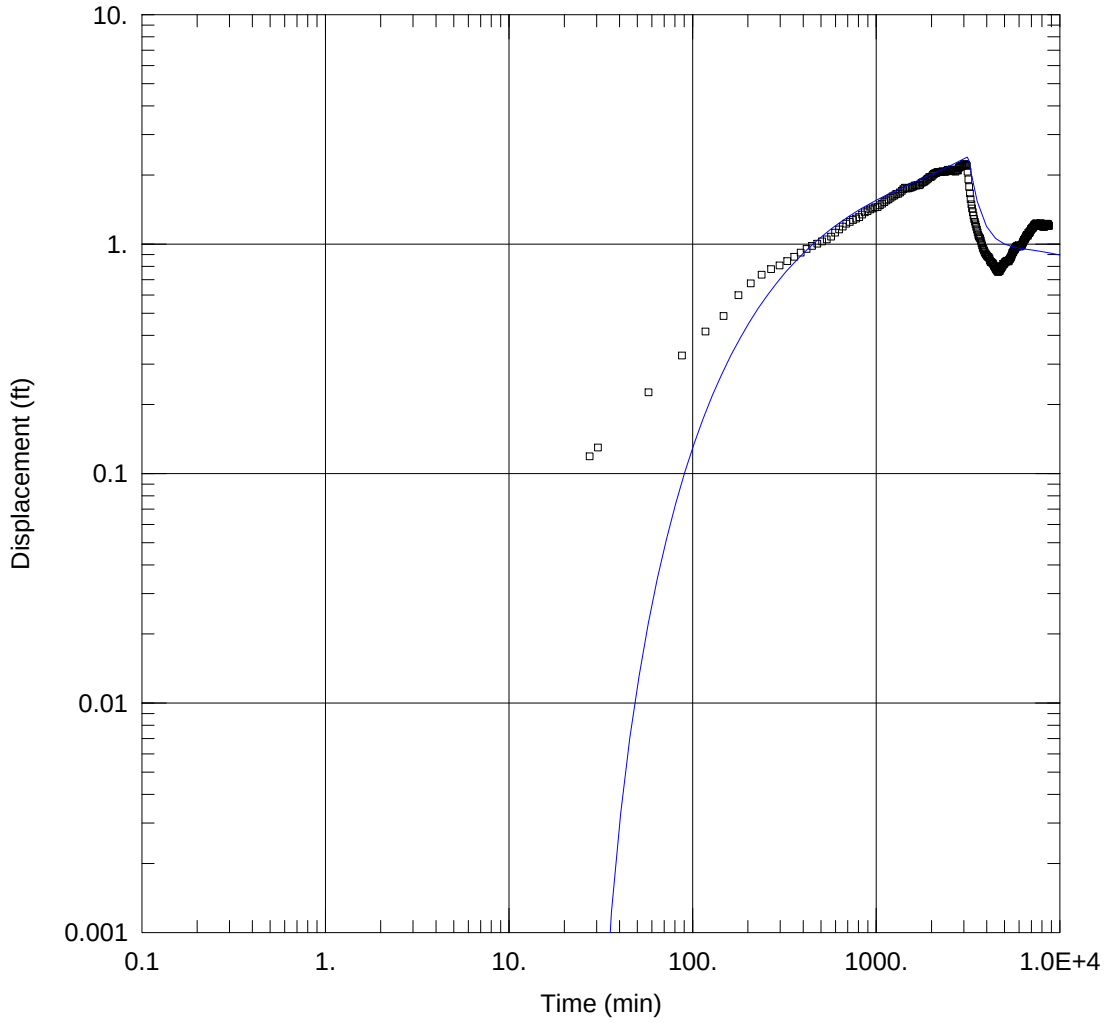
Well Name	X (ft)	Y (ft)
MW-1	70	29

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 29.34 ft^2/day
S = 0.0004963
Kz/Kr = 0.5
b = 84.5 ft

MW-1 Neuman Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-1_Neuman_incomplete.aqt
Date: 05/19/11 Time: 08:58:27

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 84.5 ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

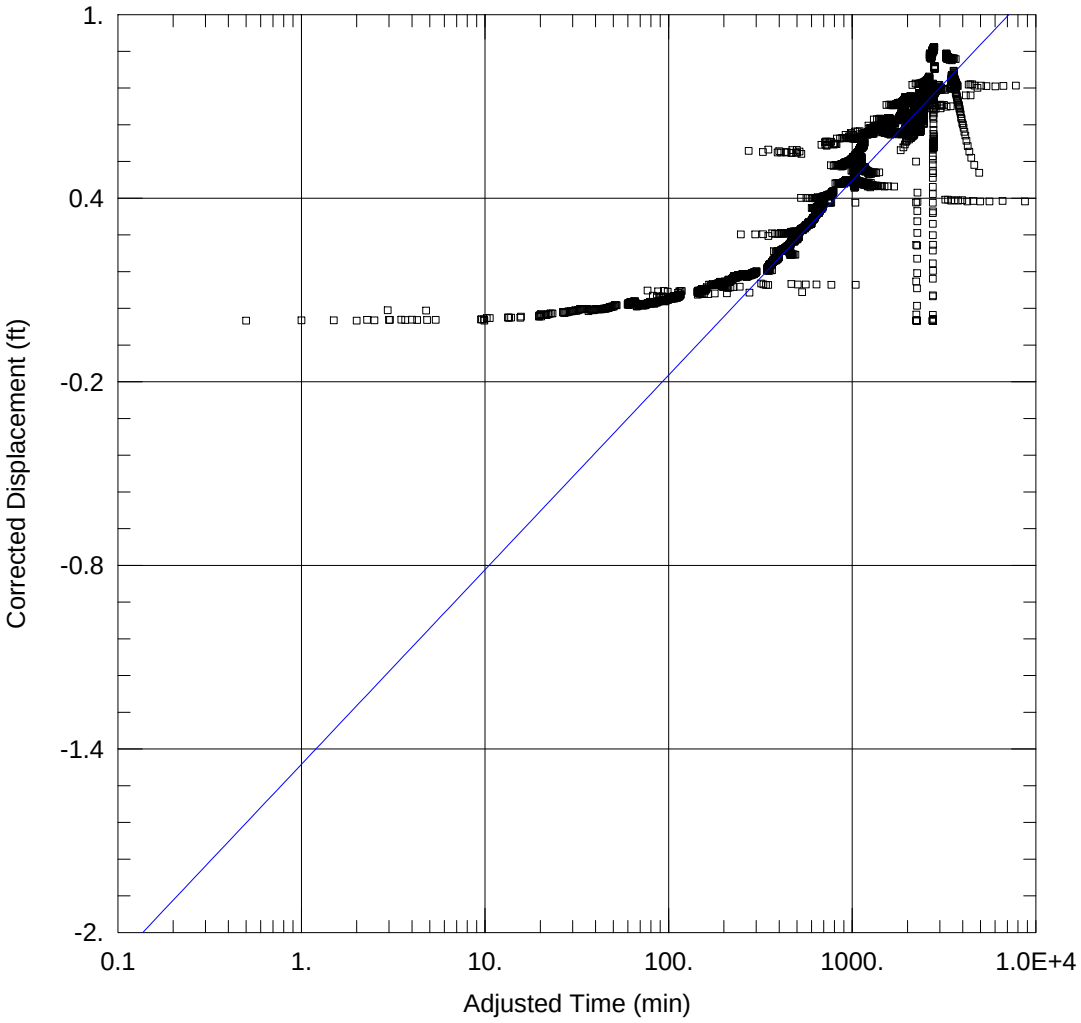
Well Name	X (ft)	Y (ft)
▫ MW-1	70	29

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 2.67 ft^2/day
S = 0.0002461
Sy = 0.004386
ß = 0.402

MW-4 - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-4_Cooper-Jacob.aqt
Date: 05/18/11 Time: 15:29:18

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 84.5 ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

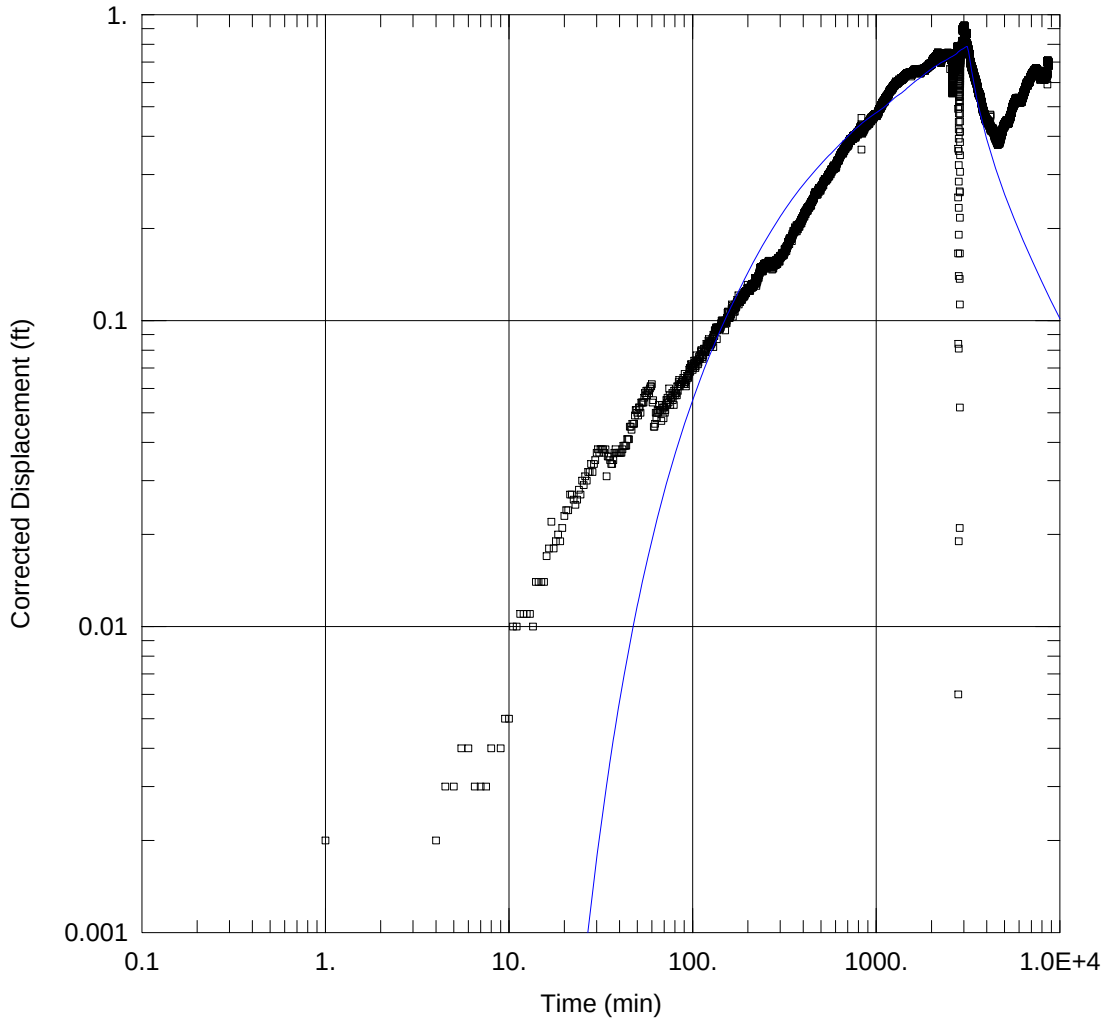
Well Name	X (ft)	Y (ft)
MW-4	10	-7

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 55.47 ft^2/day S = 0.1107

MW-4 - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-4_Theis.aqt
Date: 05/18/11 Time: 15:32:21

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

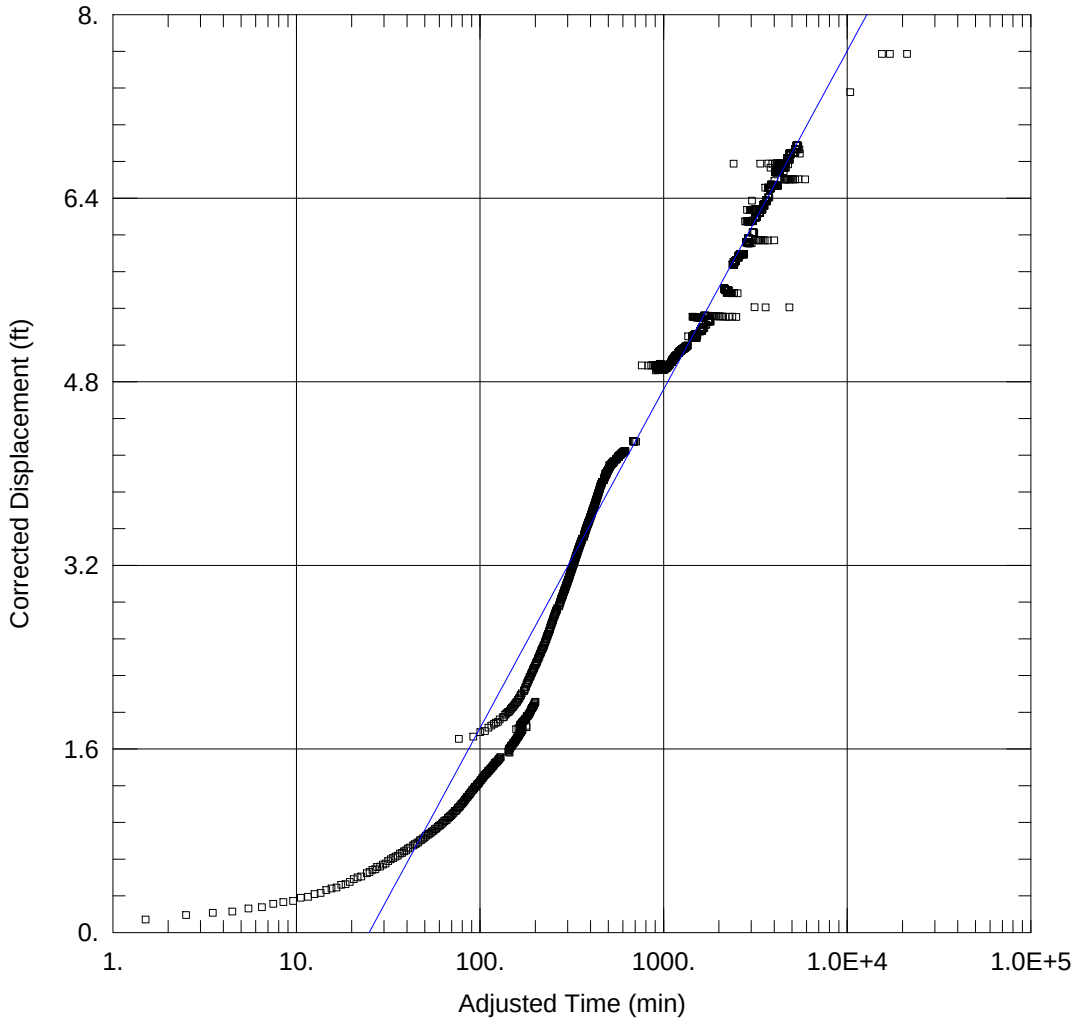
Well Name	X (ft)	Y (ft)
MW-4	10	-7

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 55.47 ft^2/day
S = 0.1107
Kz/Kr = 0.5
b = 84.5 ft

