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Corrective Action Plan

7-Eleven Store # 22281
2400 Pleasantville Road
Fallston, Maryland 21047
MDE Case # 2005-0120-HA

AECOM Corporation
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Prepared for:
7-Eleven, Inc.
Store # 22281
Fallston, Maryland

Corrective Action Plan

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EXECUTIVE SUMMARY

On behalf of 7-Eleven, Inc. (7-Eleven), AECOM (formerly ENSR) has prepared a Corrective Action Plan (CAP) to address the presence of subsurface dissolved-phase hydrocarbons at 7-Eleven Store No. 22281. Prior to CAP submission, the Maryland Department of the Environment (MDE) required 7-Eleven to complete several feasibility tests to determine an effective remedial approach.

The project site is an operating 7-Eleven store located at the western corner of the intersection of Maryland Route 152 (Fallston Road) and Pleasantville Road in Harford County, Fallston, Maryland. The store property is owned by 7-Eleven and operated by a franchisee. The 7-Eleven facility currently operates two gasoline underground storage tanks (UST): one 15,000-gallon regular unleaded (RUL) tank and one 10,000-gallon premium unleaded (PUL) tank. In October 2008, AECOM observed the removal of three 12,000-gallon, single-walled steel, cathodically protected, USTs that were installed in 1981. The associated product piping was also removed. The new USTs were installed west-northwest of the former tank field; approximately 622.59 tons of petroleum contaminated soil was removed from the site. A report detailing the UST removal was submitted to MDE on December 2, 2008.

Drinking water is supplied to the site by a potable well. In 1991, a carbon filtration system was installed on the on-site potable well due to concentrations of methyl tertiary-butyl ether (MTBE) above the current MDE guideline of 20 micrograms-per-liter (µg/l) in water samples collected from the well. In August 2004, the water filtration system was upgraded to ensure potable water at the site maintains MTBE concentrations below laboratory detection limits. The system, consisting of three granular activated carbon (GAC) units, is still currently in use at the site.

Site assessment activities were initiated in response to the detection of petroleum hydrocarbon vapors in tank field sumps during a compliance inspection at the facility conducted by an MDE representative on July 30, 2004.

Fourteen groundwater monitoring wells are installed on the site. Twelve (12) monitoring wells were installed since the initiation of the subsurface investigation activities in July 2004. Three monitoring wells were installed in 1989 by7-Eleven (formerly the Southland Corporation) as part of property transaction activities; one of these wells (HW-1) was destroyed during the 2008 UST replacement activities.

Currently, routine monitoring is conducted at the site, and groundwater elevation is recorded in all monitoring wells on a monthly basis. Quarterly, dissolved oxygen concentrations and groundwater samples and are collected from all monitoring wells and analyzed for volatile organic compounds (VOC) plus fuel oxygenates and total petroleum hydrocarbons-gasoline range organics (TPH-GRO).

Based on the analytical data, it appears that dissolved-phase MTBE is mostly concentrated in the shallow groundwater in the vicinity north of the tank field. The MTBE plume appears to be approximately 120 feet long and 50 feet wide extending north towards Maryland Route 152. The plume appears to be migrating in a northern direction, though prevailing groundwater gradient is toward the northwest.

Vertical delineation monitoring wells have shown MTBE is present in the deeper groundwater; however, dissolved-phase concentrations are below the MDE guideline of 20 µg/l. Other than surrounding businesses, none of which appear directly down-gradient of the MTBE migration, no potable wells were identified within 500 feet down-gradient of the site.

As determined from the historical sampling events dating back to July 2005, MTBE has consistently been detected above the MDE guidelines of 20 µg/l in the shallow monitoring wells MW-4A, MW-6 and HW-3. Groundwater in the deeper zone, however, has historically shown MTBE below the MDE guidelines with the one exception of monitoring well MW-4B and MW-8B.

Remedial alternatives including groundwater pump and treat, dual-phase extraction, soil vapor extraction and bio-augmentation of groundwater were considered for implementation at this site. Of these alternatives, enhanced groundwater bio-augmentation is anticipated to be the most viable remedial alternatives to address the gasoline-impacted groundwater in the immediate area of the former tank field and to the north towards State Highway 152. Previous field and bench scale studies indicating favorable conditions for application of bio-augmentation as a remedial technology were submitted to the MDE on August 27, 2007. Following MDE approval of the Bio-Augmentation Pilot Test Work Plan, dated February 4, 2008, AECOM initiated the six-month bio-augmentation pilot test on November 10, 2008.

A report detailing the six-month bio-augmentation pilot study was submitted to the MDE on July 29, 2009. Results of this study indicate the bio-augmentation supports increased aerobic in-situ microbial degradation of benzene, toluene, ethylbenzene, and xylene (BTEX) and MTBE. Laboratory data indicates a strong relationship between groundwater nutrient levels (mainly nitrate and orthophosphate) and reduction of dissolved-phase petroleum hydrocarbon concentrations in the shallow water-bearing zone in the area of monitoring well MW-4A. Over the course of the six-month bio-augmentation pilot study, an overall reduction of petroleum-related hydrocarbon concentrations followed increases in nutrient levels stimulated by the injection of Petrozyme™ products into the shallow aquifer. From October 30, 2008 to April 30, 2009, MTBE concentrations in monitoring wells MW4-A and HW-3 were reduced by approximately 50%. In addition, monitoring well MW-6, the well furthest away from the bio-augmentation delivery trenches, showed a delayed increase in nitrate and MTBE reduction.

Based upon the results of the six-month bio-augmentation pilot study, AECOM proposes to inject a combination of enzymes and nutrients via a series of injection points within the impacted area. A total of 21 one-inch diameter injection points will be installed to a depth of approximately 25 feet bgs using a Geoprobe rig. The injection points will be constructed using pre-packed 0.020-slot PVC screen from 5 feet bgs to 25 feet bgs, and one-inch diameter PVC riser from ground surface to 5 feet bgs; injection points will be finished with manholes. A 1,000-gallon aboveground polypropylene tank containing oxygenated and bio-augmented water will be installed on-site, which will be connected to the injection wells using 1/4-inch polypropylene tubing. Water will be provided from the store's on-site potable well; the oxygenated injectate will flow from the tank to the injection wells by gravity-feed.

Continued monitoring and sampling will demonstrate the effectiveness of these remedial technologies. Modifications or changes in the remedial strategy will not be implemented without approval from the MDE.

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1.0 INTRODUCTION

On behalf of 7-Eleven, Inc. (7-Eleven), AECOM (formerly ENSR) has prepared a Corrective Action Plan (CAP) for the 7-Eleven Store No. 22281 located at 2400 Pleasantville Road in Fallston, Maryland. The Maryland Department of the Environment (MDE) has assigned a case # 2005-0120-HA to the site. A Corrective Action Evaluation Plan (CAEP) was submitted to the Department on April 13, 2006 and subsequently approved by the MDE on May 5, 2006. At the request of the MDE, this report has been prepared to summarize the site activities that have been performed through June 2009 and present a plan to effectively reduce the subsurface petroleum hydrocarbon impact. The following information regarding this site is presented in this CAP:

- An overview of the project,
- A review of historic investigation activities,
- A discussion of field and bench scale pilot testing activities, and
- An outline of the proposed remedial strategy.

2.0 BACKGROUND INFORMATION

2.1 Site Description

The project site is an operating 7-Eleven Store #22281 located at the western corner of the intersection of Maryland Route 152 (Fallston Road) and Pleasantville Road in Harford County, Fallston, Maryland. **Figure 1** is an annotated USGS 7.5 Minute-Series Quadrangle Map (Jarrettsville) indicating the site location, topography, surface drainage patterns and land-use features. The site is located at 39 ° 31' 54.5" north latitude and 76 °26' 49.9" west longitude and is approximately 550 feet above mean sea level (MSL). Based on the parcel information provided by the Maryland Department of Assessments and Taxation, the property is owned by 7-Eleven. The property is assessed to be approximately 49,233 square-feet, 2,520 square-feet occupied by the 7-Eleven building. The legal identifier for the property is Map 47, Parcel 199 and Grid 2D.

2.2 Facility Description

The 7-Eleven building is a single-story concrete block structure on a poured concrete slab. The building was erected in 1981 and includes an office, restrooms, storage and retail space. The facility sanitary and process water discharge to the septic system that drains to a leaching field located on the west side of the 7-Eleven building.

The site is located in a commercial and residential area and includes a convenience store building located on the southern portion of the property and three dispenser pumps located on the central portion of the property (**Figure 2**).

The 7-Eleven facility currently operates two gasoline underground storage tanks (UST): one 15,000-gallon regular unleaded (RUL) tank and one 10,000-gallon premium unleaded (PUL) tank. In October 2008, AECOM observed the removal of three 12,000-gallon, single-walled steel, cathodically protected, USTs that were installed in 1981. The associated product piping was also removed. The new USTs were installed west-northwest of the former tank field; approximately 622.59 tons of soil was removed from the site. The UST closure report was submitted to the MDE on December 2, 2008.

There are currently a total of fourteen groundwater monitoring wells installed at this site. Twelve monitoring wells have been installed since the initiation of the subsurface investigation activities in July 2004. Three monitoring wells were installed in 1989 by the Southland Corporation as part of property transaction activities. These historic monitoring wells (HW-1, HW-2 and HW-3) are constructed of 4-inch diameter PVC and completed to an approximate depth of 20 feet below ground surface (bgs). The screened zones exist from 3 to 20 feet bgs with a solid PVC riser from 0 to 3 feet bgs. Monitoring well HW-1 was destroyed in the October 2008 UST replacement. The location of all site wells and other relevant site features are shown on **Figure 2.**

2.3 Site History

Site assessment activities at this location were initiated in response to the detection of petroleum hydrocarbon vapors in tank field sumps during a compliance inspection at the facility conducted by an MDE representative on July 30, 2004. The following chronology provides an outline of activities related to the investigation and assessment of petroleum hydrocarbons at this site performed through June 2009:

- In 1981, three 12,000-gallon steel, single-walled, cathodically protected USTs were installed at the site.
- In 1991, a carbon filtration point of entry (POET) system was installed on the on-site potable well due to concentrations of methyl tertiary-butyl ether (MTBE) above the MDE guideline of 20 micrograms-per-liter (µg/l) in water samples collected from the well.
- On July 30, 2004, MDE conducted a compliance inspection of the 7-Eleven facility. During this inspection, MDE reported to 7-Eleven that petroleum hydrocarbon vapors were detected in the tank field sumps.
- On August 9, 2004, ENSR, on behalf of 7-Eleven, performed a one-hour hydrostatic test on the regular, mid-grade and premium gasoline UST submersible turbine pump (STP) containment sumps

and conducted a general area survey to determine the source of petroleum vapors reported by MDE. The STP sumps tested tight. One observation well was discovered in the grassy area immediately adjacent to the tank field. No liquid-phase hydrocarbons (LPH) or petroleum hydrocarbon vapors were detected in the well. Test results were submitted to MDE on August 11, 2004.

- In August 2004, at the request of the Harford County Health Department, an upgraded water filtration system was installed to ensure potable water at the site maintains MTBE concentrations below laboratory detection limits. The system is still currently in use at the site.
- On September 7, 2004, MDE requested evaluation of the site environmental conditions as part of the MDE investigation of all potential petroleum sources impacting drinking water wells within the Pleasantville area of Harford County.
- On September 27, 2004, ENSR, on behalf of 7-Eleven, submitted a limited hydrogeologic investigation work plan to MDE. On November 18, 2004, MDE issued ENSR approval to proceed after expanding the scope of the initial work plan.
- From September 2004 to November 2004, a Praxair tracer test was conducted at the site. The tank system passed the Praxair test with only minor vapor leaks that were repaired and no indication of any liquid leak from the UST system. Testing of the product line secondary containment identified damage to the mid-grade unleaded (MUL) product line rock guard (secondary containment conduit) and leaks in the PUL rock guard around the test boot entry area. Because repair of the rock guards would involve excavation and replacement of the entire secondary containment pipe run, 7-Eleven decided to replace all primary product piping at the facility with Environ® piping material, which has secondary containment.
- On January 10 through 12, 2005, ENSR, on behalf of 7-Eleven, installed thirteen temporary groundwater monitoring points at the site, which were sampled on February 21, 2005.
- On March 1, 2005, ENSR submitted a Subsurface Investigation Findings Report to the MDE documenting the February 21, 2005 groundwater sampling event. Based on the analytical data and the groundwater flow direction, it appears that dissolved-phase MTBE is mostly concentrated in the immediate vicinity of the tank field and on the eastern side of the pump island, with migration of moderate levels of MTBE to the northwest. No LPH was detected. Other than surrounding businesses, none of which appear directly down-gradient of the MTBE migration, no potable wells were identified within 500 feet down-gradient of the site.
- On June 17, 2005, at the request of the MDE, ENSR submitted a Subsurface Investigation Work Plan addressing the installation of groundwater monitoring wells at the site based on the analytical results of the February 21, 2005 groundwater sampling event.
- On July 5 and 6, 2005, with MDE approval, ENSR installed eight groundwater monitoring wells at the site.
- On August 15, 2005, ENSR submitted a Monitoring Well Installation and Observation Report summarizing the site activities associated with the monitoring well installation and subsequent groundwater sampling event conducted in July 2005. Based on the analytical data and the groundwater flow direction on site, dissolved-phase MTBE is concentrated in the area directly (north) of the tank field. Additionally, a second area of moderate MTBE concentrations (<3,500 µg/l) has been observed located east of the pump island and appears to be limited to immediate vicinity of the pump island.
- On November 17, 2005, ENSR submitted a Supplemental Groundwater Investigation Work Plan which proposed the installation of three additional shallow temporary monitoring points and four additional deep monitoring wells to complete the delineation of the subsurface petroleum hydrocarbon impact.
- On December 19, 2005, ENSR installed three temporary monitoring points for horizontal delineation and abandoned the thirteen temporary monitoring points installed in January 2005.

- December 20, 2005, ENSR collected groundwater samples from and subsequently abandoned the three temporary groundwater monitoring points.
- On January 3 through 5, 2006, ENSR installed two deep monitoring wells for vertical delineation, one in the vicinity of monitoring well MW-3 and one in the vicinity of monitoring well MW-4.
- On March 16, 2006, ENSR submitted a Monitoring Well Installation and Observation Report summarizing the site activities associated with the installation of two monitoring wells for vertical delineation. Groundwater samples collected from the newly installed monitoring wells MW-3B and MW-4B did not report any concentrations of volatile organic compounds (VOC), total petroleum hydrocarbons-diesel range organics/gasoline range organics (TPH DRO/GRO) above the laboratory detection limits except MTBE in monitoring well MW-4B at 16 ug/l.
- On March 14, 2006, ENSR discussed the content of the CAP and testing with the MDE. MDE approved the submittal of a CAEP to include protocols for pilot test activities to evaluate the remediation strategy of the site.
- On April 13, 2006, ENSR submitted a CAEP as agreed upon with the MDE. The CAEP included plans for the feasibility testing of groundwater pump and treat, soil vapor extraction and bioremediation as possible remediation strategies.
- On July 12, 2006 ENSR conducted a nine hour pumping test on monitoring well 4A as discussed in the CAEP.
- On July 30, 2006, bioremediation bench scale studies were conducted by Enzyme Technologies, Inc to determine the effectiveness of bio-augmentation or bio-stimulation applications for the degradation of petroleum hydrocarbons including MTBE.
- On August 30, 2006 a soil vapor extraction test was conducted in accordance with CAEP approved protocols.
- In September 2006, ENSR submitted a Pilot Test Summary letter to the MDE.
- On November 7, 2006, ENSR submitted a Work Plan to the MDE for the Membrane Interface Probe (MIP) investigation and additional monitoring well installation; the work plan was approved by the MDE on November 29, 2006.
- On November 27, 2006 ENSR began a long-term soil vapor extraction (SVE) test on SVE points SVE-1, SVE-2, SVE-3 and monitoring well MW-4A.
- On January 16 and 17, 2007 ENSR installed nine MIP borings.
- On January 29, 2007 ENSR submitted a Site Conceptual Model (SCM) in response to the November 29, 2006 directive letter from the MDE requiring 7-Eleven to prepare a SCM for the site.
- On January 31, 2007 ENSR submitted a work plan for additional groundwater extraction testing.
- On March 21, 2007 ENSR installed an off-site monitoring well (MW-8).
- On March 22, 2007 ENSR submitted reports detailing the results of the MIP investigation and the preliminary results from the long-term SVE test under separate covers.
- On August 27, 2007 ENSR, on behalf of 7-Eleven, submitted a Work Plan for subsurface pilot testing for the injection of bio-remediation products.
- On October 2, 2007 ENSR installed one off-site monitoring well (MW-8B).
- On February 4, 2008 ENSR submitted a revised bio-injection Work Plan as requested by MDE.
- On April 23, 2008 MDE approved the revised bio-injection Work Plan.
- On September 2, 2008 eight Geoprobe points were installed to characterize soils in the proposed new tank field area.