MW-7A - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-7A_Cooper-Jacob.aqt
Date: 05/17/11 Time: 16:21:16

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-2
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 79. ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

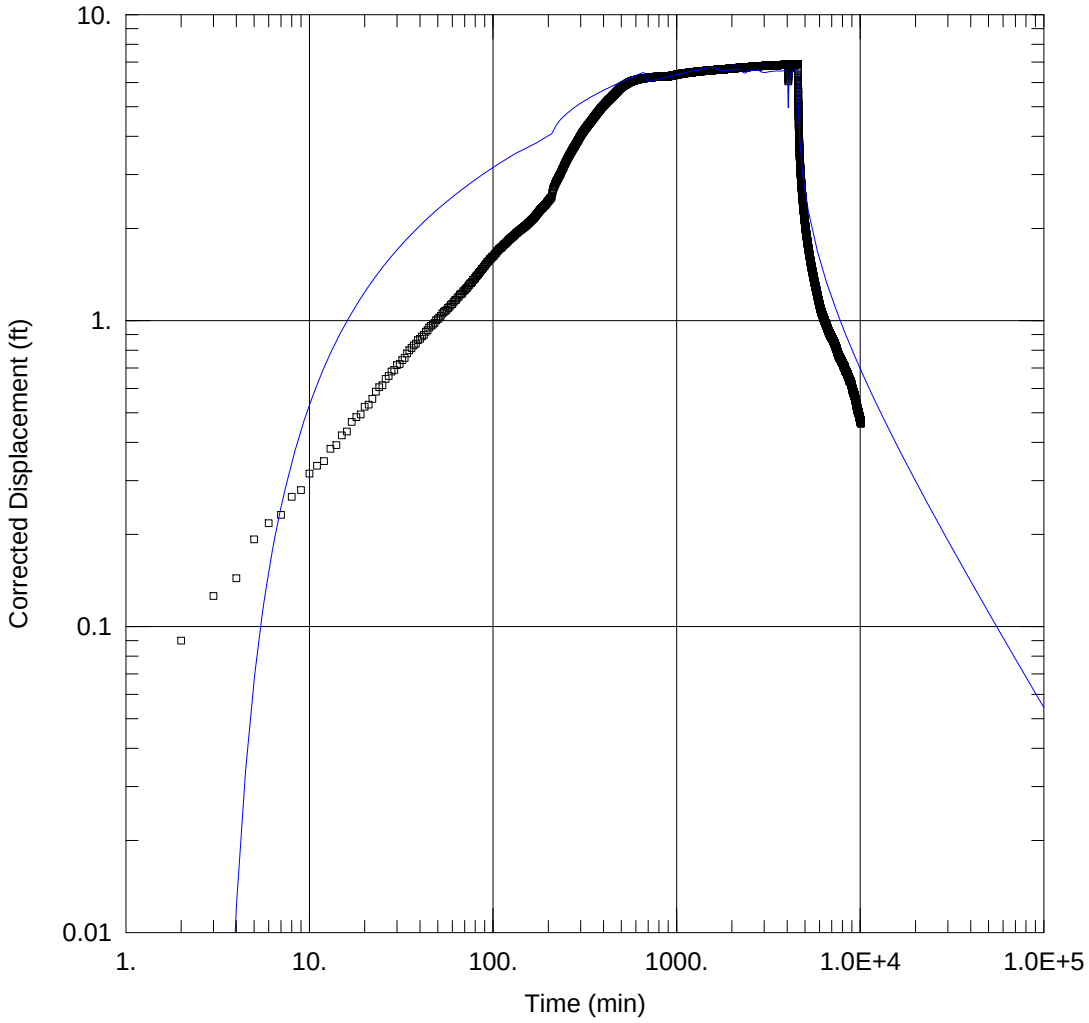
Well Name	X (ft)	Y (ft)
MW-7A	4	16

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 26.3 ft^2/day S = 0.003751

MW-7A - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-7A_Theis.aqt
Date: 05/17/11 Time: 16:23:58

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Project: 19200 Middletown, Parkton, MD
Location: 15541 New Hampshire Ave.
Test Well: RW-2
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

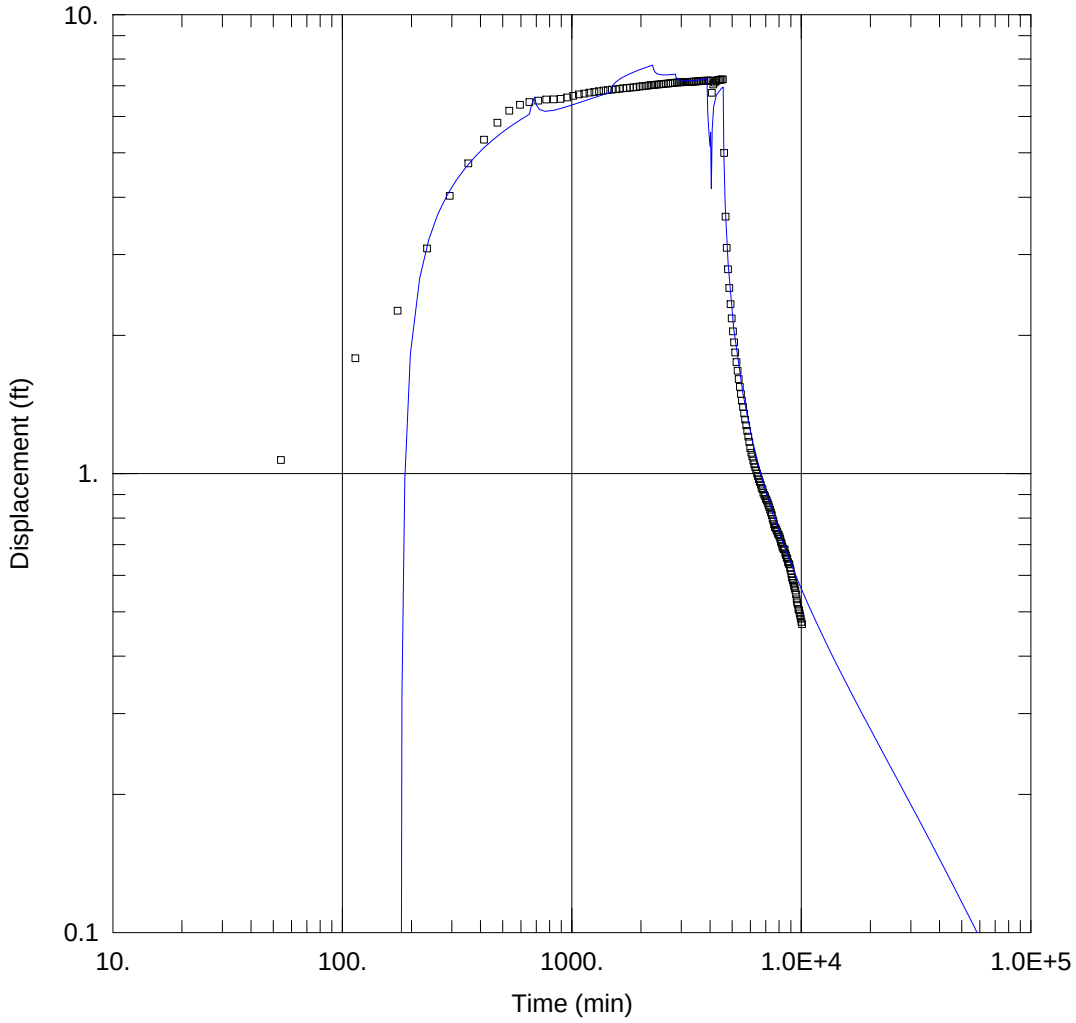
Well Name	X (ft)	Y (ft)
▫ MW-7A	4	16

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 32.85 ft^2/day
S = 0.001641
Kz/Kr = 0.5
b = 79. ft

MW-7A - Neuman Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-7A_Neuman_reduced dataset.aqt
Date: 05/17/11 Time: 16:11:53

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-2
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 79. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

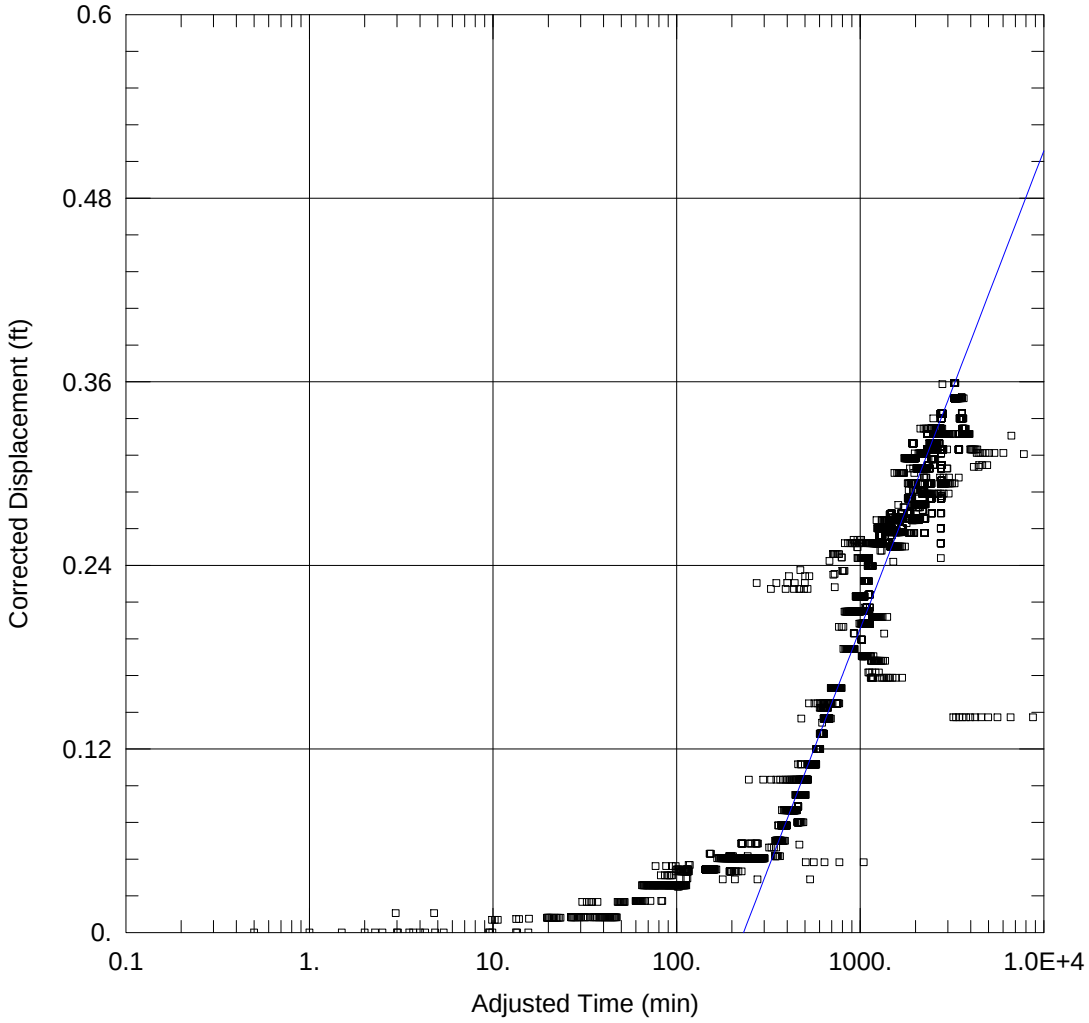
Well Name	X (ft)	Y (ft)
▫ MW-7A	4	16

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 29.23 ft^2/day
Sy = 0.001722
S = 0.001134
ß = 0.0006403

MW-10A - Cooper-Jacobs Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-10A_Cooper Jacob.aqt
Date: 05/18/11 Time: 15:46:43

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 84.5 ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