- The SVE system was discontinued on September 8, 2008. The MDE granted approval to discontinue the SVE system based on the removal of the former tank field and associated removal of subsurface soils within the excavation. Currently the above-grade SVE equipment remains on-site.
- On October 8 and 9, 2008 AECOM observed the removal of three USTs and associated product piping. In addition, 622.59 tons of soil was removed from the site. Observation well HW-1 was destroyed.
- On November 10, 2008, AECOM initiated bio-augmentation pilot testing activities as described in the Bio-Augmentation Pilot Test Work Plan approved by the MDE.
- On December 2, 2008 AECOM submitted a Tank Closure Report to the MDE.
- On June 11, 2009, AECOM initiated semi-annual sampling of the potable well located at 2414 Pleasantville Road per the MDE directive letter dated March 5, 2009.
- A report detailing the 6-month bio-augmentation pilot study was submitted to the MDE under a separate cover on July 29, 2009.

2.4 Local Land Usage and Water Supply

Land usage in the vicinity (½-mile radius) of the site is a combination of commercial and residential properties. No surface water bodies are located on the site; however, a storm water retention basin is located on the northern portion of the site. Potable water for the 7-Eleven facility and surrounding properties is obtained from individual supply wells. Information for area private supply wells was obtained from the MDE and the Harford County Health Department and will be addressed later in this report. The site potable supply well for the property is located near the southern property boundary.

2.5 Site Geology

According to the Geologic Map of Maryland (1968), geology in the site vicinity is of Late Precambrian aged Lower Pelitic Schist of the Prettyboy (Wissahickon) Formation. This material is a medium- to coarse-grained biotite-oligoclase-muscovite-quartz schist with garnet, staurolite, and kyanite; fine- to medium-grained semi-pelitic schist; and fine-grained granular to weakly schistose psammitic granulite with an apparent thickness of 5,500 feet or more. According to the 1975 Soil Survey of Harford County Maryland, overlying soils in the area consist of moderately eroded Glenelg loam on three to eight percent slopes. These soils are deep and well drained, having formed in place from acid crystalline parent material. Permeability is moderate and available water capacity can be high.

Boring logs generated during the installation of the temporary monitoring points and the monitoring wells indicate overburden soils consisting primarily of micaceous silts present to depths of approximately 50 feet below ground surface (bgs).

2.6 Area Hydrogeology

The Piedmont Physiographic Province is characterized by bedrock aquifers within the Precambrian and Paleozoic age metamorphic and igneous rocks of the region. The primary porosity of the bedrock is relatively minimal compared to secondary porosity (fractures, joints, foliation, etc.) of the bedrock, in which groundwater flow may occur. The spacing and extent of secondary porosity affects the availability of groundwater within the bedrock aquifer. Groundwater in the bedrock is usually restricted to the secondary porosity. Within the bedrock aquifer, groundwater generally occurs under unconfined conditions. In these areas groundwater occurs exclusively with the secondary porosity of the bedrock, and where present, interconnected continuous fractures provide flow paths. When the water table occurs within the weathered residuum (saprolite) above the bedrock, groundwater flow occurs within the pore spaces between the weathered mineral grains and within the relict foliation.

Precipitation is the principal source of groundwater recharge, which occurs as precipitation infiltrates the soil and percolates downward to the water table. Water table fluctuations are common in the Piedmont area due to seasonal and longer period variations in precipitation.

2.7 Site Hydrogeology

Based on groundwater elevation measurements in site monitoring wells collected from July 2005 through June 2009, the direction of groundwater gradient has been determined to be to the towards the northwest with an average slope of 0.05 feet/foot. The depth to groundwater recorded has ranged from a minimum of approximately 6.41 feet bgs (MW-8A, 3/28/07) to a maximum of approximately 26.78 feet bgs (MW-2, 10/15/07). Groundwater elevation contour maps were developed using the groundwater levels measured on March 24, 2009 and June 8, 2009 are presented as **Figures 3** and **4**. Historic monitoring well gauging results are included in **Table 1**.

2.8 Area Potable Wells

AECOM contacted the MDE Groundwater Permitting Program to establish a listing of all registered potable drinking wells within ½-mile of the site. Ms. Denise Swatzbaugh of the MDE was contacted to provide a list of any state registered potable wells within ½-mile radius of the site. According to their records, approximately 70 registered potable wells lie within the search radius. General well characteristics for the site potable well and potable wells within the immediate area of the 7-Eleven facility were obtained from the Harford County Health Department and are summarized below. No well records were available for 2414 Pleasantville Road, 2101 Fallston Road and 2114 Fallston Road. A majority of the potable wells in the area lie to the north within the Round Acres development and to the southwest within the Charles Manor development (Buell Drive).

Address	Installation Date	Permit Number	Depth of Steel Casing	Total Depth
2400 Pleasantville Road	11/21/1980	HA-73-6355	51 feet	200 feet
2402 Pleasantville Road	03/08/1974	HA-73-1461	65 feet	125 feet
2404 Pleasantville Road	11/16/1973	*	56 feet	125 feet
2410 Pleasantville Road	09/13/2000	HA-94-3847	63 feet	
2414 Pleasantville Road	No Well Record	No Well Record	No Well Record	No well Record
2101 Fallston Road	No Well Record	No Well Record	No Well Record	No Well Record
2108 Fallston Road	06/04/1979*	HA-73-5670	21 feet	120 feet
2114 Fallston Road	No Well Record	No Well Record	No Well Record	No Well Record

* Note: Not determined from Well Completion Report.

On June 11, 2009, AECOM initiated semi-annual sampling of the potable well located at 2414 Pleasantville Road per the MDE directive letter dated March 5, 2009. The results were presented to the MDE in the AECOM 2009 Second Quarter Monitoring and Sampling Report.

3.0 PRESENCE OF PETROLEUM HYDROCARBONS

3.1 Liquid-Phase Hydrocarbons

Liquid-phase hydrocarbons (LPH) have not been observed in any of the on-site monitoring wells, temporary monitoring points or soil boring locations during this investigation.

3.2 Adsorbed-Phase Hydrocarbons

3.2.1 Subsurface Investigation Activities

As summarized in correspondence to MDE dated March 1, 2005 and August 15, 2005, soil samples were collected during the installation of thirteen temporary groundwater monitoring points in January and February 2005 and during the installation of one groundwater monitoring well (MW-8A) in July 2005. Laboratory analyses of the soil samples indicated the presence of adsorbed-phase MTBE, TPH-GRO, tert-butyl alcohol (TBA), tert-amyl methyl ether (TAME) and chloromethane concentrations above their corresponding laboratory detection limits in one or more samples. None of the petroleum hydrocarbon concentrations were reported above the MDE clean-up standards in the soils on the site.

3.2.2 UST Replacement Activities

Soil samples associated with the 2008 UST replacement activities at this site were collected during the soil characterization for the new tank field on September 2 and September 12, 2008 and during the removal of the existing USTs on October 8, 2008. Data obtained during the UST replacement activities performed in September and October 2008, including, boring logs, site observations and laboratory analytical results, were submitted to the MDE in the Underground Storage Tank Closure Report dated December 2, 2008.

On September 2, 2008, AECOM installed eight soil borings (SB-1 through SB-8) to a depth of 16 feet bgs (finished depth of the new tank field) to characterize the soil in the future location of the tank field. On September 12, 2008, five finish-grade bottom-hole soil samples were collected from the bottom of the new tank field. The soil samples were submitted to Phase Separation Science, Inc. (Phase) for analysis of full volatiles and oxygenates by Method 8260B and TPH-GRO by Method 8015A. As indicated by the analytical results all concentrations were below the laboratory detection limits for all samples collected.

At the direction of the MDE, AECOM collected ten closure soil samples from the UST excavation: two samples were collected from beneath the midline of each of the three USTs removed from approximately two feet below the existing UST inverts, and four sidewall samples were collected at depths corresponding with the middle of the tanks. The closure samples reported all BTEX, MTBE, and TPH/GRO concentrations below the laboratory detection limits. TBA was detected in two samples (TF-3 and TF-4). All soil concentration levels in the samples collected were below the MDE soil standard for the protection of groundwater set forth in the March 2008 MDE Cleanup Standards for Soil and Groundwater. Approximately 622.59 tons of soil was disposed at Soil Safe, Inc. Brandywine Facility (2003-OPS-14480B) located at 16001 Mattawoman Drive, Brandywine, MD 20613.

3.3 Dissolved-Phase Hydrocarbons

3.3.1 Delineation Activities

Groundwater samples have been collected from the temporary monitoring points and/or monitoring wells associated with this site on nine occasions since the initiation of the investigation activities at this site in January 2005. The results of the groundwater sampling events from January 2005 through June 2009 have been previously submitted to the MDE in various hydrogeologic investigation and quarterly update reports. A total of fourteen monitoring wells are samples quarterly and the onsite potable well is sampled monthly and

part of MDE directed activities for this site. **Table 2** is a summary of historical monitoring well sampling data conducted at the site.

On January 16 and 17, 2007, AECOM collected membrane interface probe (MIP) logs from nine (9) locations on-site to identify the vertical and horizontal delineation of MTBE in the area north of the former tank field. Results were submitted to MDE in correspondence dated March 22, 2007.

MTBE is mapped as an indicator compound to represent the distribution of dissolved-phase hydrocarbon constituents in groundwater. **Figures 5 and 6** present dissolved-phase BTEX/MTBE concentration maps prepared from data collected on March 24, 2009 and June 9, 2009. Historic groundwater gauging and analytical results, including the most recent event on August 31, 2009, are summarized in **Table 1** and **Table 2,** respectively. The laboratory analytical reports and chain-of-custody documentation can be referenced in the corresponding Quarterly Monitoring Reports submitted to the MDE.

From delineation activities and current groundwater sampling events, MTBE migration in the shallow water table is shown to be moving in a northern direction while the prevailing groundwater gradient is sloping to the northwest. Migration of MTBE may be controlled in the shallow groundwater by relict foliation associated with the underlying parent bedrock.

As evidenced by historical sampling events, the MTBE plume in the shallow groundwater has remained relatively stable. The March 24, 2009 and June 6, 2009 MTBE iso-concentration maps are very similar in size and distribution of MTBE. Dissolved-phase MTBE is present in the deeper intervals at concentrations below MDE guidelines with the exception of offsite monitoring well MW-8B.

Dissolved-phase hydrocarbons are also present in the on-site potable water supply well. A carbon filtration point of entry treatment (POET) system was installed in 1991 and later upgraded in 2004. The POET system is still currently operational. Since August 2004, monthly samples have been collected by Sadler Plumbing. Based on data obtained from the 7-Eleven facility, influent MTBE concentrations have ranged from 41 µg/l to non-detect. Effluent analytical results have remained in compliance with MDE guidelines. **Table 3** is a historical summary of the 7-Eleven potable supply well sampling.

4.0 REMEDIAL ALTERNATIVES

4.1 Site Remediation Goals

The goal of a remediation program is to decrease the dissolved-phase petroleum hydrocarbon impact on-site and to achieve the three Oil Control Program objectives as outlined in the Maryland Environmental Assessment Technology for Leaking Underground Storage Tanks including:

- Removal of the MDE Seven Risk Factors posed by the initial groundwater impact,
- Prevention of impact migration, and
- Demonstration of an asymptotic trend of dissolved-phase petroleum hydrocarbons concentrations in site monitoring wells.

Before a remedial technology can be selected, site specific information is evaluated to formulate a site conceptual model. The information listed below is part of the site conceptual model for this site and has provided help in selecting remedial alternatives.

- The water table at this site is reported to be within the overburden, which consists primarily of micaceous silt with a trace fine sands and clays as identified within the historic boring logs;
- Depth to groundwater throughout the site has ranged from approximately 10 to 25 feet and the hydraulic gradient is generally to the northwest;
- A difference in hydraulic head may exist between the shallow and the deep zones creating an upward gradient in the deeper zone, limiting vertical MTBE migration;
- Dissolved-phase petroleum hydrocarbons have consistently been detected above groundwater action levels in monitoring wells MW-2, MW-3A, MW-4A and MW-6
- Dissolved-phase petroleum hydrocarbons have been delineated on-site both horizontally and vertically.
- MTBE migration within the overburden is in a northern direction and may be controlled by relict structural features similar to the underlying bedrock;
- The assessment of potential risk factors performed during preparation of the initial hydraulic study indicated that there is a drinking water well located on the site and adjacent surrounding properties. At the present time no potable supply wells are above MDE guidelines. Other than the on-site well and nearby businesses, none of which appear directly down gradient of the MTBE contamination, the nearest residential well is 500 feet down gradient of the site; and
- Measurable LPH has not been observed in any soil boring location or groundwater monitoring well associated with the UST system at this location.

As described in the CAEP, submitted to MDE on April 13, 2006, AECOM investigated the following remedial technologies to determine their potential for efficient implementation at this site. These technologies included:

- Technology #1 – Ex-situ Groundwater Treatment
- Technology #2 – Dual-phase vacuum extraction,
- Technology #3 – Soil Vapor Extraction,

- Technology #4 – In-situ bio-stimulation of the natural hydrocarbon degradation processes, and
- Technology #5 – In-situ bio-augmentation of the natural hydrocarbon degradation processes.

4.1.1 Technology #1 – Ex-situ Groundwater Treatment

Ex-situ groundwater treatment technologies have been widely employed to remediate soil and groundwater impacted by gasoline related hydrocarbons. These technologies are most successful in removing large accumulations of LPH and/or reducing high concentrations of dissolved-phase gasoline related hydrocarbons detected in the groundwater. Pumping from monitoring wells using submersible groundwater pumps in the vicinity of the impacted area creates a reduction in the groundwater table thereby inducing a hydraulic gradient towards the pumping well. This induced gradient serves to gain hydraulic control of the impacted groundwater or move LPH accumulations towards the recovery well.

Because LPH has not been detected in monitoring wells associated with the UST system at this site, only water recovery and treatment will be considered. Recovered groundwater would be directed to an on-site treatment system. The primary water treatment would involve air stripping technology, which utilizes the mass transfer of volatile organic chemicals from water to air through packed towers, diffused aeration, tray aeration, or spray aeration. Secondary polishing of the groundwater and the vapor stream of the air stripping process would employ the use of granular activated carbon to achieve the permitted discharge limitations.

Section 5.1 describes the assessment of ex-situ groundwater treatment as a viable remediation strategy at the site.

4.1.2 Technology #2 – Dual-Phase Vacuum Extraction

Dual-phase extraction or high-vacuum extraction (HVE) involves the extraction of LPH, groundwater and soil vapors from a well through a single extraction tube in the well via an extraction blower. Typical HVE systems use an air-water separator and when necessary an oil-water separator to separate the various phases of contaminated media before treatment. On-site treatment of the vapor stream may be required to remove or reduce emitted volatile hydrocarbons in accordance with air emissions regulations. In many cases, HVE reduces capital investment of the remediation system by eliminating the need for multiple down-well pumps. HVE is generally used when groundwater flow rates are low, and the anticipated groundwater elevation, while the system is operating, is less than 20 feet below the surface. Deeper groundwater cannot be extracted directly by the blower, as the necessary vacuum cannot be generated to lift the water. Groundwater flow rates at the site are anticipated to be low and water levels are generally between 10 and 25 feet below the surface. Application of the HVE technology; therefore, may be a feasible remedial alternative at the site.

Section 5.1 describes the assessment of HVE as a viable continued remediation strategy at the site.

4.1.3 Technology #3 – Soil Vapor Extraction

Soil vapor extraction (SVE) entails the removal of vapor-phase hydrocarbons from the subsurface unsaturated zone via a vacuum extraction blower. The application of a vacuum to the areas of impact induces the movement of air through the soils thereby removing the hydrocarbons through a combination of volatilization and biodegradation processes. The SVE system vacuum is typically applied to the subsurface through either wells or trenches situated in the area of soil and groundwater impact. Components associated with a full scale system installation include the vacuum extraction blower, treatment of the vapor stream to remove or reduce emitted volatile hydrocarbons in accordance with air emissions regulations and other assorted equipment required for monitoring operation.

Section 5.2 describes the assessment of SVE as a viable continued remediation strategy at the site.