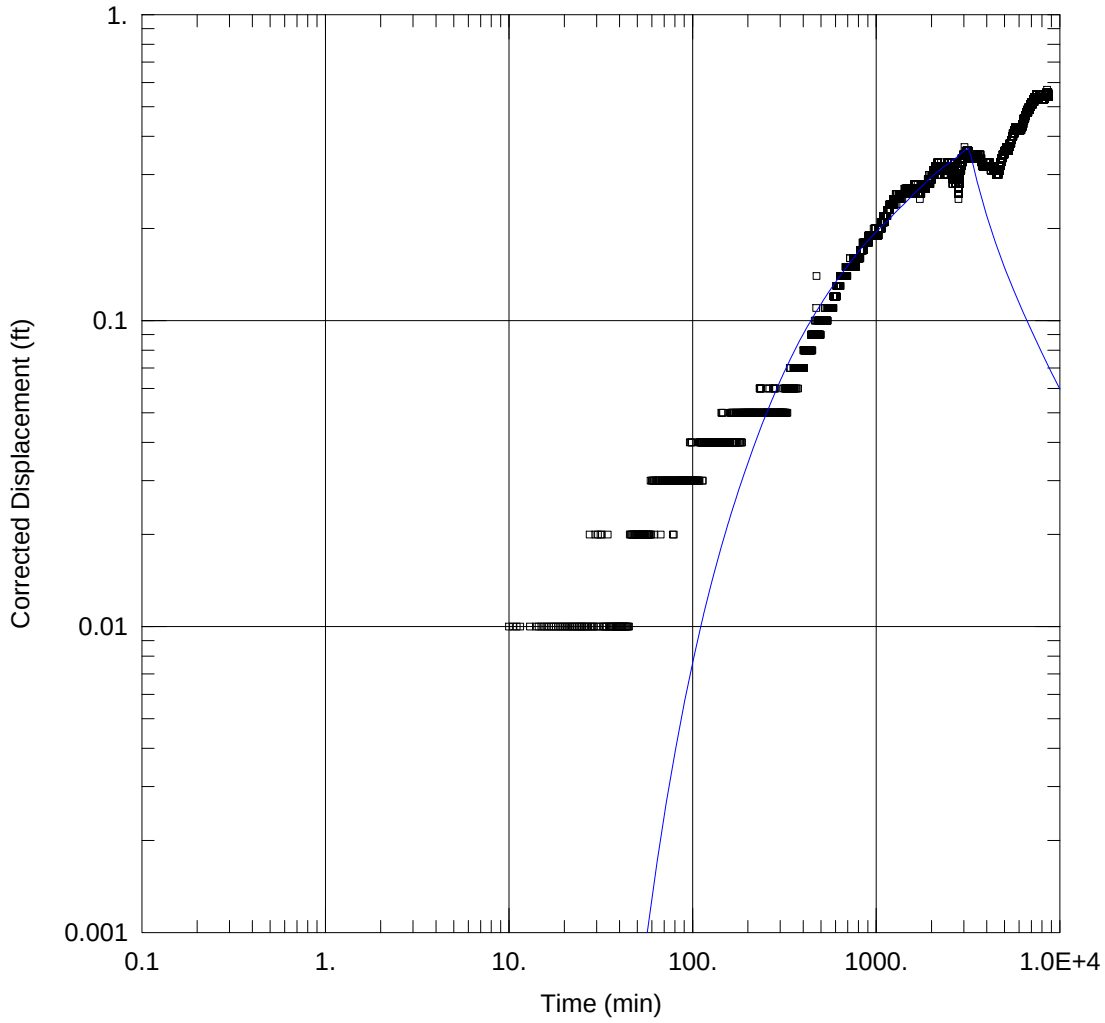
Well Name	X (ft)	Y (ft)
MW-10A	-8	21

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 112.9 ft^2/day S = 0.0807

MW-10A - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-10A_Theis.aqt
Date: 05/18/11 Time: 15:50:21

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

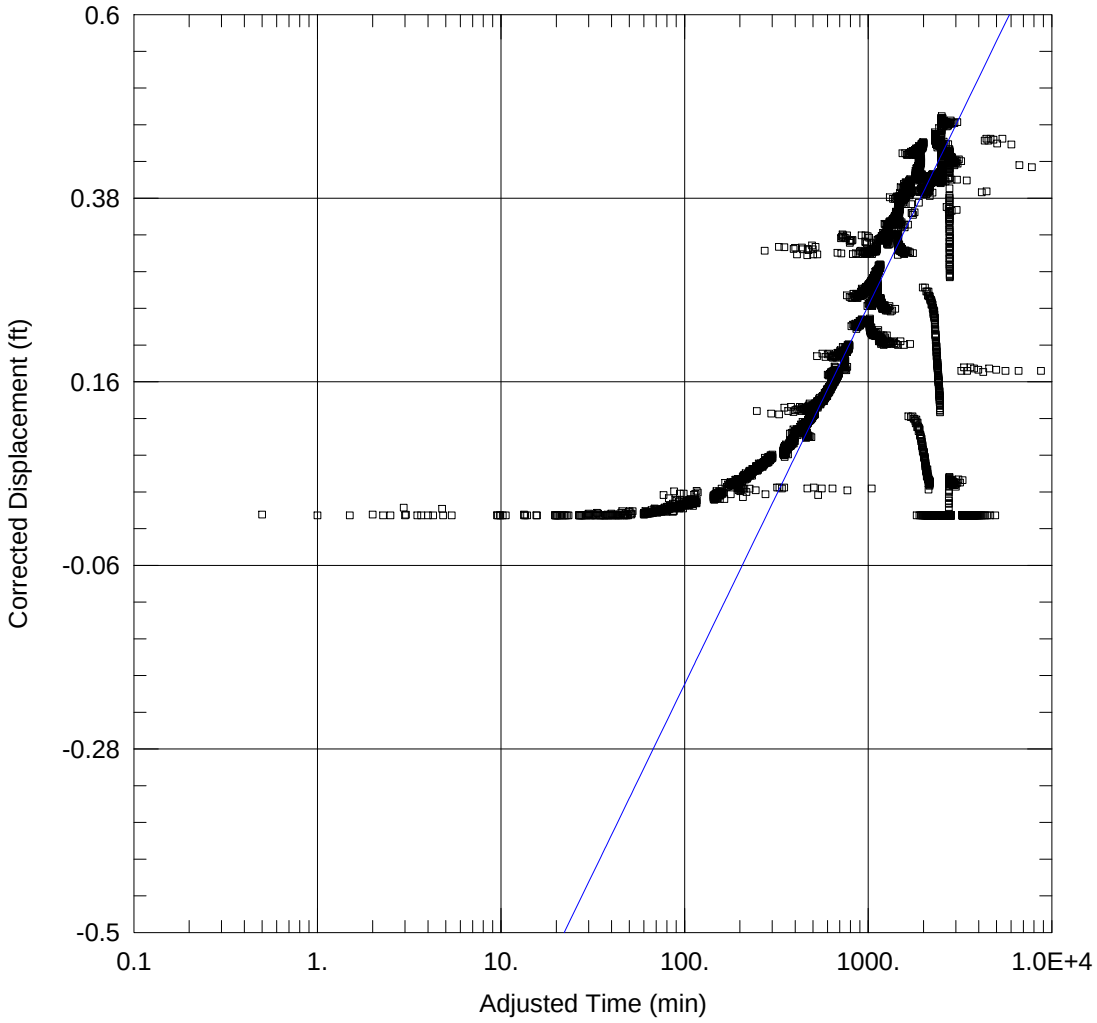
Well Name	X (ft)	Y (ft)
MW-10A	-8	21

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 93.19 ft^2/day
S = 0.1057
Kz/Kr = 0.5
b = 84.5 ft

MW-10B - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-10B_Cooper Jacob.aqt
Date: 05/18/11 Time: 16:22:22

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 84.5 ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

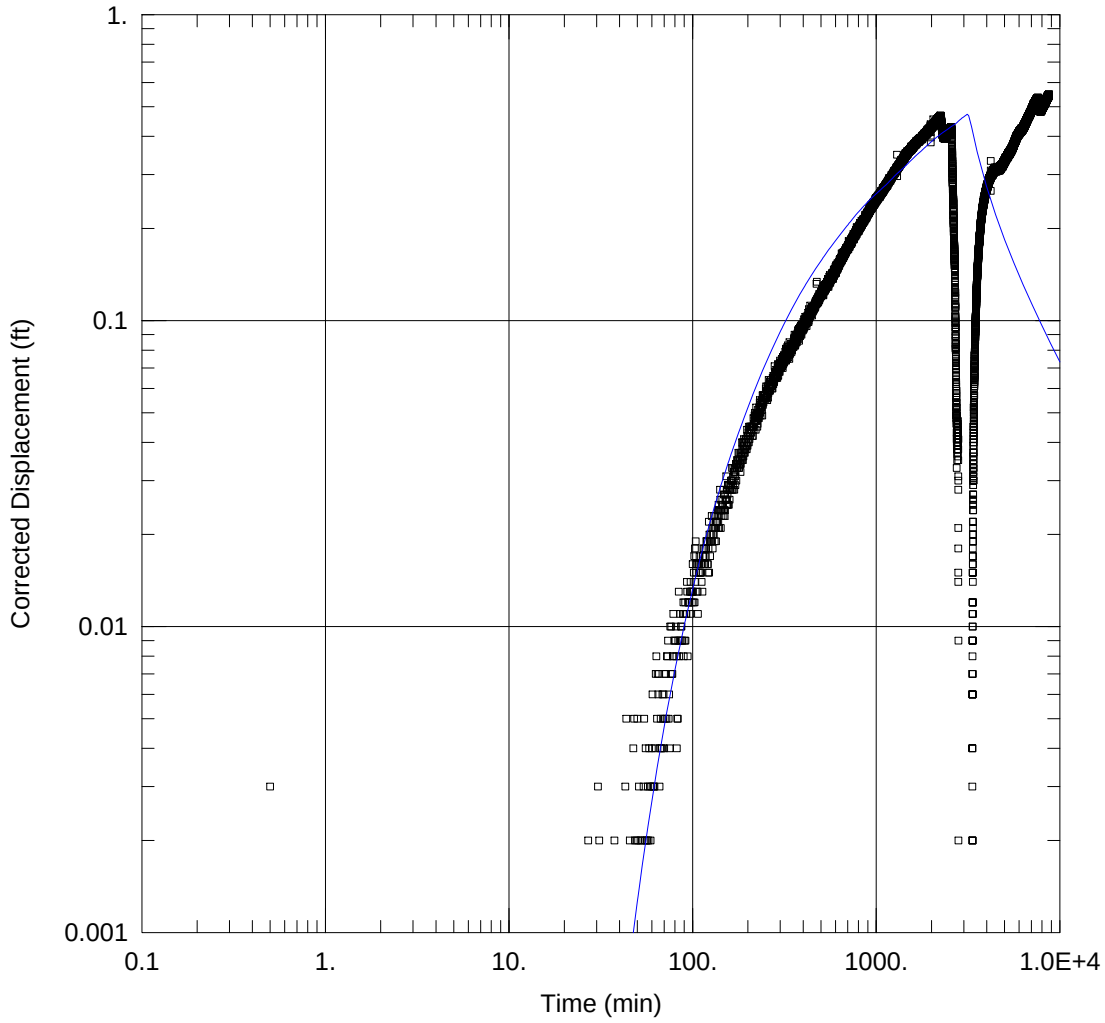
Well Name	X (ft)	Y (ft)
▫ MW-10B	-12	32

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 77.77 ft^2/day S = 0.02901

MW-10B - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-10B_Theis.aqt
Date: 05/18/11 Time: 16:24:49

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-1
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-1	0	0

Observation Wells

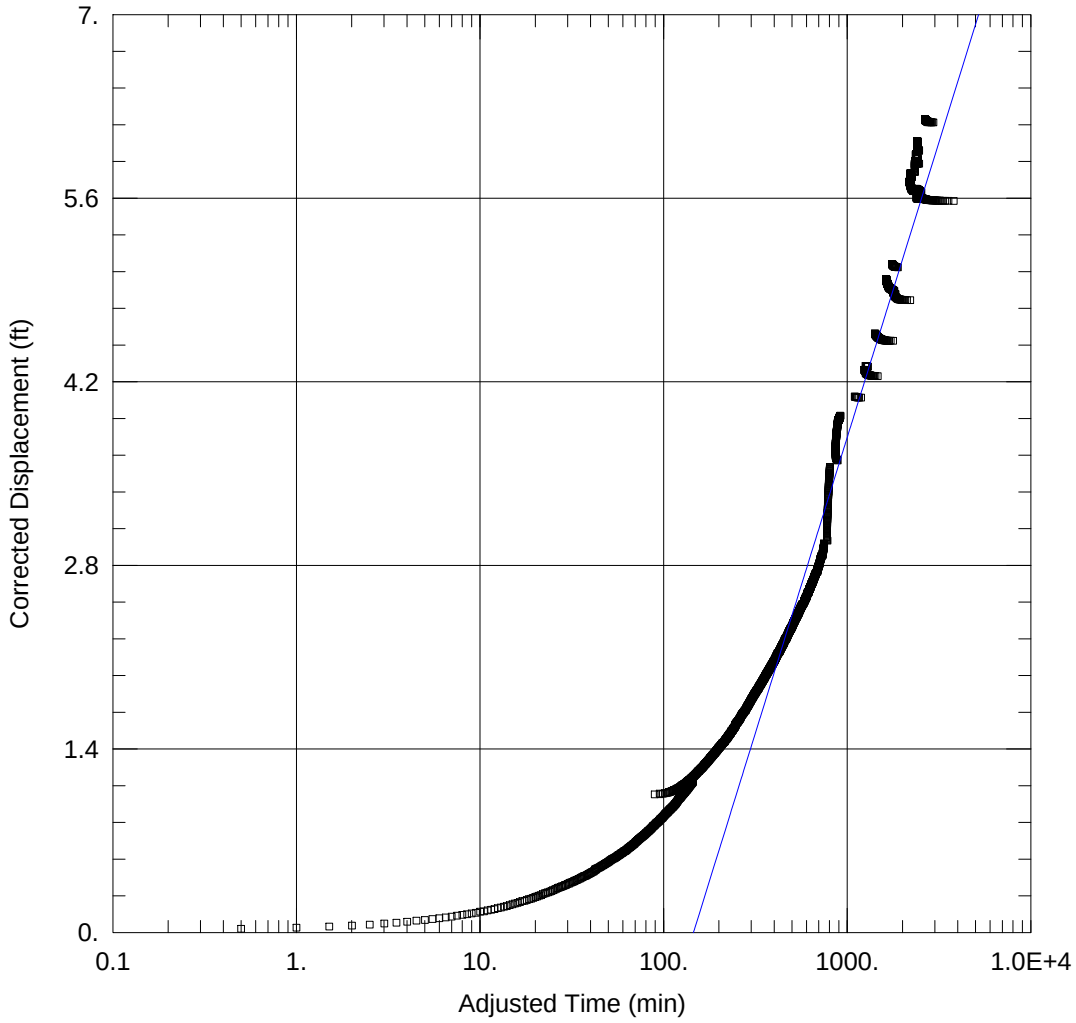
Well Name	X (ft)	Y (ft)
MW-10B	-12	32

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 76.13 ft^2/day
S = 0.03274
Kz/Kr = 0.5
b = 84.5 ft