4.1.4 Technology #4 – In-situ Bio-stimulation

In-situ bio-stimulation of groundwater is a technology that promotes the growth of naturally occurring microorganisms responsible for the biodegradation of petroleum hydrocarbons within groundwater saturated subsurface soils. In an area of petroleum hydrocarbon impact, aerobic microorganisms are typically present in the subsurface but their potential to reduce the hydrocarbon molecules to the inert byproducts of carbon dioxide and water may be limited by the absence other components required for cell growth including dissolved oxygen and nutrients such as nitrogen and phosphorus. The addition of these limiting components through nutrient solution injection, oxygen release compounds, air sparging or oxygen diffusion devices would serve to enhance the subsurface conditions and provide an environment for the microorganisms to thrive.

Section 5.3.1 describes the assessment of in-situ bio-stimulation as a viable remediation strategy at the site.

4.1.5 Technology #5 – In-situ Bio-augmentation

In-situ bio-augmentation of groundwater is the process of accelerating the biodegradation of petroleum hydrocarbons within the subsurface through the addition of specific enzyme and bacteria material to accelerate the naturally occurring degradation processes. Generally, in-situ bioremediation requires a source of oxygen and nutrients to stimulate the growth of naturally occurring microorganisms which consume the hydrocarbons and leave byproducts of only water and carbon dioxide. The addition of a mixture of specialized enzymes and bacteria to the subsurface serves to supply an additional pre-acclimated bacteria population to the naturally occurring microorganism population to accelerate this biological degradation process.

As with a program of in-situ bio-stimulation, dissolved oxygen and nutrient concentrations sufficient to support the biodegradation process are needed. These materials are typically supplied to the subsurface with the injection of the biological enhancement solution. Upon delivery to the subsurface, the dispersion of the augmentation products through the subsurface formation aids in the biodegradation process by maximizing the contact between the microbes and the petroleum hydrocarbons.

Sections 5.3.2 and 5.3.3 describe the assessment of bio-augmentation as a viable remediation strategy at the site.

4.2 Cost Analysis

The estimated costs associated with traditional groundwater pump and treat (Technology #1) are as follows:

Acquisition of Permits	$2,500
Design	$4,000
Capitol Equipment and Infrastructure Installation	$170,000 - $200,000
Operation and Maintenance (2-5 years at $50,000/year)	$100,000 - $250,000
Post Remedial Monitoring (1 year)	$20,000
Site Closure and System Dismantle	$15,000
Estimated Total	**$311,500 - $491,500**

The estimated costs associated with dual phase vacuum extraction (Technology #2) are as follows:

Acquisition of Permits	$2,500
Design	$4,000
Capitol Equipment and Infrastructure Installation	$160,000 - $200,000
Operation and Maintenance	$100,000 - $250,000
(2-5 years at $50,000/year)	
Post Remedial Monitoring (1 year)	$20,000
Site Closure and System Dismantle	$15,000
Estimated Total	**$301,500 - $491,500**

The estimated costs associated with soil vapor extraction (Technology #3) are as follows:

Permitting	$1,500
Design	$2,000
Capitol Equipment and Infrastructure Installation	$30,000
Operation and Maintenance	$10,000-$30,000
(2-3 years at $10,000/year)	
Post Remedial Monitoring (1 year)	$20,000
Site Closure and System Dismantle	$10,000
Estimated Total	**$73,500- $88,500**

The estimated costs associated with bio-stimulation (Technology #4) are as follows (includes the installation of ISOC units in five wells):

Acquisition of Permits	$1,000
Design	$1,200
Capitol Equipment and Infrastructure Installation	$30,000 - $60,000
Operation and Maintenance	$80,000 - $160,000
(2-4 years at $40,000/year)	
Post Remedial Monitoring (1 year)	$20,000
Site Closure and System Dismantle	$6,000
Estimated Total	**$138,200 - $248,200**

The estimated costs associated with bio-augmentation (Technology #5) are as follows (pricing is for injection only):

Acquisition of Permits	$1,000
Design	$2,500
Capitol Equipment and Infrastructure Installation	$20,000 - $30,000
Operation and Maintenance	$100,000 - $150,000
(2-3 years at ($50,000/year)	
Post Remedial Monitoring (1 year)	$20,000
Site Closure and System Dismantle	$6,000
Estimated Total	**$149,500 - $209,500**

5.0 REMEDIAL PILOT TESTING

The selection of a remediation program to address petroleum hydrocarbon impact is based on the ability of a technology to be efficiently applied under actual site conditions. As a result, the testing of several treatment options at the site was conducted to develop data to be used in the design of a full scale subsurface remediation program.

Field and laboratory pilot scale testing were conducted to gather information regarding the remedial technologies outlined in the Corrective Action Evaluation Plan (CAEP) dated April 2006. Activities included the extraction of groundwater to evaluate the hydrogeologic characteristics of the saturated overburden soils, the potential to reduce hydrocarbon mass via soil vapor extraction (SVE), and analysis of the ability of the naturally occurring biological processes to degrade petroleum hydrocarbons under background, stimulated and augmented conditions. The specific results of pilot testing for each remedial alternative are outlined in the following sections.

5.1 Groundwater Pumping Test

AECOM conducted a groundwater extraction test on July 12, 2006 for approximately nine hours. Monitoring well MW-4A was utilized as the extraction well for the test due to its location within the area of greatest groundwater impact. A pneumatic submersible pump was inserted into MW-4A approximately 15 feet below the static groundwater and pumped at 0.45 gallons-per-minute (gpm) to 2 gpm. During the pumping test, drawdown was observed in several on-site wells. Results of the groundwater pumping test were submitted to MDE in correspondence dated September 15, 2006.

The results of the limited duration groundwater pumping test showed that groundwater extraction (Technology #1) or dual-phase extraction (Technology #2) would not be viable remedial options for this site.

5.2 Soil Vapor Extraction Testing

As outlined in the CAEP dated April 2006, AECOM conducted an 8-hour duration SVE test and an extended SVE test to determine the effectiveness of this technology under site specific conditions. The SVE tests consisted of the application of vacuum on monitoring well MW-4A, the well exhibiting the highest dissolved-phase petroleum hydrocarbon concentrations, and three vapor extraction points installed adjacent to the tank field (SVE-1, SVE-2 and SVE-3). The SVE tests were conducted using a 5-horsepower regenerative blower connected via a PVC piping manifold to each of the test points. The air discharged from this blower was directed through two 400-pound vapor phase GAC units and subsequently discharged to the atmosphere in compliance with associated air permit requirements.

The 8-hour duration SVE test was conducted on August 30, 2006; results are summarized in correspondence dated September 15, 2006. From November 27, 2006 to September 8, 2008, AECOM conducted a long-term SVE test. Due to the removal of the former tank field and associated subsurface soils on October 8, 2008, MDE granted approval to discontinue use of the SVE system. As described in the tank closure report dated December 2, 2008, concentrations of contaminants in the former tank field area were below laboratory detection limits or below Maryland Cleanup Standards.

The porous nature of the subsurface material typically existing in the UST field area was beneficial in providing airflow through the unsaturated and vadose zone soils, and therefore SVE was a viable remedial technology while the tank field was in place. Since the removal of the contaminated soil from the former tank field, SVE (Technology #3) is no longer a viable remedial technology for this site due to the limited permeability of the subsurface soils and lack of adsorbed hydrocarbons in the vadose zone.

5.3 Bioremediation Pilot Tests

To determine the feasibility of using bioremediation, AECOM conducted several bench-scale studies and field tests to evaluate the potential usefulness of bioremediation technologies. Results of the tests described below were reported to MDE in correspondence dated August 27, 2007 and July 29, 2009.

5.3.1 Bio-stimulation Field Test

A pilot test was conducted in June and July 2006 to determine the effectiveness of oxygen addition to the stimulation of naturally occurring bacteria. Prior to the installation of two oxygen release compound (ORC) socks in well MW-3A on June 12, 2006, samples were collected from wells MW-3A and MW-4A for analysis for the presence and population of petroleum degrading bacteria including PM1, a known MTBE degrading bacteria. During the 28 days the ORC socks remained in monitoring well MW-3A, dissolved oxygen level increased from 7.48 mg/L to 25.41 mg/L. On July 10, 2006, a second sample was collected from monitoring well MW-3A and the ORC socks were removed from the monitoring well.

The data indicated that the populations of naturally occurring bacteria in the subsurface within the area of elevated levels of petroleum hydrocarbon impact (MW-4A) are approximately equivalent to those in the area of lesser petroleum hydrocarbon impact (MW-3A). The increased oxygen concentrations in well MW-3A did not induce a significant change in the bacterial population. Thus, stimulation of naturally occurring petroleum hydrocarbon degrading bacteria through the addition of dissolved oxygen is not considered a viable option for efficient remediation at this site (Technology #4).

5.3.2 Bio-Augmentation Bench Scale Test

Groundwater samples were collected from well MW-4A and sent to Enzyme Technologies, Inc (EnzymeTech) of Portland, Oregon for comparison of periodic analysis of dissolved phase petroleum hydrocarbon concentrations and biological activity to determine if the addition of nutrients increased the aerobic biodegradation of MTBE. Three conditions were tested: live control sample; augmentation of a sample with the Petrozyme™ products; and killed control sample with addition of potassium hydroxide to eliminate microbial activity.

Based on a 99% reduction of MTBE within 240 hours in the bio-augmented sample, identical reductions in MTBE concentrations in the kill control sample and the live control sample (indicating the concentration reduction in these two samples was a result of volatilization rather than biodegradation), and an increase in the hydrocarbon degrading bacteria plate count concentrations in the bio-augmented sample to approximately 10 times the initial concentration within the first 10 days, AECOM conducted a field test of the technology, described below.

5.3.3 Bio-Augmentation Pilot Test

A six month bio-augmentation pilot test was conducted using the Petrozyme™ technology to augment and stimulate the naturally-occurring bacterial population of hydrocarbon-degrading bacteria in the areas of residual dissolved-phase petroleum hydrocarbons detected in monitoring well MW-4A. Two shallow injection trenches were installed upgradient of monitoring well MW-4A on October 14-15, 2008 to approximately 10 feet bgs and backfilled with pea gravel to approximately 5 feet bgs to enhance permeability and allow for the injection of a combination of enzymes and dissolved oxygen. Site visits were conducted semi-monthly, with the first visit including the injection of Petrozyme™ products mixed with approximately 250 gallons of oxygenated water injected into each trench, and the second visit of the month including the injection of approximately 250 gallons of water into each trench to provide a sufficient mass of oxygen to stimulate the subsurface biologic activity.

Laboratory data indicated a strong relationship between groundwater nutrient levels (mainly nitrate and orthophosphate) and reduction of dissolved-phase petroleum hydrocarbon concentrations in the shallow

water-bearing zone in the area of monitoring well MW-4A. Over the course of the six-month bio-augmentation pilot study, an overall reduction of petroleum-related hydrocarbon concentrations followed increases in nutrient levels stimulated by the injection of Petrozyme™ products into the shallow aquifer. From October 30, 2008 to April 30, 2009, MTBE concentrations in monitoring wells MW4-A and HW-3 were reduced by approximately 50%. In addition, monitoring well MW-6, the well furthest away from the bio-augmentation delivery trenches, showed a delayed increase in nitrate and MTBE reduction.

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6.0 SELECTION OF RECOMMENDED REMEDIAL ALTERNATIVE

Based on the results of the pilot tests conducted to date, bio-augmentation (Technology #5) is anticipated to be the most viable remedial alternative to address the petroleum hydrocarbon impact in the subsurface at this site. The application of this remediation technology will entail the injection of a combination of enzymes, nutrients and hydrocarbon degrading organisms into the vadose zone (above the water table) within area of the dissolved-phase hydrocarbon impact.

The following sections provide more detail about the nature of the bio-augmentation product to be injected (Section 6.1), the proposed injection system (Section 6.2), proposed monitoring requirements (Section 6.3), and reporting requirements (Section 6.4)

6.1 Bio-augmentation Products

Petrozyme™, manufactured by Enzyme Technologies, Inc., is a product bundle that includes a bacterial consortium, multiple enzyme complexes and nutrients blended for the degradation of gasoline-related hydrocarbons and MTBE. The bacteria (pseudomonas, rhodococcus, and acintobacter strains) are naturally-occurring microbes isolated from a petroleum release that produce enzymes capable of catalyzing fast, complete breakdown of petroleum hydrocarbon constituents. Microbial growth requires small amounts of nitrogen (N), phosphorus (P), and potassium (K) to produce cell mass. The nutrient mix that is part of the Petrozyme™ products contains these N, P, and K compounds in the correct ratio to support bacterial cell mass growth for on-going MTBE degradation. The application of the Petrozyme™ products to subsurface areas impacted by dissolved-phase petroleum hydrocarbons serves to supply a pre-acclimated bacteria population, maximize contact between the hydrocarbons and the bacteria and supply nutrients to support ongoing biological growth.

The Petrozyme™ products, in conjunction with a source of dissolved oxygen, will support aerobic in-situ microbial degradation of MTBE. The end products of petroleum hydrocarbon degradation are carbon dioxide (CO2) and water (H2O). The microbial process is a continuous one, and any intermediate degradation products will be broken down to CO2 and water very quickly. These intermediate degradation products for petroleum hydrocarbon constituents (fatty acids, alcohols, etc.) are inert and easily degradable by indigenous bacteria already in the subsurface. No other reaction products or byproducts are formed through these natural biological processes. Material Safety Data Sheets for the Petrozyme™ products are included in **Appendix A**.

6.2 Bio-augmentation Injection System

Quarterly groundwater sampling data has confirmed that the petroleum impacted groundwater is predominately present in the shallow water bearing zone and that the groundwater concentrations in the deeper groundwater bearing zones have consistently been below MDE guidance levels. As a result, the remediation of dissolved-phase petroleum hydrocarbons will focus in this shallow water bearing zone extending north from the former tank field.

AECOM proposes the installation of twenty one (21) 1-inch diameter injection wells, Inj-1 to Inj-21, in the area north of the former tank field as shown on **Figure 7**. Each injection well will be installed to a depth of approximately 20 feet below ground surface (bgs) using a Geoprobe rig. The wells will be constructed of one-inch diameter PVC pre-packed 0.020-slot screen from 20 feet bgs to 5 feet bgs and one-inch diameter PVC riser from 5 feet bgs to ground surface. Wells will be completed with manhole covers.

A 1,000-gallon aboveground polypropylene tank will be installed on-site as shown on **Figure 7**. The tank will be connected to the injection wells using 1/4-inch polypropylene tubing, which will be installed in shallow

trenches in the asphalt, concrete, and grass. The tank will contain water that is continuously oxygenated using in-situ oxygen diffusion system known as iSOC® to keep the dissolved oxygen levels at approximately 20 milligrams-per-liter (mg/L). The iSOCs® will be connected to the oxygen tanks adjacent to the tank using polypropylene tubing. The tank will also include the bio-augmentation product Petrozyme™ bundle of products described in **Section 6.1**. The oxygenated injectate will flow from the tank to the twenty one injection wells by gravity-feed.

Water will be provided from the store's on-site potable well. Site visits will be conducted two times per month. During the first monthly site visit, Petrozyme™ products and water will be added to the polypropylene tank. During the second monthly site visit, water will be added as needed to the polypropylene tank.

6.3 Environmental Monitoring Activities

Currently, groundwater samples are collected for laboratory analysis from fourteen monitoring wells associated with the site on a quarterly basis and analyzed for the presence of VOCs, fuel oxygenates, and TPH-GRO. This routine sampling, along with semi-annual sampling of the potable well at 2414 Pleasantville Road and twice-monthly field measurements of groundwater elevation and dissolved oxygen levels, will continue in order to monitor the progress of the groundwater remediation program.

Additional water samples will be collected on a monthly basis from monitoring wells MW-4A and HW-3 for laboratory analysis for the following inorganic parameters (listed below) as indicators of excess nutrients not being used by the microbes. Subsequent injection rates will be modified accordingly.

- Nitrate
- Nitrite
- Ammonia
- Orthophosphate
- Potassium
- Iron
- Manganese
- Sulfate
- Zinc
- Copper
- Boron
- Calcium
- Sodium
- pH

6.4 Periodic Update Reporting

Reports summarizing monitoring activities and site conditions will be submitted to the MDE on a quarterly basis during the months of January, April, July and October. The reports will include an update of site activity, monitoring well gauging data, groundwater analytical results, and a groundwater gradient map.

AECOM

CORRECTIVE ACTION PLAN

7-ELEVEN STORE #22281, FALLSTON, MD

OCTOBER 2009

TABLES

Table 1: Summary of Historic Monitoring Well Gauging Results
7-Eleven Store No. 22281
Fallston, Maryland

Well	Top of Casing	Date	Depth to Water	Corrected Elevation
MW-1A	98.71	7/26/05	22.34	76.37
Installed- 7/6/05		11/22/05	22.11	76.60
Well Depth: 32'		3/16/06	22.40	76.31
Screen: 10.5'-32'		4/25/06	22.10	76.61
4" diameter		5/12/06	22.24	76.47
		6/30/06	22.47	76.24
		7/13/06	20.85	77.86
		8/11/06	21.02	77.69
		9/12/06	21.64	77.07
		10/23/06	21.69	77.02
		11/21/06	21.43	77.28
		12/7/06	20.81	77.90
		1/29/07	21.42	77.29
		2/20/07	21.84	76.87
		3/28/07	21.83	76.88
		4/12/07	21.34	77.37
		5/14/07	21.21	77.50
		6/22/07	21.62	77.09
		7/30/07	22.03	76.68
		8/23/07	21.90	76.81
		9/25/07	23.72	74.99
		10/15/07	24.10	74.61
		11/26/07	23.25	75.46
		12/14/07	24.02	74.69
		1/29/08	23.60	75.11
		2/18/08	23.14	75.57
		3/14/08	22.87	75.84
		4/15/08	22.64	76.07
		5/20/08	22.59	76.12
		6/18/08	23.32	75.39
		7/22/08	23.87	74.84
		8/20/08	23.16	75.55
		9/3/08	23.38	75.33
		10/30/08 *	NG	NG
		11/10/08	23.64	75.07
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	23.66	75.05
		3/24/09	23.91	74.80
		4/30/09 *	23.38	75.33
		6/8/09	22.49	76.22
		7/7/09	22.33	76.38
		8/31/09	23.03	75.68
MW-1B	99.18	7/26/05	23.18	76.00
Installed- 7/6/05		11/22/05	22.80	76.38
Well Depth: 81'		3/16/06	22.27	76.91
Open Hole: 53'-81'		4/25/06	22.78	76.40
6" diameter		5/12/06	22.81	76.37
		6/30/06	22.61	76.57
		7/13/06	21.20	77.98
		8/11/06	22.04	77.14
		9/12/06	22.34	76.84
		10/23/06	22.45	76.73
		11/21/06	21.88	77.30
		12/7/06	21.51	77.67
		1/29/07	22.13	77.05
		2/20/07	22.59	76.59
		3/28/07	22.31	76.87
		4/12/07	21.90	77.28
		5/14/07	21.96	77.22
		6/22/07	22.68	76.50
		7/30/07	22.64	76.54
		8/23/07	22.72	76.46
		9/25/07	24.50	74.68
		10/15/07	24.93	74.25
		11/26/07	24.13	75.05
		12/14/07	24.92	74.26
		1/29/08	24.48	74.70
		2/18/08	23.17	76.01
		3/14/08	23.45	75.73
		4/15/08	23.65	75.53
		5/20/08	23.31	75.87
		6/18/08	22.91	76.27
		7/22/08	23.45	75.73
		8/20/08	23.88	75.30
		9/3/08	23.96	75.22
		10/30/08 *	24.07	75.11
		11/10/08	24.10	75.08
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	24.13	75.05
		3/24/09	24.39	74.79
		4/30/09 *	23.84	75.34
		6/8/09	22.95	76.23
		7/7/09	23.05	76.13
		8/31/09	23.45	75.73

Table 1: Summary of Historic Monitoring Well Gauging Results
7-Eleven Store No. 22281
Fallston, Maryland

Well	Top of Casing	Date	Depth to Water	Corrected Elevation
MW-2	98.1	7/26/05	24.95	73.15
Installed- 7/6/05		11/22/05	24.96	73.14
Well Depth: 31'		3/16/06	24.28	73.82
Screen: 10.5'-31'		4/25/06	24.81	73.29
4" diameter		5/12/06	24.86	73.24
		6/30/06	23.99	74.11
		7/13/06	23.21	74.89
		8/11/06	23.89	74.21
		9/12/06	24.67	73.43
		10/23/06	24.74	73.36
		11/21/06	23.90	74.20
		12/7/06	23.67	74.43
		1/29/07	24.12	73.98
		2/20/07	24.39	73.71
		3/28/07	24.26	73.84
		4/12/07	24.07	74.03
		5/14/07	24.00	74.10
		6/22/07	24.97	73.13
		7/30/07	24.31	73.79
		8/23/07	26.00	72.10
		9/25/07	26.53	71.57
		10/15/07	26.78	71.32
		11/26/07	26.02	72.08
		12/14/07	26.25	71.85
		1/29/08	25.69	72.41
		2/18/08	25.43	72.67
		3/14/08	25.20	72.90
		4/15/08	25.38	72.72
		5/20/08	25.00	73.10
		6/18/08	25.05	73.05
		7/22/08	25.67	72.43
		8/20/08	26.22	71.88
		9/3/08	26.45	71.65
		10/30/08 *	NG	NG
		11/10/08	26.58	71.52
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	26.22	71.88
		3/24/09	26.55	71.55
		4/30/09 *	25.82	72.28
		6/8/09	25.11	72.99
		7/7/09	25.16	72.94
		8/31/09	25.94	72.16
MW-3A	97.44	7/26/05	20.60	76.84
Installed- 7/6/05		11/22/05	20.21	77.23
Well Depth: 30'		3/16/06	19.70	77.74
Screen: 10.5'-30'		4/25/06	20.11	77.33
4" diameter		5/12/06	20.25	77.19
		6/30/06	20.33	77.11
		7/13/06	18.39	79.05
		8/11/06	19.09	78.35
		9/12/06	19.72	77.72
		10/23/06	19.77	77.67
		11/21/06	19.18	78.26
		12/7/06	18.81	78.63
		1/29/07	19.41	78.03
		2/20/07	19.95	77.49
		3/28/07	19.71	77.73
		4/12/07	19.23	78.21
		5/14/07	19.20	78.24
		6/22/07	20.26	77.18
		7/30/07	19.81	77.63
		8/23/07	21.50	75.94
		9/25/07	21.97	75.47
		10/15/07	22.35	75.09
		11/26/07	21.31	76.13
		12/14/07	22.21	75.23
		1/29/08	21.70	75.74
		2/18/08	21.12	76.32
		3/14/08	20.82	76.62
		4/15/08	23.18	74.26
		5/20/08	20.57	76.87
		6/18/08	20.35	77.09
		7/22/08	20.72	76.72
		8/20/08	21.26	76.18
		9/3/08	21.35	76.09
		10/30/08 *	NG	NG
		11/10/08	21.55	75.89
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	21.52	75.92
		3/24/09	21.82	75.62
		4/30/09 *	21.16	76.28
		6/8/09	20.44	77.00
		7/7/09	20.26	77.18
		8/31/09	20.92	76.52

Table 1: Summary of Historic Monitoring Well Gauging Results
7-Eleven Store No. 22281
Fallston, Maryland

Well	Top of Casing	Date	Depth to Water	Corrected Elevation
MW-3B	98.06	2/22/06	18.60	79.46
Installed- 1/3/06		3/16/06	19.29	78.77
Well Depth: 80'		4/25/06	19.60	78.46
Screen: 70-80'		5/12/06	19.63	78.43
4" diameter		6/30/06	19.55	78.51
		7/13/06	17.82	80.24
		8/11/06	18.76	79.30
		9/12/06	18.80	79.26
		10/23/06	19.23	78.83
		11/21/06	18.72	79.34
		12/7/06	18.92	79.14
		1/29/07	19.27	78.79
		2/20/07	19.42	78.64
		3/28/07	19.15	78.91
		4/12/07	18.73	79.33
		5/14/07	18.81	79.25
		6/22/07	19.76	78.30
		7/30/07	19.19	78.87
		8/23/07	22.02	76.04
		9/25/07	21.37	76.69
		10/15/07	22.00	76.06
		11/26/07	20.82	77.24
		12/14/07	22.16	75.90
		1/29/08	21.82	76.24
		2/18/08	20.47	77.59
		3/14/08	20.27	77.79
		4/15/08	21.09	76.97
		5/20/08	15.82	82.24
		6/18/08	19.67	78.39
		7/22/08	20.03	78.03
		8/20/08	20.90	77.16
		9/3/08	20.72	77.34
		10/30/08 *	NG	NG
		11/10/08	20.84	77.22
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	20.77	77.29
		3/24/09	20.94	77.12
		4/30/09 *	20.49	77.57
		6/8/09	19.90	78.16
		7/7/09	20.02	78.04
		8/31/09	19.90	78.16
MW-4A	88.68	7/26/05	15.57	73.11
Installed- 7/5/05		11/22/05	15.60	73.08
Well Depth: 35'		3/16/06	14.87	73.81
Screen:10-30.5'		4/25/06	16.46	72.22
4" diameter		5/12/06	15.51	73.17
		6/30/06	14.49	74.19
		7/13/06	13.75	74.93
		8/11/06	14.54	74.14
		9/12/06	15.29	73.39
		10/23/06	15.41	73.27
		11/21/06	14.54	74.14
		12/7/06	11.03	77.65
		1/29/07	13.32	75.36
		2/20/07	NG	NG
		3/28/07	14.80	73.88
		4/12/07	11.93	76.75
		5/14/07	11.36	77.32
		6/22/07	13.51	75.17
		7/30/07	12.23	76.45
		8/23/07	13.35	75.33
		9/25/07	15.68	73.00
		10/15/07	18.17	70.51
		11/26/07	15.55	73.13
		12/14/07	13.94	74.74
		1/29/08	13.91	74.77
		2/18/08	15.99	72.69
		3/14/08	15.73	72.95
		4/15/08	16.77	71.91
		5/20/08	12.45	76.23
		6/18/08	12.70	75.98
		7/22/08	13.98	74.70
		8/20/08	14.45	74.23
		9/3/08	14.79	73.89
		10/30/08 *	17.34	71.34
		11/10/08	17.36	71.32
		11/24/08 *	17.35	71.33
		12/12/08 *	17.33	71.35
		12/22/08	16.94	71.74
		1/6/09*	16.77	71.91
		1/19/09*	16.68	72.00
		1/28/09*	16.65	72.03
		2/4/09*	16.88	71.80
		2/16/09*	17.01	71.67
		3/4/09*	17.21	71.47
		3/24/09	17.31	71.37
		4/30/09 *	16.49	72.19
		6/8/09	15.80	72.88
		7/7/09	15.87	72.81
		8/31/09	16.69	71.99

Table 1: Summary of Historic Monitoring Well Gauging Results
7-Eleven Store No. 22281
Fallston, Maryland

Well	Top of Casing	Date	Depth to Water	Corrected Elevation
MW-4B	89.43	2/22/06	15.44	73.99
Installed- 1/4/06		3/16/06	15.70	73.73
Well Depth: 60'		4/25/06	16.29	73.14
Screen: 45-60'		5/12/06	16.34	73.09
4" diameter		6/30/06	15.35	74.08
		7/13/06	14.58	74.85
		8/11/06	15.20	74.23
		9/12/06	16.11	73.32
		10/23/06	16.07	73.36
		11/21/06	15.23	74.20
		12/7/06	15.17	74.26
		1/29/07	15.09	74.34
		2/20/07	NG	NG
		3/28/07	15.82	73.61
		4/12/07	15.83	73.60
		5/14/07	15.25	74.18
		6/22/07	16.20	73.23
		7/30/07	15.76	73.67
		8/23/07	17.03	72.40
		9/25/07	18.00	71.43
		10/15/07	14.42	75.01
		11/26/07	17.93	71.50
		12/14/07	17.72	71.71
		1/29/08	17.09	72.34
		2/18/08	17.07	72.36
		3/14/08	16.72	72.71
		4/15/08	17.31	72.12
		5/20/08	16.77	72.66
		6/18/08	16.43	73.00
		7/22/08	16.96	72.47
		8/20/08	17.49	71.94
		9/3/08	17.97	71.46
		10/30/08 *	18.09	71.34
		11/10/08	18.10	71.33
		11/24/08 *	18.06	71.37
		12/12/08 *	18.12	71.31
		12/22/08	17.77	71.66
		1/6/09*	17.68	71.75
		1/19/09*	17.64	71.79
		1/28/09*	17.60	71.83
		2/4/09*	17.63	71.80
		2/16/09*	17.67	71.76
		3/4/09*	17.75	71.68
		3/24/09	18.10	71.33
		4/30/09 *	17.44	71.99
		6/8/09	17.14	72.29
		7/7/09	16.66	72.77
		8/31/09	17.44	71.99
MW-5	93.29	7/26/05	20.21	73.08
Installed- 7/5/05		11/22/05	20.15	73.14
Well Depth: 35'		3/16/06	19.55	73.74
Screen: 10.5'-35'		4/25/06	20.05	73.24
4" diameter		5/12/06	20.09	73.20
		6/30/06	19.16	74.13
		7/13/06	18.45	74.84
		8/11/06	19.15	74.14
		9/12/06	19.90	73.39
		10/23/06	20.00	73.29
		11/21/06	19.14	74.15
		12/7/06	18.99	74.30
		1/29/07	19.41	73.88
		2/20/07	19.80	73.49
		3/28/07	19.29	74.00
		4/12/07	19.33	73.96
		5/14/07	19.28	74.01
		6/22/07	20.20	73.09
		7/30/07	20.24	73.05
		8/23/07	21.26	72.03
		9/25/07	21.79	71.50
		10/15/07	22.03	71.26
		11/26/07	21.48	71.81
		12/14/07	21.46	71.83
		1/29/08	21.02	72.27
		2/18/08	20.18	73.11
		3/14/08	20.45	72.84
		4/15/08	20.25	73.04
		5/20/08	20.25	73.04
		6/18/08	20.33	72.96
		7/22/08	20.96	72.33
		8/20/08	21.49	71.80
		9/3/08	21.71	71.58
		10/30/08 *	NG	NG
		11/10/08	21.81	71.48
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	21.38	71.91
		3/24/09	21.81	71.48
		4/30/09 *	21.06	72.23
		6/8/09	20.37	72.92
		7/7/09	20.44	72.85
		8/31/09	21.21	72.08

Table 1: Summary of Historic Monitoring Well Gauging Results
7-Eleven Store No. 22281
Fallston, Maryland

Well	Top of Casing	Date	Depth to Water	Corrected Elevation
MW-6	84.01	7/26/05	12.70	71.31
Installed- 7/5/05		11/22/05	12.63	71.38
Well Depth: 25'		3/16/06	12.17	71.84
Screen: 5.5'-25'		4/25/06	12.41	71.60
4" diameter		5/12/06	12.55	71.46
		6/30/06	10.39	73.62
		7/13/06	11.18	72.83
		8/11/06	10.47	73.54
		9/12/06	12.37	71.64
		10/23/06	12.43	71.58
		11/21/06	11.46	72.55
		12/7/06	11.85	72.16
		1/29/07	12.11	71.90
		2/20/07	12.28	71.73
		3/28/07	11.42	72.59
		4/12/07	11.92	72.09
		5/14/07	11.60	72.41
		6/22/07	12.76	71.25
		7/30/07	12.58	71.43
		8/23/07	12.65	71.36
		9/25/07	13.99	70.02
		10/15/07	14.08	69.93
		11/26/07	13.62	70.39
		12/14/07	13.41	70.60
		1/29/08	13.10	70.91
		2/18/08	12.72	71.29
		3/14/08	12.56	71.45
		4/15/08	12.62	71.39
		5/20/08	12.47	71.54
		6/18/08	12.76	71.25
		7/22/08	13.03	70.98
		8/20/08	13.77	70.24
		9/3/08	13.95	70.06
		10/30/08 *	13.98	70.03
		11/10/08	13.94	70.07
		11/24/08 *	13.92	70.09
		12/12/08 *	NG	NG
		12/22/08	13.34	70.67
		1/19/09*	13.37	70.64
		2/16/09*	13.66	70.35
		3/24/09	13.87	70.14
		4/30/09 *	13.04	70.97
		6/8/09	12.75	71.26
		7/7/09	12.89	71.12
		8/31/09	13.43	70.58
MW-7	97.15	7/26/05	20.10	77.05
Installed- 7/6/05		11/22/05	19.64	77.51
Well Depth: 30.5'		3/16/06	19.19	77.96
Screen: 10'-30.5'		4/25/06	19.61	77.54
4" diameter		5/12/06	19.72	77.43
		6/30/06	19.24	77.91
		7/13/06	17.57	79.58
		8/11/06	18.68	78.47
		9/12/06	19.67	77.48
		10/23/06	19.30	77.85
		11/21/06	18.38	78.77
		12/7/06	18.16	78.99
		1/29/07	18.84	78.31
		2/20/07	19.50	77.65
		3/28/07	19.01	78.14
		4/12/07	18.67	78.48
		5/14/07	18.65	78.50
		6/22/07	19.81	77.34
		7/30/07	19.78	77.37
		8/23/07	21.08	76.07
		9/25/07	21.55	75.60
		10/15/07	21.94	75.21
		11/26/07	20.97	76.18
		12/14/07	21.70	75.45
		1/29/08	21.19	75.96
		2/18/08	20.53	76.62
		3/14/08	20.16	76.99
		4/15/08	20.43	76.72
		5/20/08	20.04	77.11
		6/18/08	19.86	77.29
		7/22/08	20.28	76.87
		8/20/08	20.84	76.31
		9/3/08	20.96	76.19
		10/30/08 *	NG	NG
		11/10/08	21.11	76.04
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	20.98	76.17
		1/28/09*	20.73	76.42
		2/4/09*	20.79	76.36
		3/24/09	21.30	75.85
		4/30/09 *	20.50	76.65
		6/8/09	19.91	77.24
		7/7/09	19.87	77.28
		8/31/09	20.42	76.73