MW-14A - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-14A_Cooper-Jacob.aqt
Date: 05/18/11 Time: 16:51:58

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-3
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 84.5 ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-3	0	0

Observation Wells

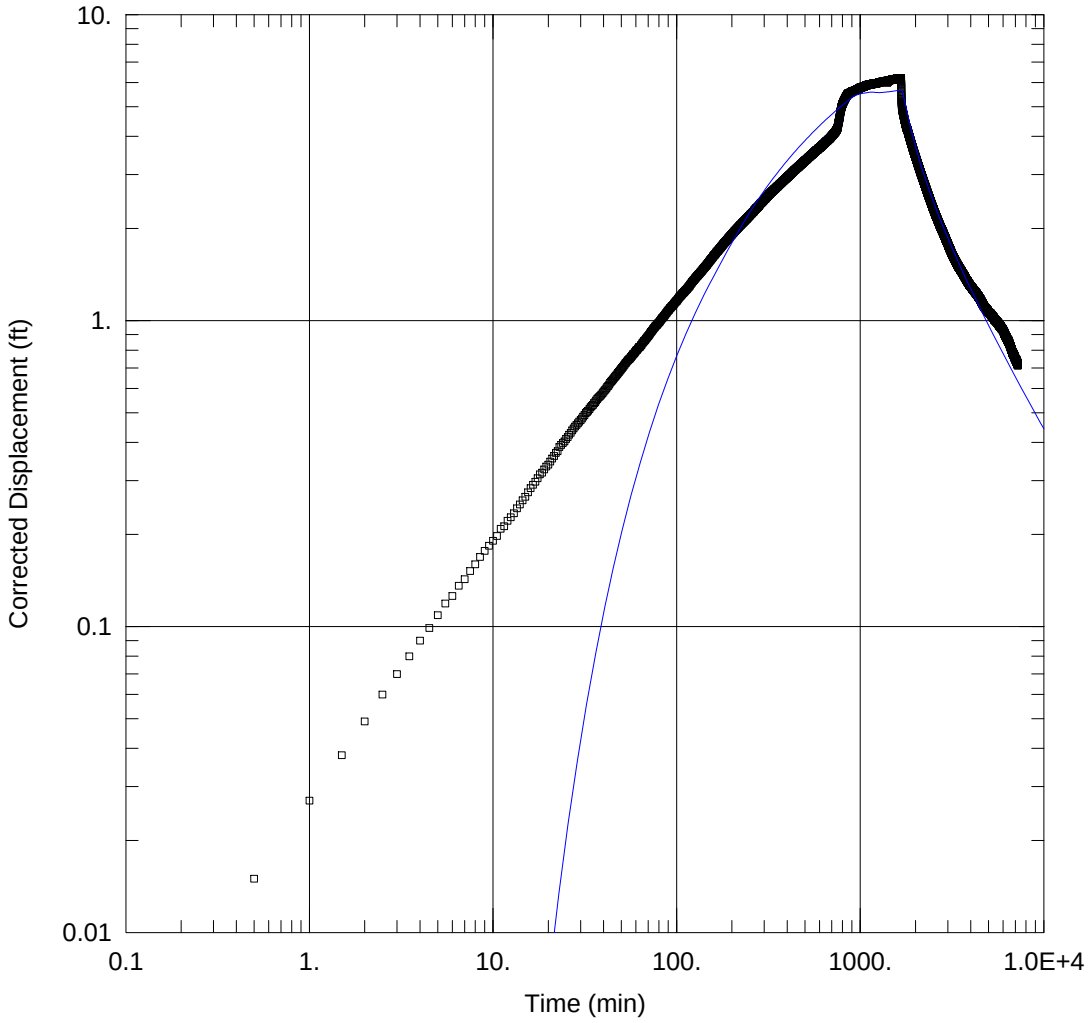
Well Name	X (ft)	Y (ft)
MW-14A	30	20

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 29.74 ft^2/day S = 0.005186

MW-14A - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-14A_Theis.aqt
Date: 05/18/11 Time: 16:50:17

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-3
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-3	0	0

Observation Wells

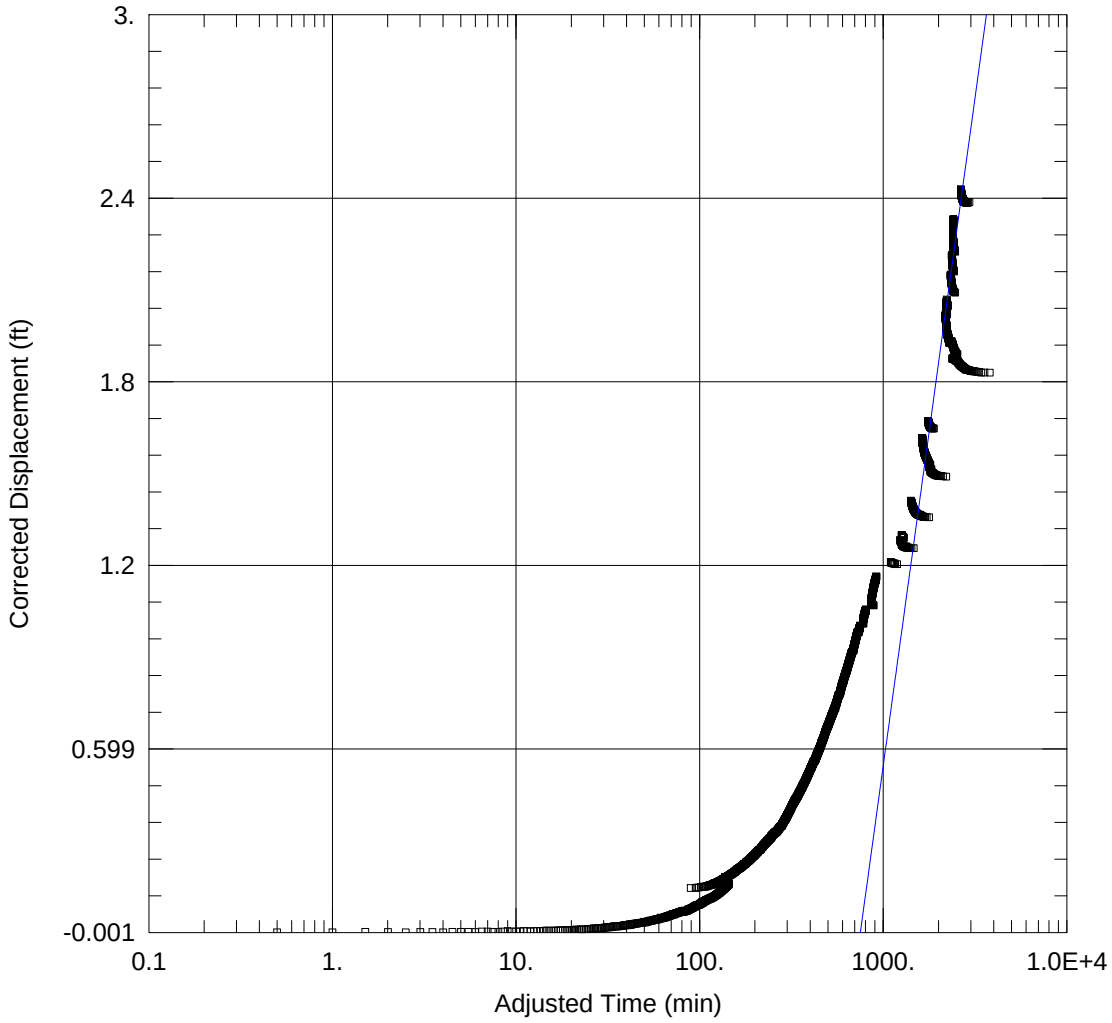
Well Name	X (ft)	Y (ft)
MW-14A	30	20

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 29.74 ft^2/day
S = 0.005186
Kz/Kr = 0.5
b = 84.5 ft

MW-17A - Cooper-Jacobs Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-17A_Cooper-Jacobs.aqt
Date: 05/18/11 Time: 17:48:57

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-3
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 84.5 ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-3	0	0

Observation Wells

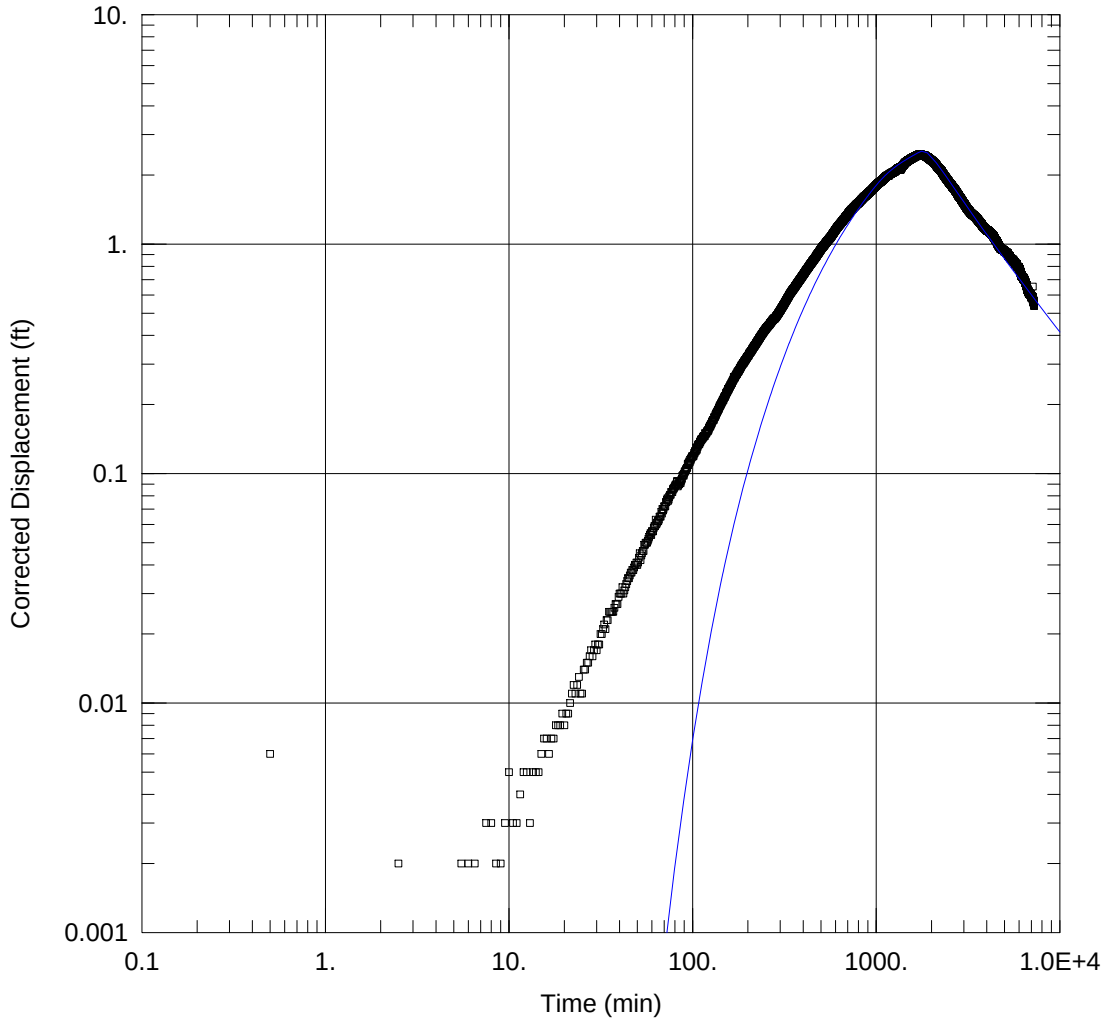
Well Name	X (ft)	Y (ft)
▫ MW-17A	-100	-136

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 30.67 ft^2/day S = 0.001261

MW-17A - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-17A_Theis.aqt
Date: 05/18/11 Time: 17:08:05

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-3
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-3	0	0