Table 1: Summary of Historic Monitoring Well Gauging Results
7-Eleven Store No. 22281
Fallston, Maryland

Well	Top of Casing	Date	Depth to Water	Corrected Elevation
MW-8A	75.07	3/28/07	6.41	68.66
Installed- 3/21/07		4/12/07	7.82	67.25
Well Depth: 30.'		5/14/07	7.79	67.28
Screen: 5'-30'		6/22/07	8.73	66.34
4" diameter		7/30/07	8.59	66.48
		8/23/07	8.95	66.12
		9/25/07	9.60	65.47
		10/15/07	9.10	65.97
		11/26/07	9.12	65.95
		12/14/07	9.02	66.05
		1/29/08	8.42	66.65
		2/18/08	7.39	67.68
		3/14/08	8.58	66.49
		4/15/08	8.75	66.32
		5/20/08	8.56	66.51
		6/18/08	9.00	66.07
		7/22/08	9.40	65.67
		8/20/08	9.76	65.31
		9/3/08	8.86	66.21
		10/30/08 *	NG	NG
		11/10/08	9.50	65.57
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	9.00	66.07
		3/24/09	9.47	65.60
		4/30/09 *	9.03	66.04
		6/8/09	8.89	66.18
		7/7/09	9.31	65.76
		8/31/09	9.46	65.61
MW-8B	74.74	10/3/07	8.26	66.48
Installed-10/2/07		10/15/07	8.22	66.52
Well Depth: 50'		11/26/07	8.30	66.44
Screen: 45'-50'		12/14/07	7.82	66.92
4" diameter		1/29/08	7.31	67.43
		2/18/08	8.60	66.14
		3/14/08	7.25	67.49
		4/15/08	7.42	67.32
		5/20/08	7.36	67.38
		6/18/08	7.63	67.11
		7/22/08	8.02	66.72
		8/20/08	8.09	66.65
		9/3/08	8.38	66.36
		10/30/08 *	NG	NG
		11/10/08	8.37	66.37
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	8.17	66.57
		3/24/09	9.58	65.16
		4/30/09 *	9.11	65.63
		6/8/09	8.38	66.36
		7/7/09	8.79	65.95
		8/31/09	8.92	65.82
HW-1	92.69	3/16/06	19.31	73.38
Installed- 10/89		6/30/06	17.88	74.81
Well Depth: 20'		7/13/06	17.57	75.12
Screen: 3'-20'		8/11/06	18.49	74.20
4" diameter		9/12/06	19.20	73.49
		10/23/06	19.31	73.38
** destroyed during 10/08 excavation activities*		11/21/06	18.27	74.42
		12/7/06	18.22	74.47
		1/29/07	18.30	74.39
		2/20/07	18.31	74.38
		3/28/07	18.71	73.98
		4/12/07	18.51	74.18
		5/14/07	18.32	74.37
		6/22/07	18.82	73.87
		7/30/07	18.79	73.90
		8/23/07	19.56	73.13
		9/25/07	Dry	Dry
		10/15/07	19.56	73.13
		11/26/07	Dry	Dry
		12/14/07	Dry	Dry
		1/29/08	19.85	72.84
		2/18/08	19.62	73.07
		3/14/08	19.62	73.07
		4/15/08	19.53	73.16
		5/20/08	19.32	73.37
		6/18/08	19.53	73.16
		7/22/08	19.76	72.93
		8/20/08	19.82	72.87
		9/3/08	19.84	72.85
		10/30/08	Destroyed	-
		7/7/09	Destroyed	-
		8/31/09	Destroyed	-

Table 1: Summary of Historic Monitoring Well Gauging Results
7-Eleven Store No. 22281
Fallston, Maryland

Well	Top of Casing	Date	Depth to Water	Corrected Elevation
HW-2	102	3/16/06	Dry	Dry
Installed- 10/89		6/30/06	19.49	82.51
Well Depth: 19.5'		7/13/06	Dry	Dry
Screen: 3'-19.5'		8/11/06	Dry	Dry
4" diameter		9/12/06	Dry	Dry
		10/23/06	Dry	Dry
		11/21/06	Dry	Dry
		12/7/06	Dry	Dry
		1/29/07	Dry	Dry
		2/20/07	Dry	Dry
		3/28/07	19.32	82.68
		4/12/07	Dry	Dry
		5/14/07	Dry	Dry
		6/22/07	Dry	Dry
		7/30/07	Dry	Dry
		8/23/07	Dry	Dry
		9/25/07	Dry	Dry
		10/15/07	Dry	Dry
		11/26/07	Dry	Dry
		12/14/07	Dry	Dry
		1/29/08	Dry	Dry
		2/18/08	Dry	Dry
		3/14/08	Dry	Dry
		4/15/08	Dry	Dry
		5/20/08	Dry	Dry
		6/18/08	Dry	Dry
		7/22/08	Dry	Dry
		8/20/08	Dry	Dry
		9/3/08	Dry	Dry
		10/30/08 *	NG	-
		11/10/08	Dry	Dry
		11/24/08 *	NG	NG
		12/12/08 *	NG	NG
		12/22/08	Dry	Dry
		3/24/09	Dry	Dry
		4/30/09 *	Dry	Dry
		6/8/09	Dry	Dry
		7/7/09	Dry	Dry
		8/31/09	Dry	Dry
HW-3	85.01	1/29/07	12.40	72.61
Installed- 10/89		2/20/07	12.57	72.44
Well Depth: 19.5'		3/28/07	NG	NG
Screen: 3'-19.5'		4/12/07	12.22	72.79
4" diameter		5/14/07	12.11	72.90
		6/22/07	12.97	72.04
		7/30/07	12.61	72.40
		8/23/07	13.05	71.96
		9/25/07	14.30	70.71
		10/15/07	14.33	70.68
		11/26/07	14.19	70.82
		12/14/07	13.65	71.36
		1/29/08	13.54	71.47
		2/18/08	13.90	71.11
		3/14/08	12.97	72.04
		4/15/08	12.61	72.40
		5/20/08	12.41	72.60
		6/18/08	12.92	72.09
		7/22/08	13.31	71.70
		8/20/08	13.96	71.05
		9/3/08	14.16	70.85
		10/30/08 *	14.18	70.83
		11/10/08	14.16	70.85
		11/24/08 *	14.12	70.89
		12/12/08 *	NG	NG
		12/22/08	13.59	71.42
		1/19/09*	13.59	71.42
		2/16/09*	13.90	71.11
		3/24/09	14.12	70.89
		4/30/09 *	13.28	71.73
		6/8/09	12.94	72.07
		7/7/09	13.02	71.99
		8/31/09	13.65	71.36

* Gauged as part of the Bio-injection Pilot Testing
NG = Not Gauged

Table 2
Monitoring Well Groundwater Analytical Results
7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	TPH-GRO (µg/L)	TPH-DRO (mg/L)
MW-1A	7/26/05	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.56
	11/22/05	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	NA	NA
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.50
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	12/7/06	ND@1	ND@1	ND@1	ND@3	ND	1	ND@10	ND@10	ND@100	ND@0.5
	3/28/07	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@1	ND@3	ND	1	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	3	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	1	ND@20	ND@10	ND@100	ND@0.5
	12/23/08	ND@1	ND@1	ND@1	ND@3	ND	2	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	1	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	NA
MW-1B	7/26/05	ND@1	ND@1	ND@1	ND@3	ND	11	ND@25	ND@25	ND@100	ND@0.5
	11/22/05	ND@1	ND@1	ND@1	ND@3	ND	12	ND@25	ND@25	NA	NA
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	6	ND@25	ND@25	ND@100	ND@0.5
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	3	ND@25	ND@25	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	6	ND@25	ND@25	ND@100	ND@0.5
	12/7/06	ND@1	ND@1	ND@1	ND@3	ND	6	ND@10	ND@10	ND@100	ND@0.5
	3/28/07	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	1	ND@20	ND@10	ND@100	ND@0.5
	12/23/08	ND@1	ND@1	ND@1	ND@3	ND	1	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	2	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	1	ND@20	ND@10	ND@100	NA
MW-2	7/26/05	ND@1	ND@1	ND@1	ND@3	ND	3	ND@25	ND@25	ND@100	ND@0.56
	11/22/05	ND@1	ND@1	ND@1	ND@3	ND	**37**	ND@25	ND@25	NA	NA
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	**49**	28	ND@25	ND@100	ND@0.5
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	**52**	ND@25	ND@25	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	**31**	ND@25	ND@25	ND@100	ND@0.5
	12/7/06	ND@1	ND@1	ND@1	ND@3	ND	**27**	ND@10	ND@10	ND@100	ND@0.5
	3/28/07	ND@1	ND@1	ND@1	ND@3	ND	12	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@1	ND@3	ND	9	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@1	ND@3	ND	5	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@1	ND@3	ND	5	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	5	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	4	ND@20	ND@10	ND@100	ND@0.5
	12/23/08	ND@1	ND@1	ND@1	ND@3	ND	3	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	3	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	3	ND@20	ND@10	ND@100	NA

Table 2
Monitoring Well Groundwater Analytical Results
7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	TPH-GRO (µg/L)	TPH-DRO (mg/L)
MW-3A	7/26/05	ND@1	ND@1	ND@1	ND@3	ND	**2400**	1700	110	**2700**	ND@0.5
	11/22/05	ND@1	ND@1	ND@1	ND@3	ND	**260**	120	ND@25	NA	NA
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	**37**	ND@25	ND@25	ND@100	ND@0.5
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	3	ND@25	ND@25	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	12/7/06	ND@1	ND@1	ND@1	ND@3	ND	2	ND@10	ND@10	ND@100	ND@0.5
	3/28/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	12/23/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	NA
MW-3B	2/16/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	2/22/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	12/7/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	**2.5**
	3/28/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	12/23/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	NA
MW-4A	7/26/05	**11**	ND@1	ND@1	10	21	**31,000**	25,000	E 2,200	**30,000**	ND@0.5
	11/22/05	**15**	ND@1	ND@1	10	25	**42,000**	29,000	3,200	NA	NA
	3/16/06	ND@5	ND@5	ND@5	ND@10	ND	**20,000**	9,900	940	**2,100**	ND@0.5
	6/30/06	**14**	3	ND@1	12	29	**E 3,300**	E 3,400	E 560	**2,000**	LF 0.52
	9/12/06	**34**	9	ND@1	25	68	**20,000**	E 21,000	E 630	**2,900**	ND@0.5
	12/7/06	**30**	ND@5	ND@5	11	41	**27,000**	32000	780	**3,000**	LF 0.72
	3/28/07	**8**	ND@1	ND@1	6	14	**E 37,000**	E 41,000	E 490	**2,500**	**0.7**
	6/22/07	**8**	ND@1	ND@1	10	18	**E 12,000**	E 5,300	E 480	**2,500**	ND@0.5
	9/25/07	**7**	ND@1	ND@1	6	13	**E 11,000**	E 4,500	E 560	**1,500**	ND@0.5
	12/14/07	**7**	ND@1	ND@1	6	13	**E 7,600**	ND@10	E 460	**1,700**	ND@0.5
	3/14/08	ND@100	ND@100	ND@100	ND@300	ND	**15,000**	11,000	ND@1,000	**20,000**	ND@0.5
	6/18/08	ND@50	ND@50	ND@50	ND@150	ND	**8,100**	4,500	ND@500	**1,500**	ND@0.5
	9/3/08	**7**	ND@1	ND@1	ND@3	ND	**8,200**	11,000	460	**4,400**	ND@0.5
	12/23/08	ND@100	ND@100	ND@100	ND@300	ND	**15,000**	9,500	ND@1,000	**6,000**	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	**4,900**	4,100	130	**720**	NA
	6/8/09	2	ND@1	ND@1	ND@3	2	**5,100**	2,900	150	**1,600**	NA

Table 2
Monitoring Well Groundwater Analytical Results
7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	TPH-GRO (µg/L)	TPH-DRO (mg/L)
MW-4B	2/16/06	ND@1	ND@1	ND@1	ND@3	ND	16	ND@25	ND@25	ND@100	ND@0.5
	2/22/06	ND@1	ND@1	ND@1	ND@3	ND	16	ND@25	ND@25	ND@100	ND@0.5
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	13	ND@25	ND@25	ND@100	ND@0.5
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	7	ND@25	ND@25	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	6	ND@25	ND@25	ND@100	ND@0.5
	12/7/06	ND@1	ND@1	ND@1	ND@3	ND	**21**	ND@10	ND@10	ND@100	ND@0.5
	3/28/07	ND@1	ND@1	ND@1	ND@3	ND	7	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@1	ND@3	ND	3	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@1	ND@3	ND	8	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@1	ND@3	ND	6	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@1	ND@3	ND	5	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	12	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	13	ND@20	ND@10	ND@100	ND@0.5
	12/23/08	ND@1	ND@1	ND@1	ND@3	ND	18	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	4	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	4	ND@20	ND@10	ND@100	NA
MW-5	7/26/05	ND@1	ND@1	ND@1	ND@3	ND	10	ND@25	ND@25	ND@100	ND@0.5
	11/22/05	ND@1	ND@1	ND@1	ND@3	ND	15	ND@25	ND@25	NA	NA
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	**76**	44	ND@25	ND@100	ND@0.5
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	11	ND@25	ND@25	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	**27**	ND@25	ND@25	ND@100	ND@0.5
	12/7/06	ND@1	ND@1	ND@1	ND@3	ND	15	ND@10	ND@10	ND@100	ND@0.5
	3/28/07	ND@1	ND@1	ND@1	ND@3	ND	3	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@1	ND@3	ND	3	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@1	ND@3	ND	4	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@1	ND@3	ND	5	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@1	ND@3	ND	7	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	9	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	7	ND@20	ND@10	ND@100	ND@0.5
	12/23/08	ND@1	ND@1	ND@1	ND@3	ND	**32**	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	15	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	8	ND@20	ND@10	ND@100	NA
MW-6	7/26/05	ND@1	ND@1	ND@1	ND@3	ND	**760**	560	28	**840**	ND@0.5
	11/22/05	ND@1	ND@1	ND@1	ND@3	ND	**1,900**	990	77	NA	NA
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	**1,300**	650	48	ND@100	ND@0.5
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	**E 860**	59	48	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	**1,200**	78	52	ND@100	ND@0.5
	12/7/06	ND@10	ND@10	ND@10	ND@30	ND	**2,400**	140	110	**140**	ND@0.5
	3/28/07	ND@100	ND@100	ND@100	ND@300	ND	**1,100**	ND@1,000	ND@1,000	**110**	ND@0.5
	6/22/07	ND@1	ND@1	ND@1	ND@3	ND	**E 1,000**	78	62	**130**	ND@0.5
	9/25/07	ND@1	ND@1	ND@1	ND@3	ND	**E 1,200**	120	65	**150**	ND@0.5
	12/14/07	2	ND@1	ND@1	ND@3	2	**E 3,800**	E 330	E 350	**600**	ND@0.5
	3/14/08	ND@50	ND@50	ND@50	ND@350	ND	**3,000**	ND@500	ND@500	**3,700**	ND@0.5
	6/18/08	ND@10	ND@10	ND@10	ND@30	ND	**2,200**	ND@200	120	**510**	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	**1,200**	210	84	**300**	ND@0.5
	12/27/08	ND@10	ND@10	ND@10	ND@30	ND	**3,600**	320	260	**1,700**	ND@0.5
	3/24/09	ND@10	ND@10	ND@10	ND@30	ND	**2,100**	230	120	**360**	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	**2,600**	230	170	**810**	NA