Observation Wells

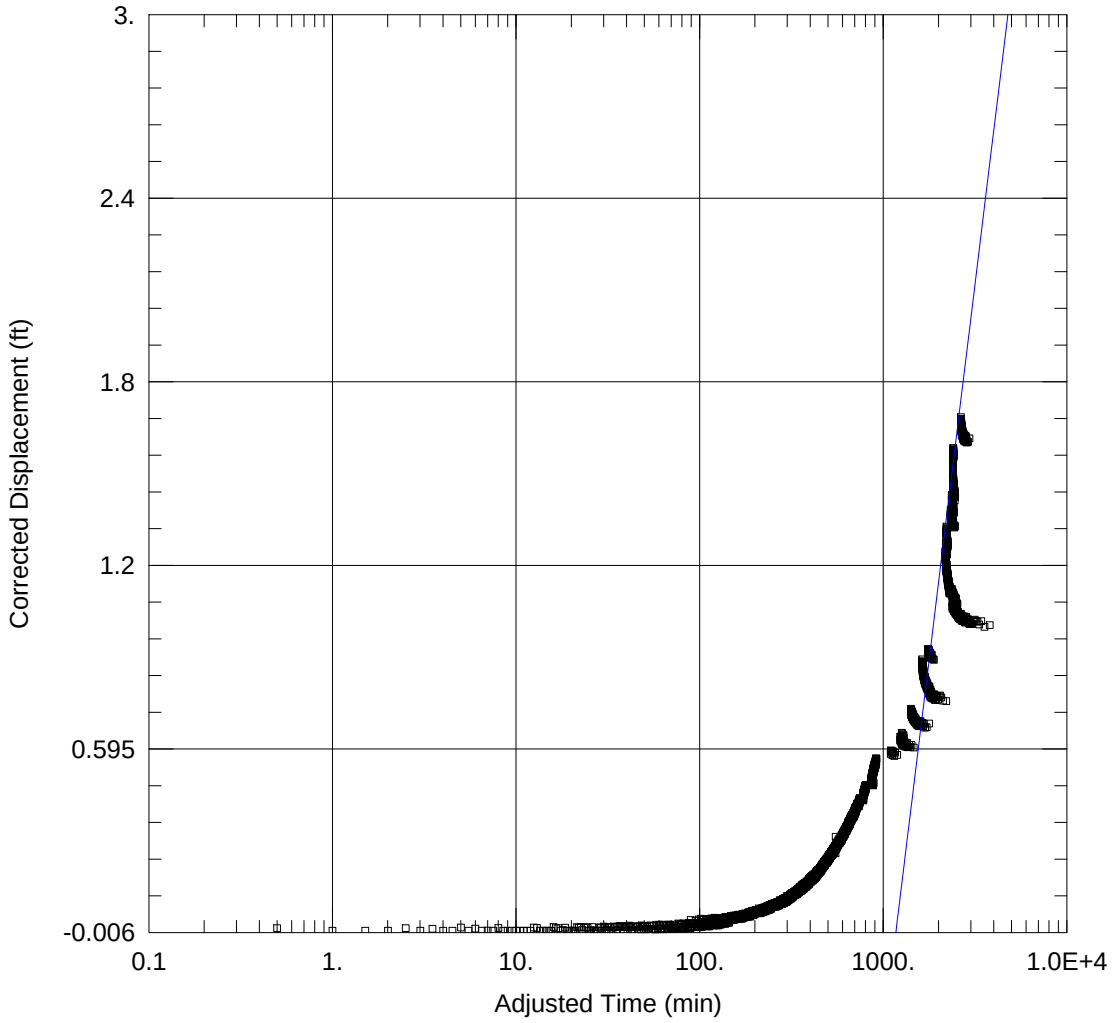
Well Name	X (ft)	Y (ft)
MW-17A	-100	-136

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 30.67 ft^2/day
S = 0.001261
Kz/Kr = 0.5
b = 84.5 ft

MW-17B - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-17B_Cooper-jacob.aqt
Date: 05/18/11 Time: 17:58:27

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-3
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 90.6 ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-3	0	0

Observation Wells

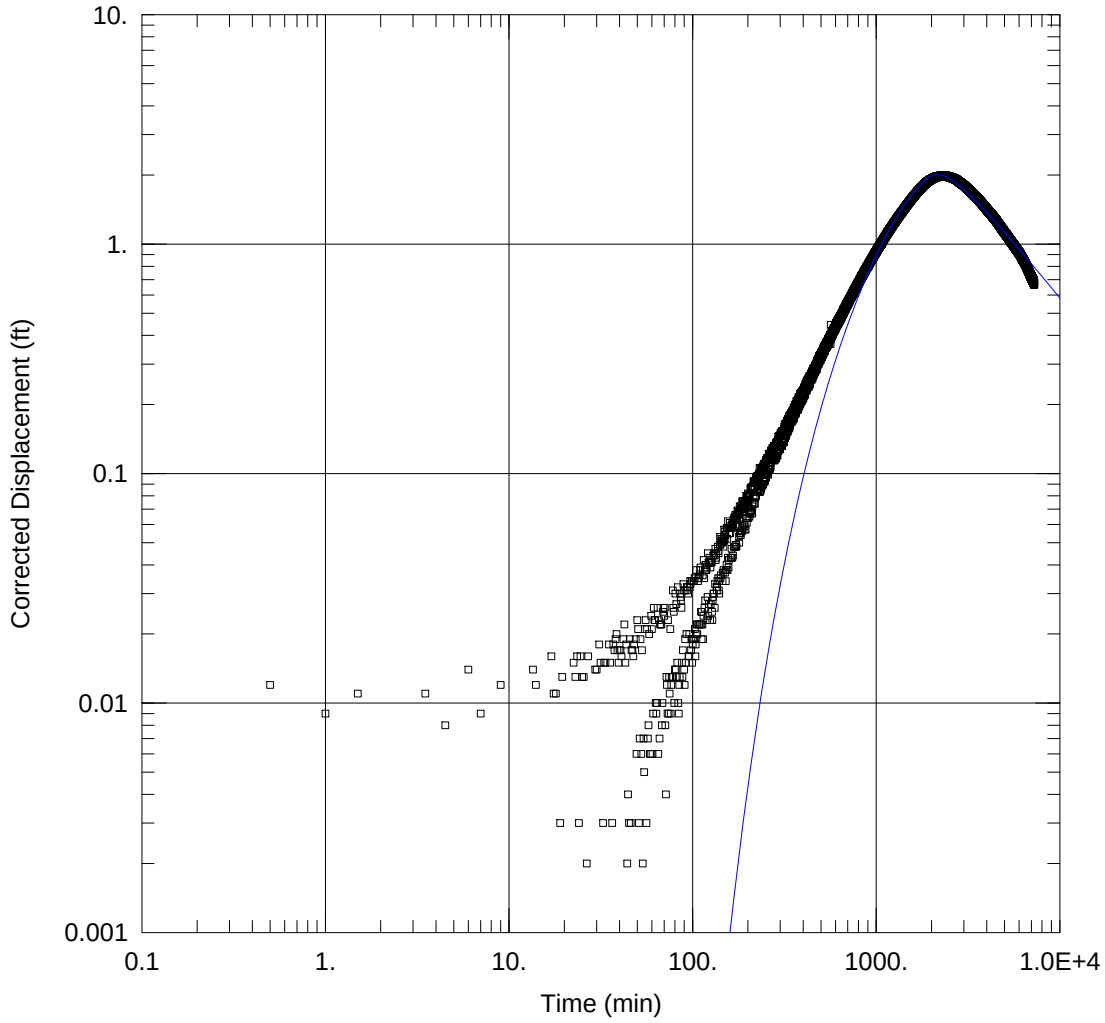
Well Name	X (ft)	Y (ft)
MW-17B	-102	-143

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 27.22 ft^2/day S = 0.001616

MW-17B - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-17B_Theis.aqt
Date: 05/18/11 Time: 17:57:06

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-3
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-3	0	0

Observation Wells

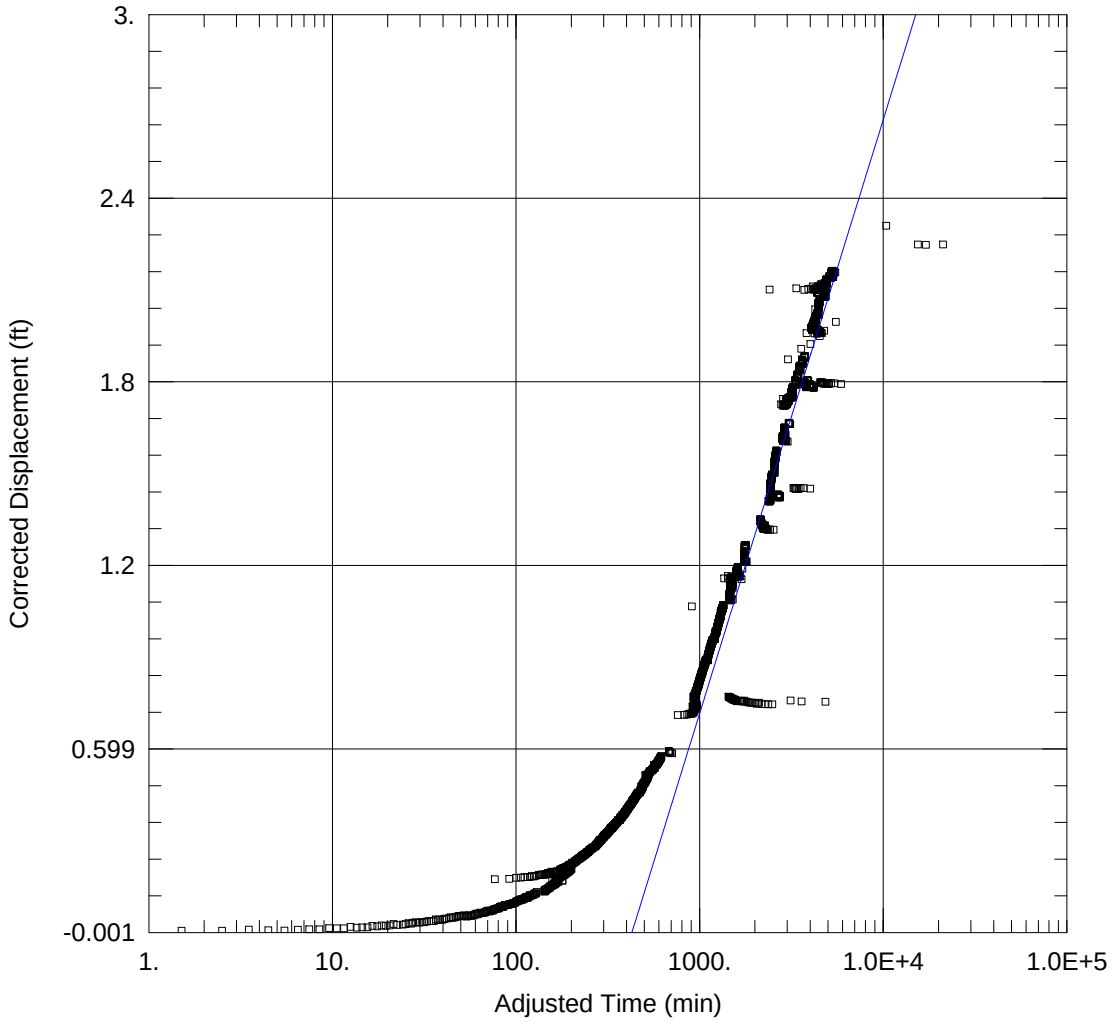
Well Name	X (ft)	Y (ft)
MW-17B	-102	-143

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 20.45 ft^2/day
S = 0.00183
Kz/Kr = 0.5
b = 90.6 ft

MW-18A - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-18A_Cooper-Jacob.aqt
Date: 05/17/11 Time: 14:36:28

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Project: 19200 Middletown, Parkton, MD
Location: 15541 New Hampshire Ave.
Test Well: RW-2
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 79. ft Anisotropy Ratio (Kz/Kr): 0.001997

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

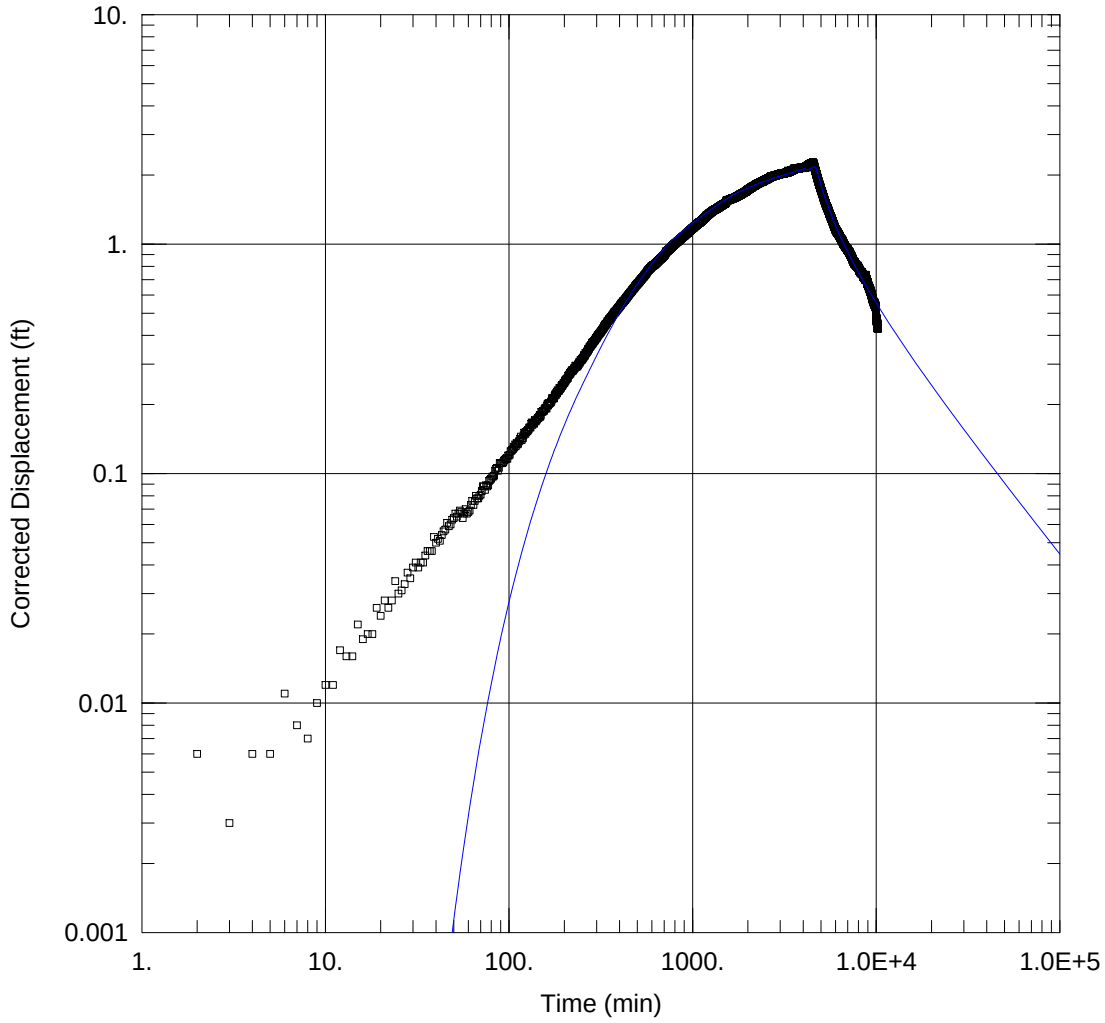
Well Name	X (ft)	Y (ft)
MW-18A	-10	-55

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 39.97 ft^2/day S = 0.008543