Table 2
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7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	TPH-GRO (µg/L)	TPH-DRO (mg/L)
MW-7	7/26/05	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.56
	11/22/05	ND@1	ND@1	ND@1	ND@3	ND	ND@1	34	ND@25	NA	NA
	3/16/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	6/30/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	9/12/06	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@25	ND@25	ND@100	ND@0.5
	12/7/06	ND@1	ND@1	ND@100	ND@3	ND	ND@1	ND@10	ND@10	ND@100	**0.94**
	3/28/07	ND@1	ND@1	ND@100	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@100	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@100	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@100	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@100	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	12/23/08	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	1	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	ND@1	ND@20	ND@10	ND@100	NA
MW-8A	3/28/07	ND@1	1	ND@100	ND@3	ND	**44**	ND@10	ND@10	ND@100	ND@0.5
	6/22/07	ND@1	ND@1	ND@100	ND@3	ND	9	ND@10	ND@10	ND@100	ND@0.5
	9/25/07	ND@1	ND@1	ND@100	ND@3	ND	3	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@100	ND@3	ND	ND@1	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@100	ND@3	ND	3	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	2	ND@20	ND@10	ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	2	ND@20	ND@10	ND@100	ND@0.5
	12/27/08	ND@1	ND@1	ND@1	ND@3	ND	2	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	4	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	2	ND@20	ND@10	ND@100	NA
MW-8B	10/15/07	ND@1	1	ND@1	ND@3	1	14	ND@10	ND@10	ND@100	ND@0.5
	12/14/07	ND@1	ND@1	ND@100	ND@3	ND	15	ND@10	ND@10	ND@100	ND@0.5
	3/14/08	ND@1	ND@1	ND@100	ND@3	ND	16	ND@10	ND@10	ND@100	ND@0.5
	6/18/08	ND@1	ND@1	ND@1	ND@3	ND	**24**	ND@20		ND@100	ND@0.5
	9/3/08	ND@1	ND@1	ND@1	ND@3	ND	**28**	ND@20	ND@10	ND@100	ND@0.5
	12/27/08	ND@1	ND@1	ND@1	ND@3	ND	**23**	ND@20	ND@10	ND@100	ND@0.5
	3/24/09	ND@1	ND@1	ND@1	ND@3	ND	**39**	ND@20	ND@10	ND@100	NA
	6/8/09	ND@1	ND@1	ND@1	ND@3	ND	**64**	25	ND@10	ND@100	NA
HW-1	3/16/06	100	880	ND@5	1,690	2,670	**3,700**	1,800	ND@130	**41,000**	**3.6**
	6/30/06	**8**	E 380	170	E 790	968	**62**	56	ND@25	**2,700**	LF/DF 2
	9/12/06	*Not Sampled, Well Dry									
	12/7/06	*Not Sampled, Well Dry									
	3/28/07	*Not Sampled, Well Dry									
	6/13/07	*Not Sampled, Well Dry									
	9/25/07	*Not Sampled, Well Dry									
	12/14/07	*Not Sampled, Well Dry									
	3/14/08	*Not Sampled, Well Dry									
	6/18/08	*Not Sampled, Well Dry									
	9/3/08	*Not Sampled, Well Dry									
	12/23/08	*Not Sampled; well destroyed during 10/08 UST excavation activities									

Table 2
Monitoring Well Groundwater Analytical Results
7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	TPH-GRO (µg/L)	TPH-DRO (mg/L)
HW-2	3/16/06	*Not Sampled, Well Dry									
	6/30/06	*Not Sampled, Well Dry									
	9/12/06	*Not Sampled, Well Dry									
	12/7/06	*Not Sampled, Well Dry									
	3/28/07	*Not Sampled, Well Dry									
	6/13/07	*Not Sampled, Well Dry									
	9/25/07	*Not Sampled, Well Dry									
	12/14/07	*Not Sampled, Well Dry									
	3/14/08	*Not Sampled, Well Dry									
	6/18/08	*Not Sampled, Well Dry									
	9/3/08	*Not Sampled, Well Dry									
	12/23/08	*Not Sampled, Well Dry									
	3/24/09	*Not Sampled, Well Dry									
	6/8/09	*Not Sampled, Well Dry									
HW-3	1/23/07	2	ND@1	ND@1	ND@3	2	**6,600**	230	250	**510**	ND@0.5
	3/28/07	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/22/07	4	ND@1	ND@1	3	7	**5,800**	440	380	**900**	ND@0.5
	9/25/07	**6**	ND@1	ND@1	4	10	**E 7,200**	E 730	E 660	**1,600**	ND@0.5
	12/14/07	4	ND@1	ND@1	2	6	**E 6,300**	E 470	E600	**1,100**	ND@0.5
	3/14/08	ND@50	ND@50	ND@50	ND@350	ND	**7,100**	ND@500	ND@500	**9,000**	ND@0.5
	6/18/08	ND@50	ND@50	ND@50	ND@350	ND	**7,700**	ND@1000	ND@500	**1,500**	ND@0.5
	9/3/08	5	ND@1	ND@1	3	8	**6,500**	E 750	E 750	**3,100**	ND@0.5
	12/27/08	ND@10	ND@10	ND@10	ND@30	ND	**7,600**	530	590	**2,700**	ND@0.5
	3/24/09	2	ND@1	ND@1	1	3	**9,000**	790	660	**1,500**	NA
	6/8/09	2	ND@1	ND@1	ND@3	2	**7,000**	490	600	**2,500**	NA
MDE CLEANUP STD		**5**	**1,000**	**700**	**10,000**	**--**	**20**	--	--	**47**	**0.047**

BTEX - Total Benzene, Toluene, Ethylbenzene and Xylenes
MTBE - methyl tert-butyl ether
µg/L - micrograms-per-liter
mg/L - milligrams-per-liter
* Well not sampled due to insufficient amount of water

ND@x - not detected above laboratory detection level of x
ND - not detected
NA - not analyzed
E - estimated value, exceeds calibration range of laboratory equipment
LF - lighter fuel/oil pattern observed in sample

Table 3: Summary of Historic Potable Supply Well Sampling Analytical Results
7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	TBA	TAME
Influent	8/23/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**26**	ND@10	ND@0.5
	9/22/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**22**	ND@10	ND@0.5
	10/21/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**30**	ND@10	ND@0.5
	11/18/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	18	ND@10	ND@0.5
	12/16/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**41**	ND@10	ND@0.5
	2/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**26**	ND@10	ND@0.5
	3/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**24**	ND@10	ND@0.5
	4/28/2005	ND@0.5	3.6	ND@0.5	ND@1	ND	**22**	ND@10	ND@0.5
	6/3/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**21**	ND@10	ND@0.5
	7/22/2005	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	15.7	ND@10	ND@5
	8/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	19	ND@10	ND@0.5
	9/14/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	12	ND@10	ND@0.5
	10/11/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**23**	ND@10	ND@0.5
	11/22/2005	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	17	ND@5	ND@5
	1/16/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	16	ND@10	ND@0.5
	3/16/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	18	11	ND@5
	4/12/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	13	ND@10	ND@5
	6/30/2006	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	16	7	ND@5
	9/12/2006	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	8	ND@10	ND@5
	12/7/2006	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@10
	1/15/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	14	ND@10	ND@0.5
	2/27/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	14	ND@10	ND@0.5
	3/27/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	12	ND@10	ND@0.5
	4/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	12	ND@10	ND@0.5
	5/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	16	ND@10	ND@10
	7/6/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	4	ND@10	ND@10
	7/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	3.4	ND@10	ND@10
	8/7/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	3.7	ND@10	ND@10
	9/4/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2.4	ND@10	ND@10
	10/2/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	3	ND@10	ND@0.5
	11/6/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	4.3	ND@10	ND@0.5
	12/4/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	4.9	ND@10	ND@0.5
	1/8/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	5.6	ND@10	ND@0.5
	2/8/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	5.9	ND@10	ND@0.5
	3/12/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	6.1	ND@10	ND@0.5
	4/1/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	4.6	ND@10	ND@0.5
	5/5/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	6.3	ND@11	ND@0.5
	6/10/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2.5	ND@10	ND@0.5
	7/15/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2.3	ND@10	ND@0.5
	8/14/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	10/9/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	1.5	ND@10	ND@0.5
	11/11/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	1.6	ND@10	ND@0.5
	12/16/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2.8	ND@10	ND@0.5
	1/13/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2.3	ND@10	ND@0.5
	2/3/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	3/19/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2	ND@10	ND@0.5
	4/14/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	1.1	ND@10	ND@0.5
	5/5/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	1.3	ND@10	ND@0.5
	6/4/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	1.4	ND@10	ND@0.5

Table 3: Summary of Historic Potable Supply Well Sampling Analytical Results
7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	TBA	TAME
GAC 1	8/23/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	**26**	ND@10	ND@0.5
MID 1	9/22/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	10/21/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	11/18/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	12/16/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	2/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	3/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	2.6	ND@10	ND@0.5
	4/28/2005	ND@0.5	3.7	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	6/3/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	7/22/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@5
	8/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@5
	9/14/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	0.8	ND@10	ND@5
	10/11/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	1	ND@10	ND@5
	1/16/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	8	ND@10	ND@5
	4/12/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	17	ND@10	ND@5
	1/15/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@5
	2/27/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2.1	ND@10	ND@0.5
	3/27/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2.2	ND@10	ND@0.5
	4/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	5.6	ND@10	ND@0.5
	5/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	7/6/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	4.3	ND@10	ND@0.5
	7/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	5.4	ND@10	ND@0.5
	8/7/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	6.1	ND@10	ND@0.5
	9/4/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	10/2/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	11/6/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	12/4/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	1/8/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	2/8/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	3/12/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.7	ND@10	ND@0.5
	4/1/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	5/1/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	6/10/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	7/15/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	8/14/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.5	ND@10	ND@0.5
	10/9/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.6	ND@10	ND@0.5
	11/11/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	12/16/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	1/13/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	2/3/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	3/19/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	4/14/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	5/5/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	6/4/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5

Table 3: Summary of Historic Potable Supply Well Sampling Analytical Results
7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	TBA	TAME
GAC 2	8/23/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
MID 2	9/22/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	10/21/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	11/18/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	12/16/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	2/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	3/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	0.6	ND@10	ND@0.5
	4/28/2005	ND@0.5	3.8	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	6/3/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	7/22/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@5	ND@5
	8/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@5
	9/14/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@5
	10/11/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@5
	1/16/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@5
	4/12/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@5
	1/15/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	2/27/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	3/27/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	4/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	5/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	7/6/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	7/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	8/7/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	9/4/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	2.1	ND@10	ND@0.5
	10/2/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	1.4	ND@10	ND@0.5
	11/6/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.7	ND@10	ND@0.5
	12/4/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.8	ND@10	ND@0.5
	1/8/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.7	ND@10	ND@0.5
	2/8/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.6	ND@10	ND@0.5
	3/12/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.5	ND@10	ND@0.5
	4/1/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.7	ND@10	ND@0.5
	5/1/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.9	ND@10	ND@0.5
	6/10/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.7	ND@10	ND@0.5
	7/15/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	8/14/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	10/9/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.6	ND@10	ND@0.5
	11/11/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	0.5	ND@10	ND@0.5
	12/16/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	1/13/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	2/3/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	3/19/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	4/14/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	5/5/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	6/4/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5

Table 3: Summary of Historic Potable Supply Well Sampling Analytical Results
7-Eleven Store No. 22281
Fallston, Maryland

Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX	MTBE	TBA	TAME
Effluent	8/23/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
Final	9/22/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	10/21/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	11/18/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	12/16/2004	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	2/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	3/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	4/28/2005	ND@0.5	6.2	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	6/3/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	7/22/2005	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@5	ND@5
	8/10/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	9/14/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	10/11/2005	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	11/22/2005	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@5	ND@5
	1/16/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@0.5
	3/16/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@5	ND@5
	4/12/2006	ND@0.5	ND@0.5	ND@0.5	ND@1	ND	ND@0.5	ND@10	ND@5
	6/30/2006	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@5	ND@5
	9/12/2006	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@5	ND@5
	12/7/2006	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@10
	1/15/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	2/27/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	3/27/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	4/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	4/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	5/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	7/6/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	7/30/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	8/7/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	9/4/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	10/2/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	11/6/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	12/4/2007	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	1/8/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	2/8/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	3/12/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	4/12/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	5/1/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	6/10/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	7/15/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	8/14/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	10/9/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	11/11/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	12/16/2008	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	1/13/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	2/3/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	3/19/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	4/14/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	5/5/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5
	6/4/2009	ND@0.5	ND@0.5	ND@0.5	ND@1.5	ND	ND@0.5	ND@10	ND@0.5

BTEX - Total Benzene, Toluene, Ethylbenzene and Xylenes
MTBE - methyl tert-butyl ether
TBA - tert-butanol
TAME - tert-amyl methyl ether
All units micrograms-per-liter (µg/L)
NOTE: June 2007 sample was collected on July 6, 2007

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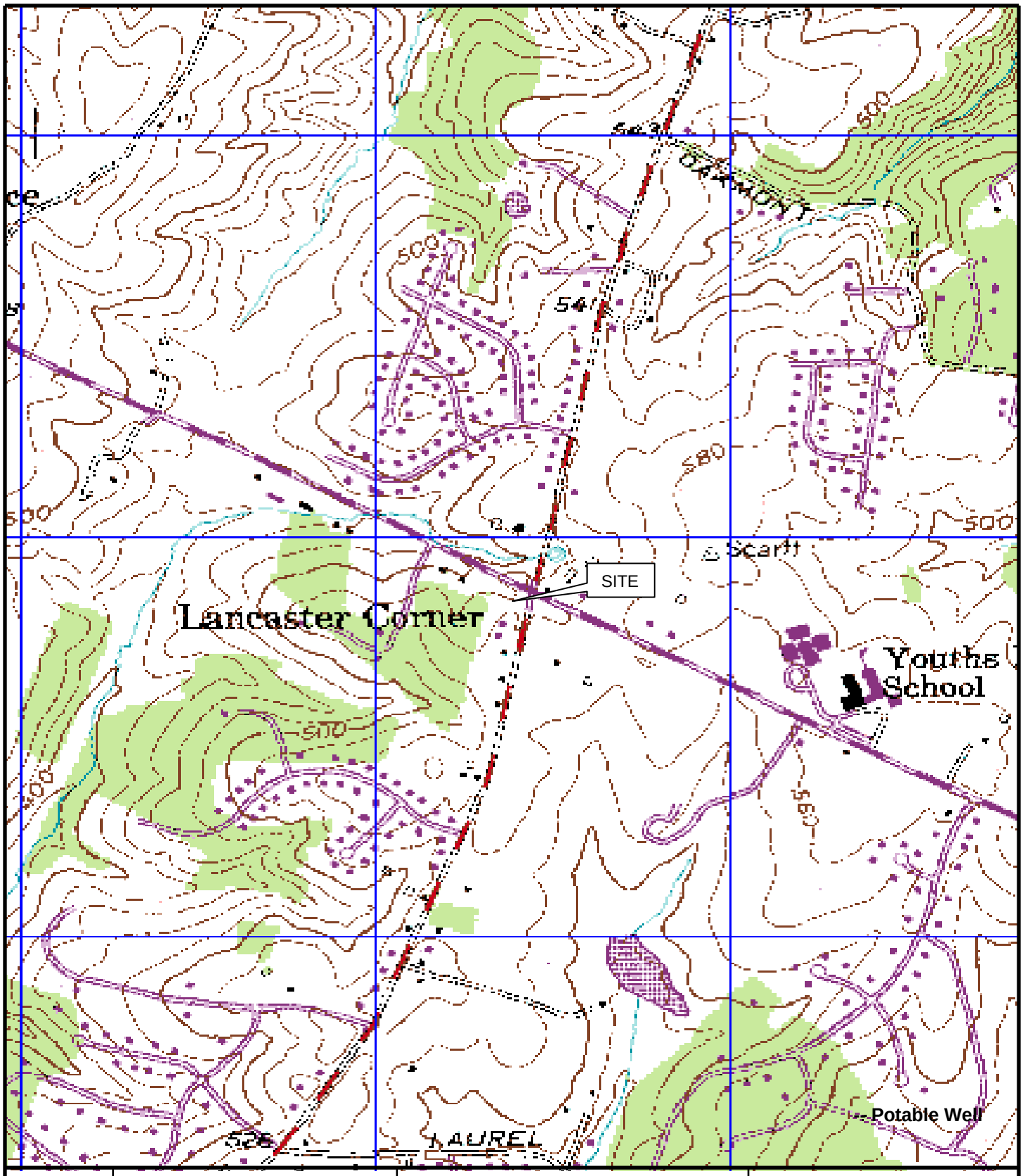
CORRECTIVE ACTION PLAN

7-ELEVEN STORE #22281, FALLSTON, MD

OCTOBER 2009

FIGURES



7-Eleven Store No. 22281
2400 Pleasantville Road
Fallston, Maryland

Source: USGS Quadrangle
Jarrettsville, Maryland

Site Area Topographic Map

7-Eleven, Inc.

October 2009

Job No. 06230-859

FIGURE 1

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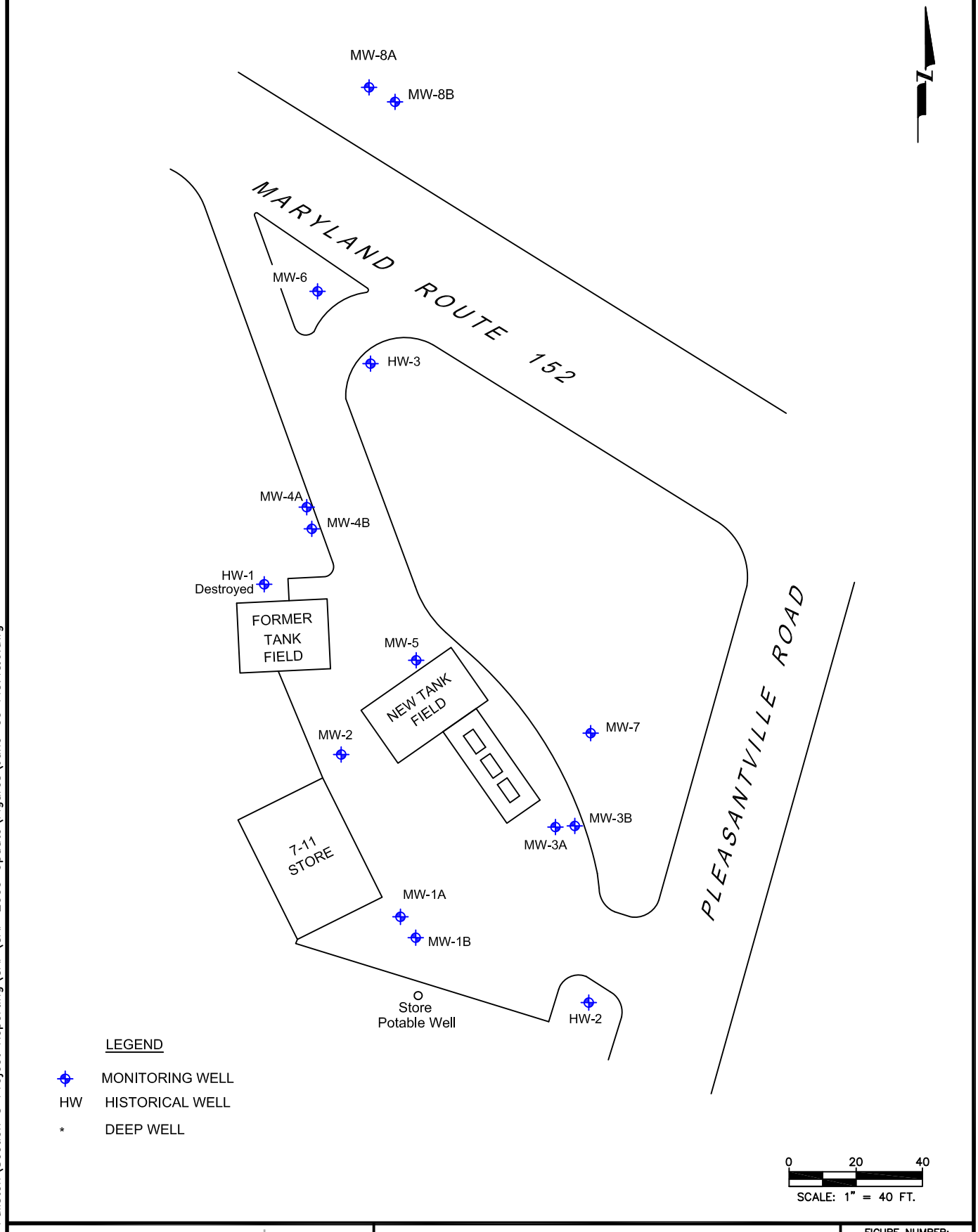

X:\Maryland\22281 - Fallston\Section 5 Project Reporting\CAP\CAP 2009 Update\Figures\June-09 FIG.4&6.dwg

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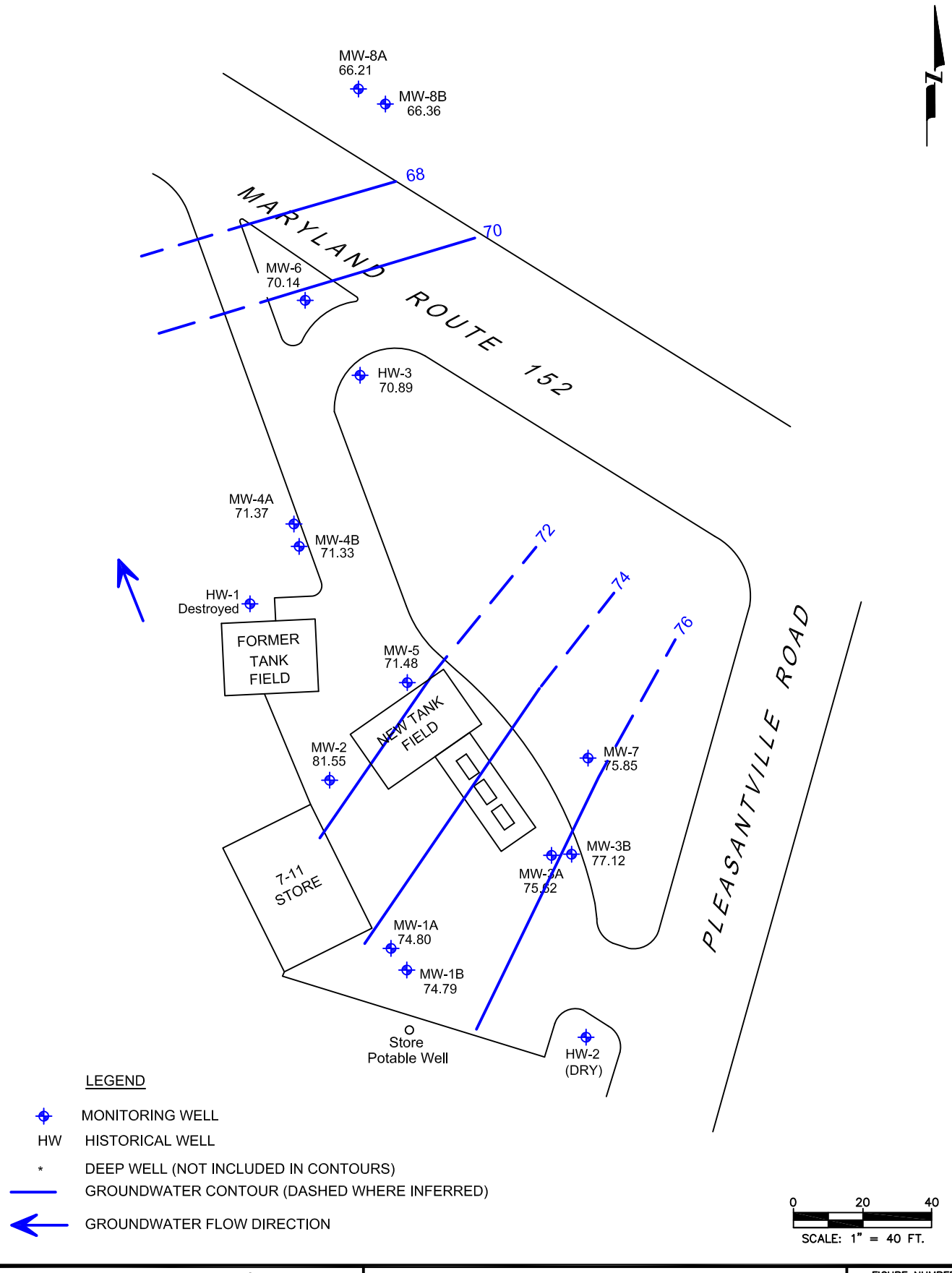
www.ensr.aecom.com

SITE PLAN

7-ELEVEN STORE #22281
2400 PLEASANTVILLE ROAD
FALLSTON, MARYLAND

FIGURE NUMBER: 2

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
JF	JUNE 2009	06230-859-000	1



X:\Maryland\22281 - Fallston\Section 5 Project Reporting\CAP\CAP 2009 Update\Figures\March-09 FIG.3&5.dwg

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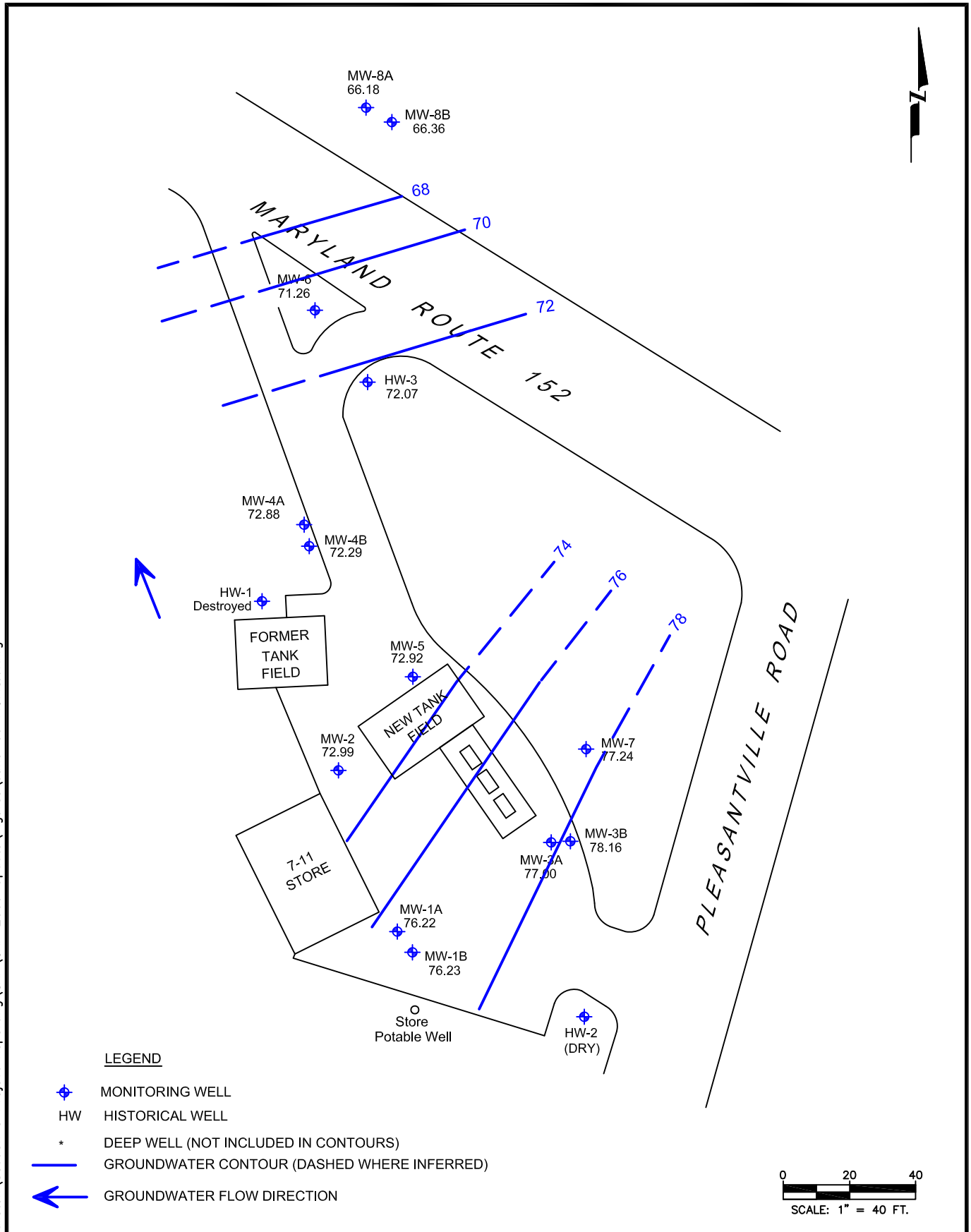
GROUNDWATER ELEVATION MAP (SHALLOW WELLS) MARCH 24, 2009

7-ELEVEN STORE #22281
2400 PLEASANTVILLE ROAD
FALLSTON, MARYLAND

FIGURE NUMBER: 3

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
JF	MAY 2008	06230-859-000	1



X:\Maryland\22281 - Fallston\Section 5 Project Reporting\CAP\CAP 2009 Update\Figures\June-09 FIG.4&6.dwg

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GROUNDWATER ELEVATION MAP (SHALLOW WELLS) JUNE 8, 2009

7-ELEVEN STORE #22281
2400 PLEASANTVILLE ROAD
FALLSTON, MARYLAND

FIGURE NUMBER: 4

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
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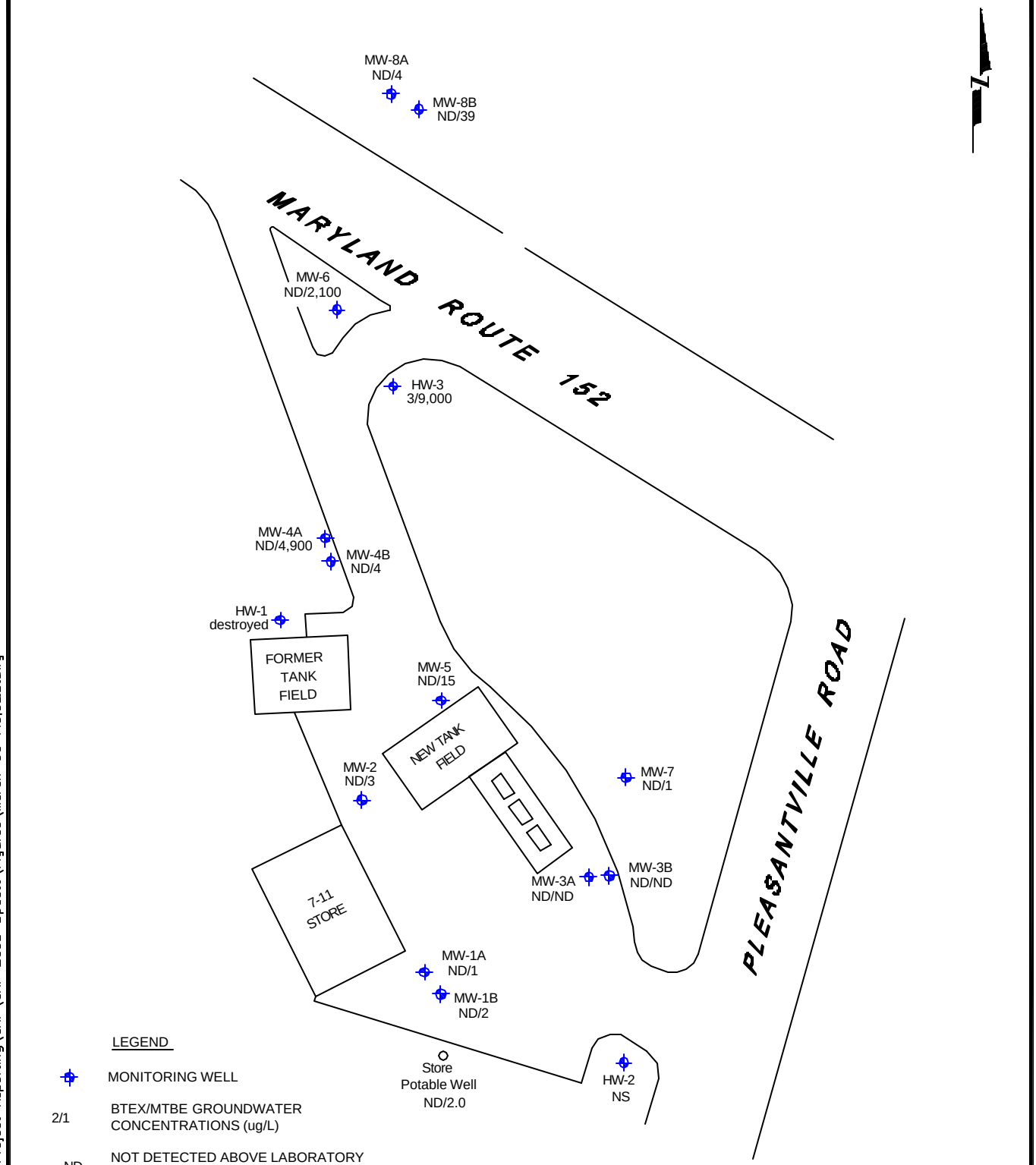