MW-18A - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-18A_Theis.aqt
Date: 05/17/11 Time: 14:37:09

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Project: 19200 Middletown, Parkton, MD
Location: 15541 New Hampshire Ave.
Test Well: RW-2
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

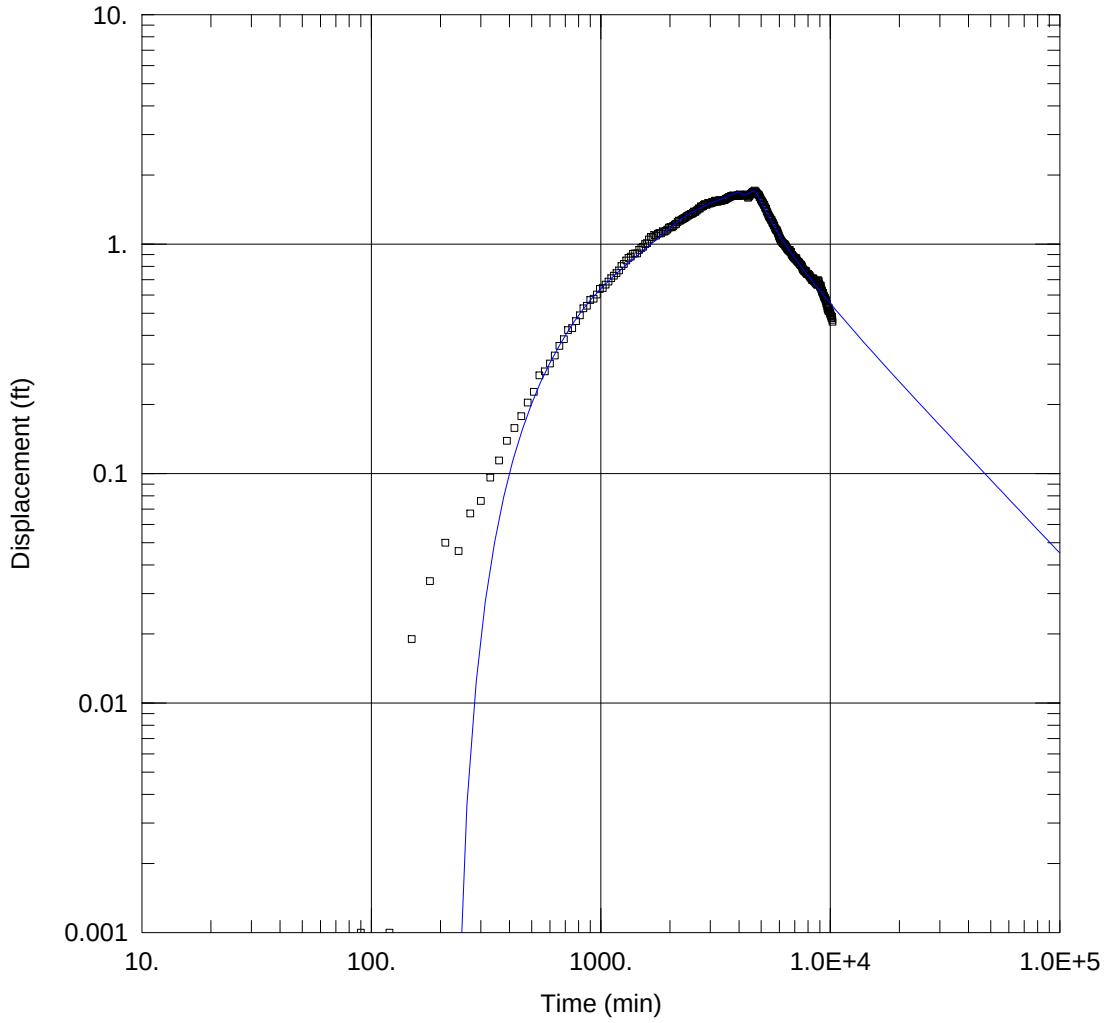
Well Name	X (ft)	Y (ft)
▫ MW-18A	-10	-55

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 39.97 ft^2/day
S = 0.008543
Kz/Kr = 0.001997
b = 79. ft

MW-18A - Neuman Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-18B_Neuman_reduced dataset.aqt
Date: 05/17/11 Time: 15:47:07

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Project: 19200 Middletown, Parkton, MD
Location: 15541 New Hampshire Ave.
Test Well: RW-2
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 79. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

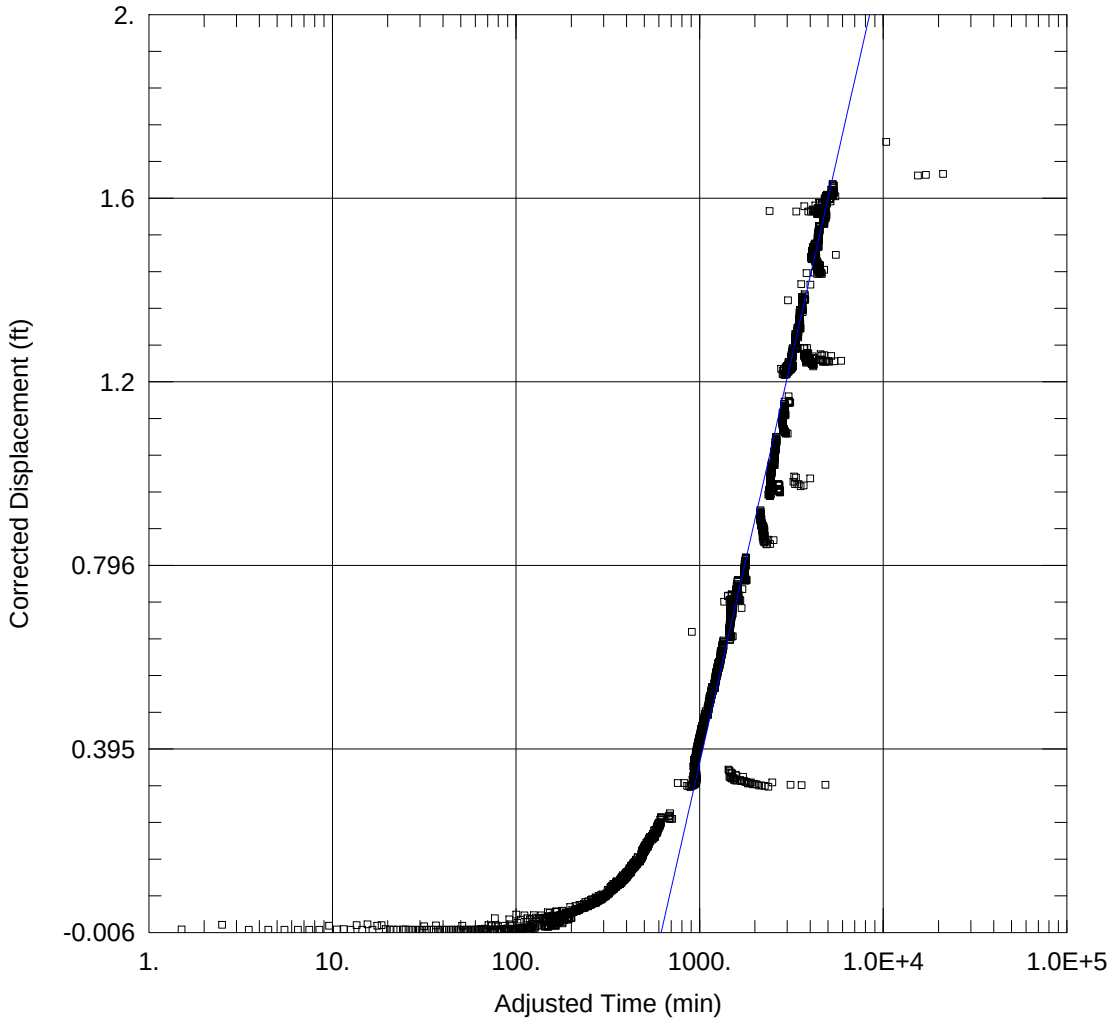
Well Name	X (ft)	Y (ft)
▫ MW-18B	-10	-55

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 38.54 ft^2/day
S = 0.01117
Sy = 0.001309
ß = 0.009941

MW-18B - Cooper-Jacob Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-18B_Cooper-Jacob.aqt
Date: 05/17/11 Time: 14:50:37

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-2
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 79. ft Anisotropy Ratio (Kz/Kr): 0.001997

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

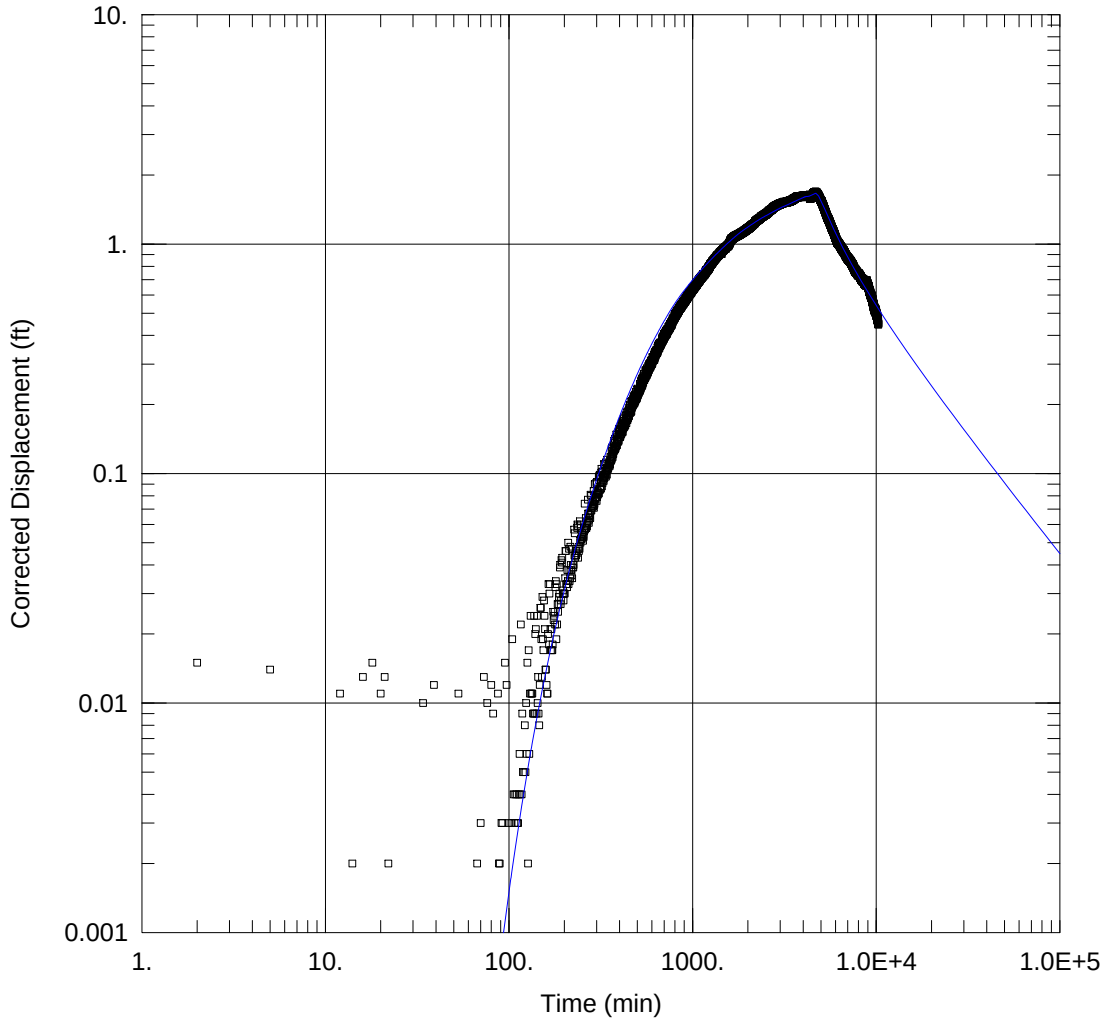
Well Name	X (ft)	Y (ft)
MW-18B	3	-51

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 43.93 ft^2/day S = 0.01633

MW-18B - Theis Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-18B_Theis.aqt
Date: 05/17/11 Time: 14:47:41

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Location: 19200 Middletown, Parkton, MD
Test Well: RW-2
Test Date: April 25-28, 2011

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

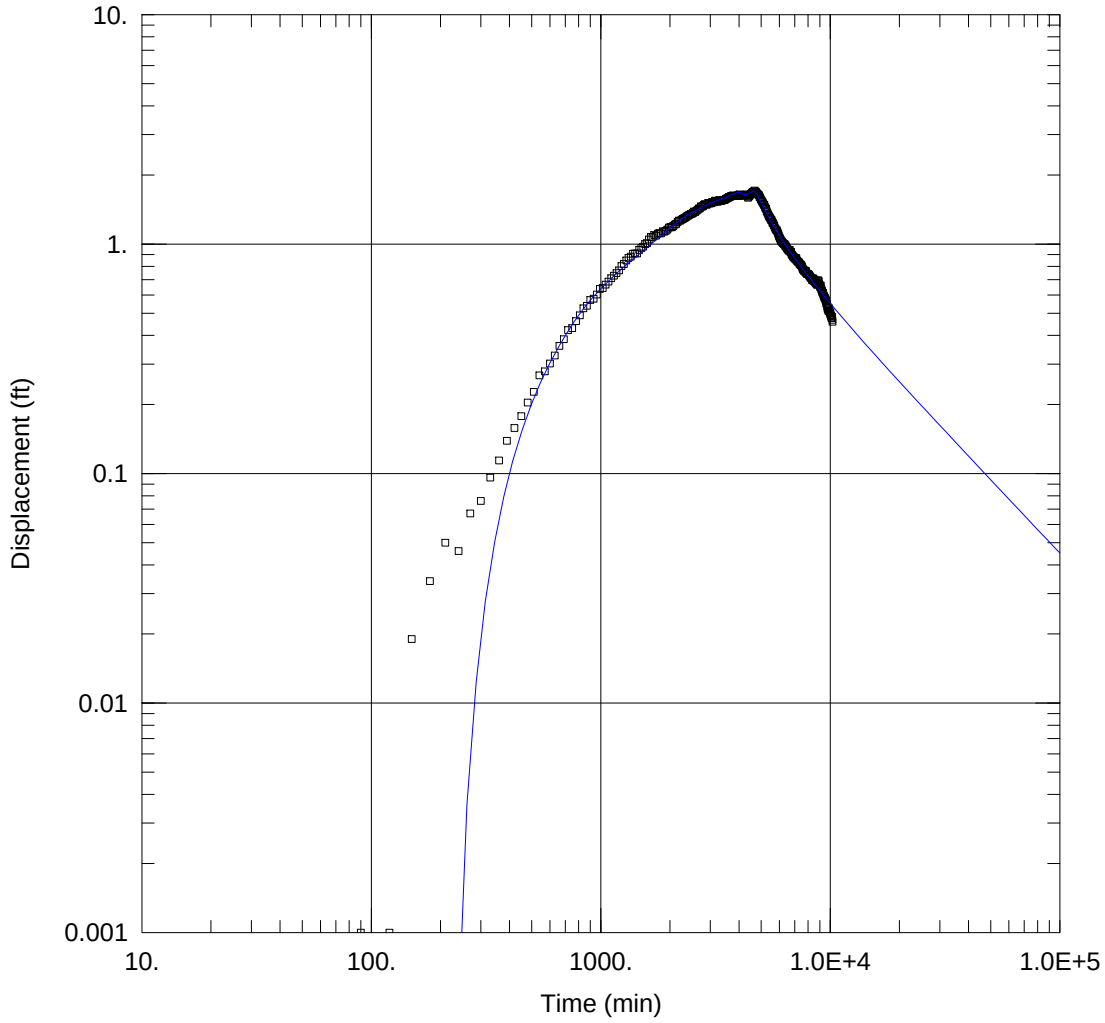
Well Name	X (ft)	Y (ft)
MW-18B	3	-51

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 39.7 ft^2/day
S = 0.01988
Kz/Kr = 0.001997
b = 79. ft

MW-18B - Neuman Solution



WELL TEST ANALYSIS

Data Set: L:\...\MW-18B_Neuman_reduced dataset.aqt
Date: 05/17/11 Time: 15:47:07

PROJECT INFORMATION

Company: GES
Client: Carroll Fuel
Project: 19200 Middletown, Parkton, MD
Location: 15541 New Hampshire Ave.
Test Well: RW-2
Test Date: April 25-28, 2011

AQUIFER DATA

Saturated Thickness: 79. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
RW-2	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
MW-18B	-10	-55

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 38.54 ft^2/day
S = 0.01117
Sy = 0.001309
ß = 0.009941

APPENDIX I

Manually Gauged Well Data Tabulation & Hydrographs

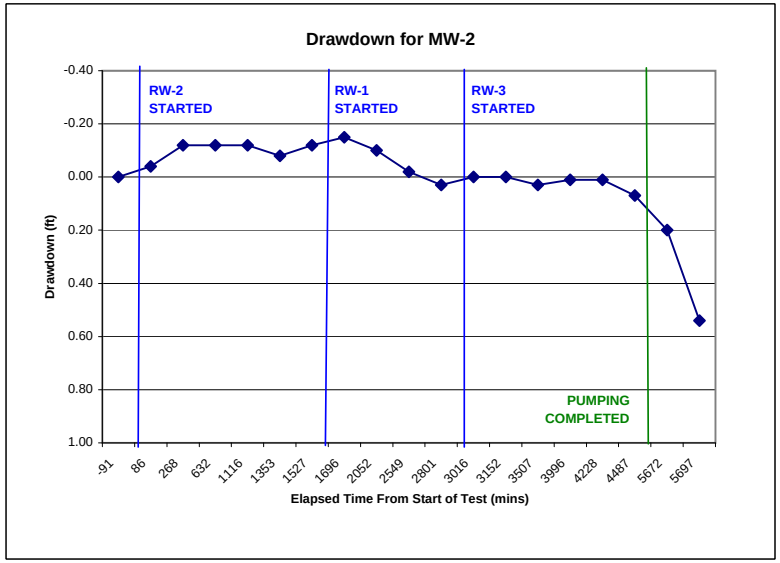
Appendix I

HYDROGRAPHS FOR MANUALLY GAUGED WELLS

Former Wally's CITGO
19200 Middletwon Rd.
Parkton, MD

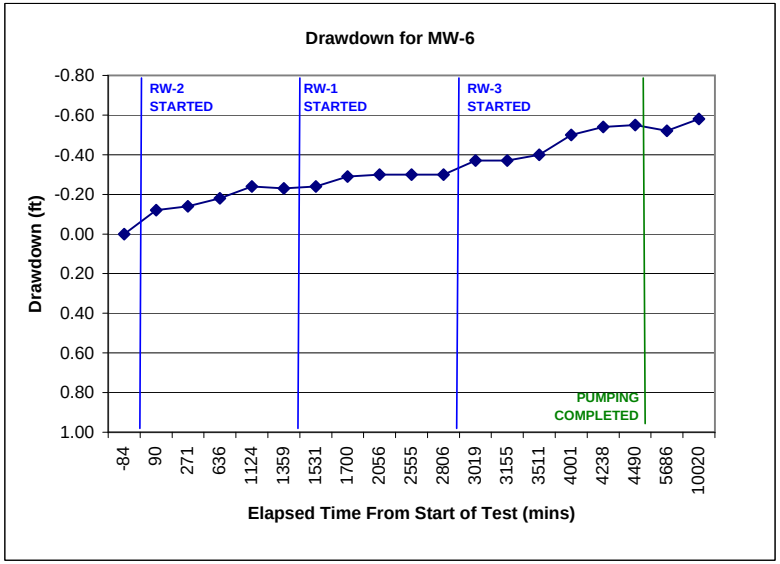
MW-2

Date	Elapsed Time	DTW	Draw Down
4/25/2011 9:22	-91	36.02	0.00
4/25/2011 12:18	86	35.98	-0.04
4/25/2011 15:20	268	35.90	-0.12
4/25/2011 21:24	632	35.90	-0.12
4/26/2011 5:28	1116	35.90	-0.12
4/26/2011 9:25	1353	35.94	-0.08
4/26/2011 12:19	1527	35.90	-0.12
4/26/2011 15:08	1696	35.87	-0.15
4/26/2011 21:04	2052	35.92	-0.10
4/27/2011 5:21	2549	36.00	-0.02
4/27/2011 9:33	2801	36.05	0.03
4/27/2011 13:08	3016	36.02	0.00
4/27/2011 15:24	3152	36.02	0.00
4/27/2011 21:19	3507	36.05	0.03
4/28/2011 5:28	3996	36.03	0.01
4/28/2011 9:20	4228	36.03	0.01
4/28/2011 13:39	4487	36.09	0.07
4/29/2011 9:24	5672	36.22	0.20
4/29/2011 9:49	5697	36.56	0.54



MW-6

Elapsed Time	DTW	Draw Down
4/25/2011 9:29	-84	38.42	0.00
4/25/2011 12:22	90	38.3	-0.12
4/25/2011 15:23	271	38.28	-0.14
4/25/2011 21:28	636	38.24	-0.18
4/26/2011 5:36	1124	38.18	-0.24
4/26/2011 9:31	1359	38.19	-0.23
4/26/2011 12:23	1531	38.18	-0.24
4/26/2011 15:12	1700	38.13	-0.29
4/26/2011 21:08	2056	38.12	-0.30
4/27/2011 5:27	2555	38.12	-0.30
4/27/2011 9:38	2806	38.12	-0.30
4/27/2011 13:11	3019	38.05	-0.37
4/27/2011 15:27	3155	38.05	-0.37
4/27/2011 21:23	3511	38.02	-0.40
4/28/2011 5:33	4001	37.92	-0.50
4/28/2011 9:30	4238	37.88	-0.54
4/28/2011 13:42	4490	37.87	-0.55
4/29/2011 9:38	5686	37.9	-0.52
5/2/2011 9:52	10020	37.84	-0.58

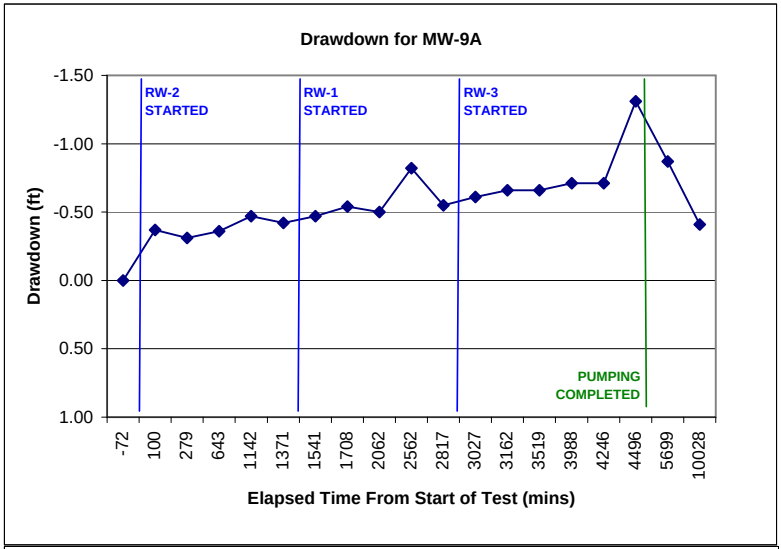


Appendix I

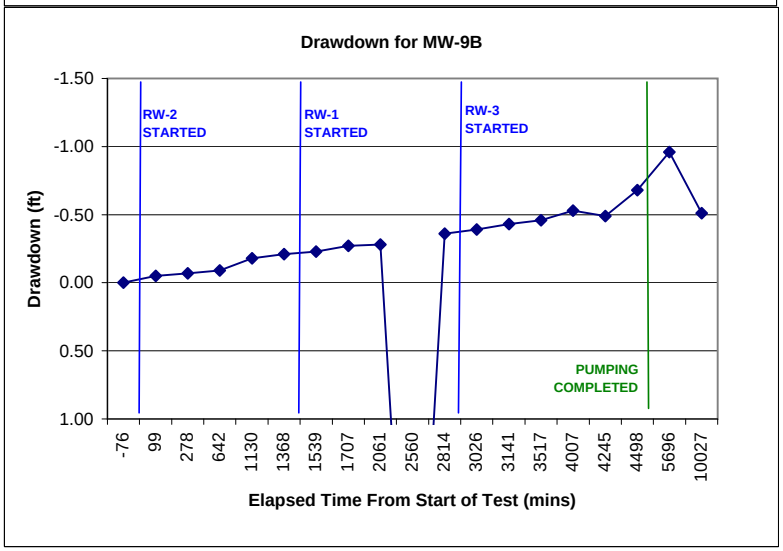
HYDROGRAPHS FOR MANUALLY GAUGED WELLS

Former Wally's CITGO
19200 Middletwon Rd.
Parkton, MD

MW-9A	Elapsed Time	DTW	Draw Down
4/25/2011 9:41	-72	35.22	0.00
4/25/2011 12:32	100	34.85	-0.37
4/25/2011 15:31	279	34.91	-0.31
4/25/2011 21:35	643	34.86	-0.36
4/26/2011 5:54	1142	34.75	-0.47
4/26/2011 9:43	1371	34.8	-0.42
4/26/2011 12:33	1541	34.75	-0.47
4/26/2011 15:20	1708	34.68	-0.54
4/26/2011 21:14	2062	34.72	-0.50
4/27/2011 5:34	2562	34.4	-0.82
4/27/2011 9:49	2817	34.67	-0.55
4/27/2011 13:19	3027	34.61	-0.61
4/27/2011 15:34	3162	34.56	-0.66
4/27/2011 21:31	3519	34.56	-0.66
4/28/2011 5:20	3988	34.51	-0.71
4/28/2011 9:38	4246	34.51	-0.71
4/28/2011 13:48	4496	33.91	-1.31
4/29/2011 9:51	5699	34.35	-0.87
5/2/2011 10:00	10028	34.81	-0.41



MW-9B	Elapsed Time	DTW	Draw Down
4/25/2011 9:37	-76	34.94	0.00
4/25/2011 12:31	99	34.89	-0.05
4/25/2011 15:30	278	34.87	-0.07
4/25/2011 21:34	642	34.85	-0.09
4/26/2011 5:42	1130	34.76	-0.18
4/26/2011 9:40	1368	34.73	-0.21
4/26/2011 12:31	1539	34.71	-0.23
4/26/2011 15:19	1707	34.67	-0.27
4/26/2011 21:13	2061	34.66	-0.28
4/27/2011 5:32	2560	38.59	3.65
4/27/2011 9:46	2814	34.58	-0.36
4/27/2011 13:18	3026	34.55	-0.39
4/27/2011 15:13	3141	34.51	-0.43
4/27/2011 21:29	3517	34.48	-0.46
4/28/2011 5:39	4007	34.41	-0.53
4/28/2011 9:37	4245	34.45	-0.49
4/28/2011 13:50	4498	34.26	-0.68
4/29/2011 9:48	5696	33.98	-0.96
5/2/2011 9:59	10027	34.43	-0.51

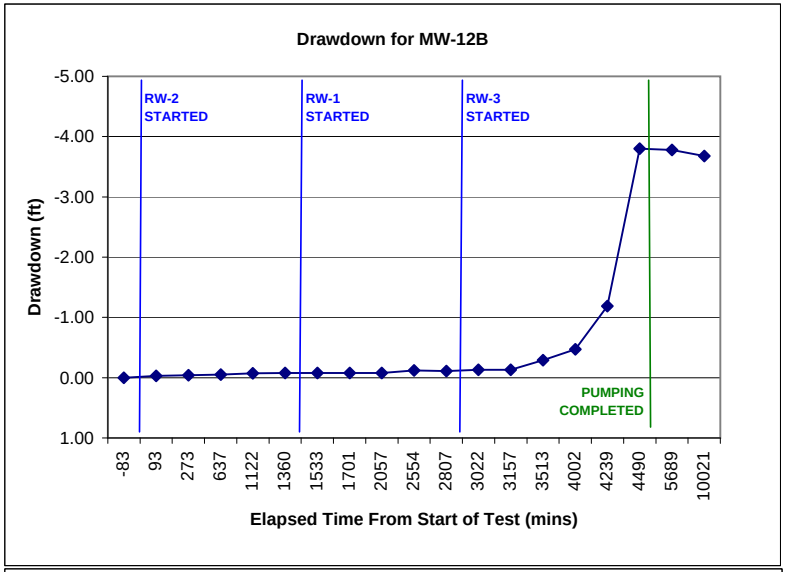


Appendix I

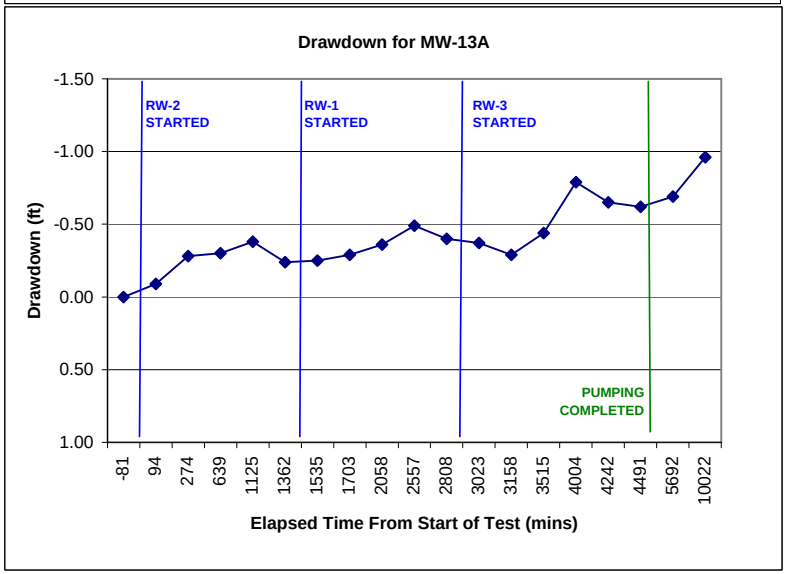
HYDROGRAPHS FOR MANUALLY GAUGED WELLS

Former Wally's CITGO
19200 Middletwon Rd.
Parkton, MD

MW-12B	Elapsed Time	DTW	Draw Down
4/25/2011 9:30	-83	40.3	0.00
4/25/2011 12:25	93	40.27	-0.03
4/25/2011 15:25	273	40.26	-0.04
4/25/2011 21:29	637	40.25	-0.05
4/26/2011 5:34	1122	40.23	-0.07
4/26/2011 9:32	1360	40.22	-0.08
4/26/2011 12:25	1533	40.22	-0.08
4/26/2011 15:13	1701	40.22	-0.08
4/26/2011 21:09	2057	40.22	-0.08
4/27/2011 5:26	2554	40.18	-0.12
4/27/2011 9:39	2807	40.19	-0.11
4/27/2011 13:14	3022	40.17	-0.13
4/27/2011 15:29	3157	40.17	-0.13
4/27/2011 21:25	3513	40.01	-0.29
4/28/2011 5:34	4002	39.83	-0.47
4/28/2011 9:31	4239	39.11	-1.19
4/28/2011 13:42	4490	36.5	-3.80
4/29/2011 9:41	5689	36.52	-3.78
5/2/2011 9:53	10021	36.62	-3.68



MW-13A	Elapsed Time	DTW	Draw Down
4/25/2011 9:32	-81	39.4	0.00
4/25/2011 12:26	94	39.31	-0.09
4/25/2011 15:26	274	39.12	-0.28
4/25/2011 21:31	639	39.1	-0.30
4/26/2011 5:37	1125	39.02	-0.38
4/26/2011 9:34	1362	39.16	-0.24
4/26/2011 12:27	1535	39.15	-0.25
4/26/2011 15:15	1703	39.11	-0.29
4/26/2011 21:10	2058	39.04	-0.36
4/27/2011 5:29	2557	38.91	-0.49
4/27/2011 9:40	2808	39	-0.40
4/27/2011 13:15	3023	39.03	-0.37
4/27/2011 15:30	3158	39.11	-0.29
4/27/2011 21:27	3515	38.96	-0.44
4/28/2011 5:36	4004	38.61	-0.79
4/28/2011 9:34	4242	38.75	-0.65
4/28/2011 13:43	4491	38.78	-0.62
4/29/2011 9:44	5692	38.71	-0.69
5/2/2011 9:54	10022	38.44	-0.96

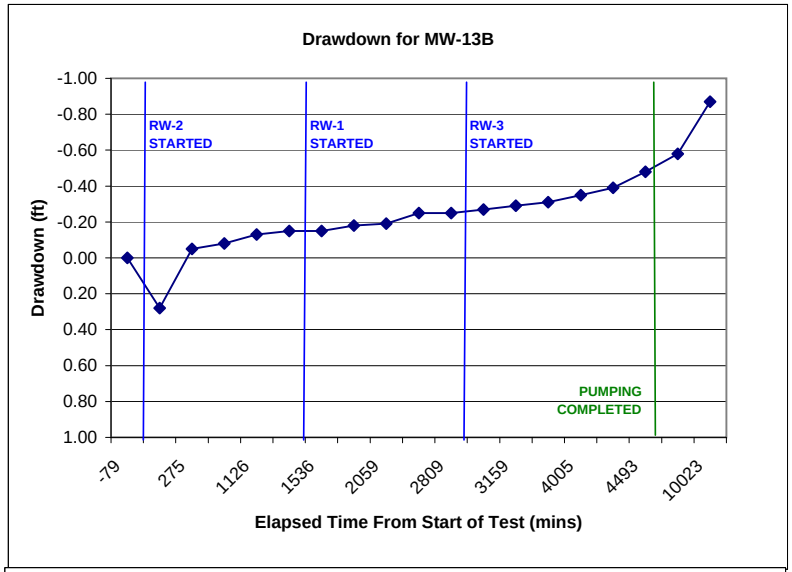


Appendix I

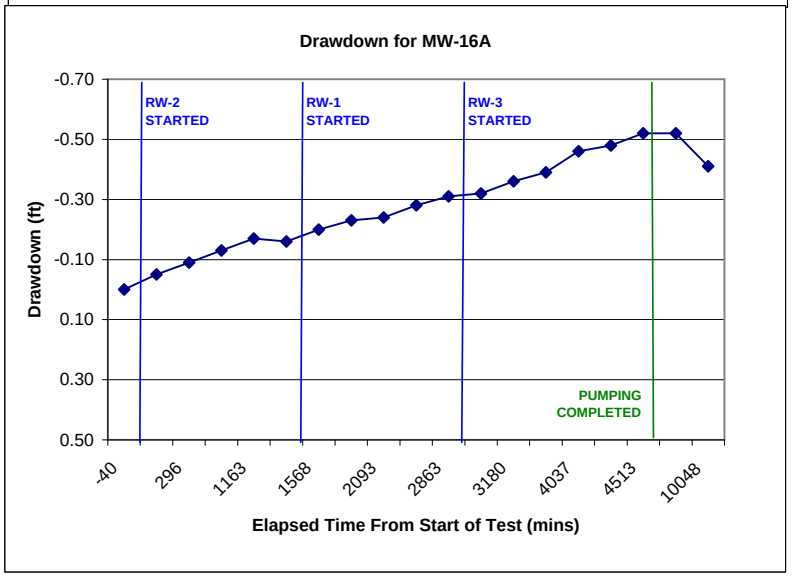
HYDROGRAPHS FOR MANUALLY GAUGED WELLS

Former Wally's CITGO
19200 Middletwon Rd.
Parkton, MD

MW-13B	Elapsed Time	DTW	Draw Down
4/25/2011 9:34	-79	40.4	0.00
4/25/2011 12:28	96	40.68	0.28
4/25/2011 15:27	275	40.35	-0.05
4/25/2011 21:31	639	40.32	-0.08
4/26/2011 5:38	1126	40.27	-0.13
4/26/2011 9:35	1363	40.25	-0.15
4/26/2011 12:28	1536	40.25	-0.15
4/26/2011 15:16	1704	40.22	-0.18
4/26/2011 21:11	2059	40.21	-0.19
4/27/2011 5:30	2558	40.15	-0.25
4/27/2011 9:41	2809	40.15	-0.25
4/27/2011 13:16	3024	40.13	-0.27
4/27/2011 15:31	3159	40.11	-0.29
4/27/2011 21:28	3516	40.09	-0.31
4/28/2011 5:37	4005	40.05	-0.35
4/28/2011 9:35	4243	40.01	-0.39
4/28/2011 13:45	4493	39.92	-0.48
4/29/2011 9:45	5693	39.82	-0.58
5/2/2011 9:55	10023	39.53	-0.87



MW-16A	Elapsed Time	DTW	Draw Down
4/25/2011 10:13	-40	40.33	0.00
4/25/2011 12:22	90	40.28	-0.05
4/25/2011 15:48	296	40.24	-0.09
4/25/2011 22:11	679	40.2	-0.13
4/26/2011 6:15	1163	40.16	-0.17
4/26/2011 10:06	1394	40.17	-0.16
4/26/2011 13:00	1568	40.13	-0.20
4/26/2011 15:39	1727	40.1	-0.23
4/26/2011 21:45	2093	40.09	-0.24
4/27/2011 6:05	2593	40.05	-0.28
4/27/2011 10:35	2863	40.02	-0.31
4/27/2011 13:37	3045	40.01	-0.32
4/27/2011 15:52	3180	39.97	-0.36
4/27/2011 22:01	3549	39.94	-0.39
4/28/2011 6:09	4037	39.87	-0.46
4/28/2011 11:11	4339	39.85	-0.48
4/28/2011 14:05	4513	39.81	-0.52
4/29/2011 11:05	5773	39.81	-0.52
5/2/2011 10:20	10048	39.92	-0.41



Appendix I

HYDROGRAPHS FOR MANUALLY GAUGED WELLS

Former Wally's CITGO
19200 Middletwon Rd.
Parkton, MD

MW-16B	Elapsed Time	DTW	Draw Down
4/25/2011 10:11	-42	40.91	0.00
4/25/2011 12:53	121	40.88	-0.03
4/25/2011 15:48	296	40.84	-0.07
4/25/2011 22:10	678	40.79	-0.12
4/26/2011 6:13	1161	40.75	-0.16
4/26/2011 10:07	1395	40.75	-0.16
4/26/2011 12:59	1567	40.72	-0.19
4/26/2011 15:38	1726	40.69	-0.22
4/26/2011 21:44	2092	40.66	-0.25
4/27/2011 6:07	2595	40.65	-0.26
4/27/2011 10:33	2861	40.62	-0.29
4/27/2011 13:36	3044	40.6	-0.31
4/27/2011 15:51	3179	40.56	-0.35
4/27/2011 22:00	3548	40.54	-0.37
4/28/2011 6:08	4036	40.45	-0.46
4/28/2011 11:10	4338	40.43	-0.48
4/28/2011 14:04	4512	40.41	-0.50
4/29/2011 11:03	5771	40.42	-0.49
5/2/2011 10:18	10046	40.5	-0.41