X:\Maryland\22281 - Fallston\Section 5 Project Reporting\CAP\CAP 2009 Update\Figures\March-09 FIG,3&5.dwg

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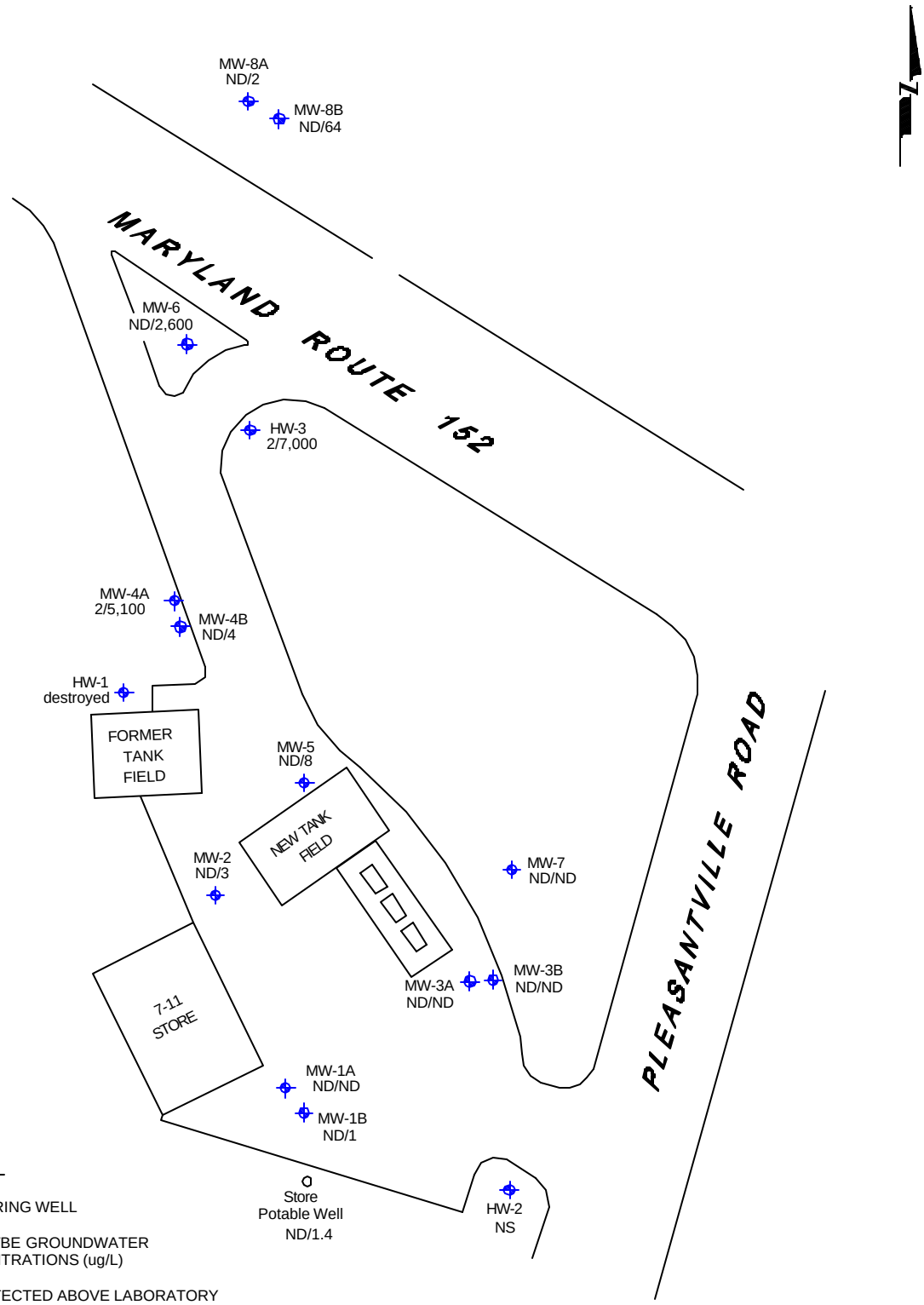
BTEX/MTBE CONCENTRATIONS
MARCH 24, 2009

7-ELEVEN STORE #22281
2400 PLEASANTVILLE ROAD
FALLSTON, MARYLAND

FIGURE NUMBER: 5

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
JF	JANUARY 2009	06230-859-000	1



NOTE: STORE POTABLE WELL SAMPLED ON JUNE 4, 2009

X:\Maryland\22281 - Fallston\Section 5 Project Reporting\CAP\CAP 2009 Update\Figures\June-09 FIG.4&6.dwg

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BTEX/MTBE CONCENTRATIONS
JUNE 8, 2009

7-ELEVEN STORE #22281
2400 PLEASANTVILLE ROAD
FALLSTON, MARYLAND

FIGURE NUMBER: 6

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
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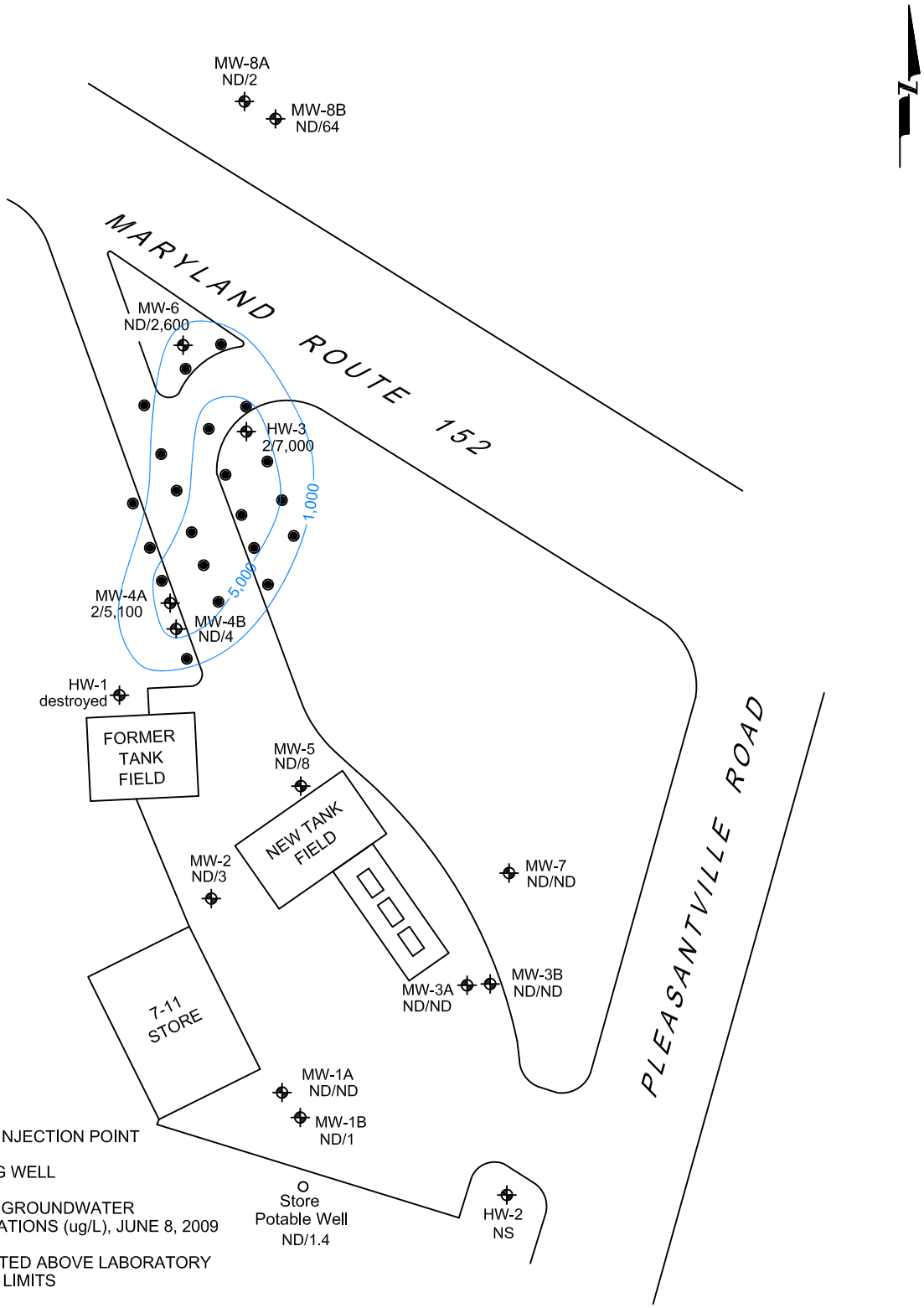

LEGEND

- PROPOSED INJECTION POINT
- MONITORING WELL
- 2/1 — BTEX/MTBE GROUNDWATER CONCENTRATIONS (ug/L), JUNE 8, 2009
- ND — NOT DETECTED ABOVE LABORATORY DETECTION LIMITS
- NS — NOT SAMPLED
- HW — HISTORICAL WELL
- * — DEEP WELL
- MTBE ISOCONCENTRATION CONTOURS

NOTE: STORE POTABLE WELL SAMPLED ON JUNE 4, 2009

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PROPOSED INJECTION POINTS

7-ELEVEN STORE #22281
2400 PLEASANTVILLE ROAD
FALLSTON, MARYLAND

FIGURE NUMBER:	DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
7	JF	October 2009	06230-859	1

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CORRECTIVE ACTION PLAN

7-ELEVEN STORE #22281, FALLSTON, MD

OCTOBER 2009

APPENDIX A

PETROZYME PRODUCT INFORMATION (ENZYME TECHNOLOGIES, LLC)

MATERIAL SAFETY DATA SHEET — CBN™ Custom-Blend Nutrients

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC – DAY OR NIGHT 1-800-424-9300 Code E419

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FORMULATED FOR:

ETEC
6635 NE 59th Place, Portland, Oregon 97218
Information – 971-222-3616

24-Hour Emergency Phone: 1-800-535-5053
Medical Emergencies: 1-800-301-7976
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: CBN™ Custom-Blend Nutrients (NutriMax™)
CHEMICAL NAME: Inorganic Nutrient Mixture
CHEMICAL FAMILY: N-P-K Mixed Nutrient
EPA REG. NO.: not applicable
MSDS Revisions: New **Date of Issue:** 04-28-08 **Supersedes:** New **MSDS No.:** 014

2. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients:	CAS No.	Percent	Hazardous
Ammonium Nitrate	6484-52-2	76.75%	Yes

3. HAZARDS IDENTIFICATION SUMMARY

Emergency Overview

DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE OR EXPLOSION. MAY BE HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate
Flammability Rating: 1 - Slight
Reactivity Rating: 3 - Severe (Oxidizer)
Contact Rating: 2 - Moderate
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES
Storage Color Code: Yellow (Reactive)

Potential Health Effects

Inhalation: May cause irritation to the respiratory tract; symptoms may include coughing, sore throat, and shortness of breath. At high temperatures, exposure to toxic nitrogen oxides decomposition products can quickly cause acute respiratory problems. Inhalation of large amounts causes systemic acidosis and abnormal hemoglobin.
Ingestion: Large oral doses of nitrates may cause dizziness, abdominal pain, vomiting, bloody diarrhea, weakness, convulsions, and collapse. Harmful if swallowed. May cause methemoglobinemia resulting in cyanosis.
Skin Contact: Causes irritation to skin. Symptoms include redness, itching, and pain.
Eye Contact: Causes irritation, redness, and pain.
Chronic Exposure: Small repeated oral doses of nitrates may cause weakness, depression, headache, and mental impairment.
Aggravation of Pre-existing Conditions: No information found.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin Contact: Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.
Eye Contact: Wash thoroughly with running water. Get medical advice if irritation develops.

5. FIRE FIGHTING MEASURES

Fire: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. May support combustion in an existing fire.
Explosion: Contact with oxidizable substances may cause extremely violent combustion. Sealed containers may rupture when heated. Sensitive to mechanical impact.
Fire Extinguishing Media: Use flooding amounts of water in early stages of fire involving ammonium nitrate. Use any means suitable for extinguishing surrounding fire.
Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Remove sources of heat and ignition.
Collected waste may be transferred to a closed, preferably metal, container and sent to a RCRA approved waste disposal facility.
Alternatively, sweep spill into noncombustible container and dissolve in large amount of water. Add soda ash. Mix and neutralize with 6M-HCl. Neutralized sludge may be sent to an approved waste disposal facility.

7. HANDLING AND STORAGE

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Protect against physical damage. Store in a dry location separate from combustible, organic or other readily oxidizable materials. Avoid storage on wood floors. Remove and dispose of any spilled dichromates; do not return to original containers. Do not store above 54C (130F) preferably below 30C (86F). Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Limits: None established.
Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Personal Respirators (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection: Wear protective gloves and clean body-covering clothing.
Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless crystals.
Odor: Odorless.
Solubility: 118g/100g water @ 0C (32F).
Specific Gravity: 1.73 @ 23C (77F)
pH: 5.4
% Volatiles by volume @ 21C (70F): 0

Boiling Point: 210C (410F) Decomposes.
Melting Point: 170C (338F)
Vapor Density (Air=1): No information found.
Vapor Pressure (mm Hg): No information found.
Evaporation Rate (BuAc=1): No information found.

10. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage. Hygroscopic.
Hazardous Decomposition Products: Emits nitrous oxides when heated to decomposition. Liberates ammonia in reaction with strong alkalis.
Hazardous Polymerization: Will not occur.
Incompatibilities: Aluminum, antimony, chromium, copper, iron, lead, magnesium, manganese, nickel, zinc, brass, oil, charcoal, organic material, acetic acid, ammonium chloride, bismuth, cadmium, chlorides, cobalt, phosphorus, potassium and ammonium sulfate, sodium, sodium hypochlorite, sodium perchlorate, sodium-potassium alloy, and sulfure.
Conditions to Avoid: Heat, flame, ignition sources, dusting and incompatibles. Moisture and combustible materials. Shock sensitive.

11. TOXICOLOGICAL INFORMATION

Oral rat LD50: 2217 mg/kg.

--------\Cancer Lists\----------

	---NTP Carcinogen---		
Ingredient	Known	Anticipated	IARC Category
Ammonium Nitrate (6484-52-2)	No	No	None

12. ECOLOGICAL INFORMATION

Environmental Fate:
When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is not expected to evaporate significantly. When released into water, this material is expected to readily biodegrade.
Environmental Toxicity:
No information found.

13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Domestic (Land, D.O.T.)

Proper Shipping Name: AMMONIUM NITRATE
Hazard Class: 5.1
UN/NA: UN1942
Packing Group: III
Information reported for product/size: 22.7KG

International (Water, I.M.O.)

Proper Shipping Name: AMMONIUM NITRATE
Hazard Class: 5.1
UN/NA: UN1942
Packing Group: III
Information reported for product/size: 22.7KG

15. REGULATORY INFORMATION

```
--------\Federal, State & International Regulations - Part 1\----------------
                                        -SARA 302-    ------SARA 313------
Ingredient                              RQ    TPQ     List  Chemical Catg.
--------------------------------------  ---   -----   ----  --------------
Ammonium Nitrate (6484-52-2)            No    No      No    Nitrate cmpd

--------\Federal, State & International Regulations - Part 2\----------------
                                                  -RCRA-    -TSCA-
Ingredient                              CERCLA    261.33     8(d)
--------------------------------------  ------    ------    ------
Ammonium Nitrate (6484-52-2)            No        No         No

Chemical Weapons Convention:  No     TSCA 12(b):  No     CDTA:  No
SARA 311/312:  Acute: Yes      Chronic: No   Fire: No  Pressure: No
Reactivity: Yes      (Pure / Solid)
```

Australian Hazchem Code: 1[S]
Poison Schedule: None allocated.
WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

NFPA Ratings: Health: **0** Flammability: **0** Reactivity: **3** Other: Oxidizer
Label Hazard Warning: DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE OR EXPLOSION. MAY BE HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.
Label Precautions: Keep from contact with clothing and other combustible materials. Do not store near combustible materials. Store in a tightly closed container. Avoid breathing dust. Avoid contact with eyes, skin and clothing. Remove and wash contaminated clothing promptly. Use only with adequate ventilation. Wash thoroughly after handling. Store preferably below 30C
Label First Aid: If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases, get medical attention.
Product Use: Microbial Nutrient.
Revision Information: New

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MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-1; Flammability-0; Reactivity-0; Special- -		**HMIS Rating:** Health-1; Flammability-0; Reactivity-0; Personal Protection-G
Manufacturer's Name:	ETEC, LLC	**DOT Hazard Classification: None**
Address:	6635 NE 59th Place Portland, OR 97218	**TRADE NAME: Enzyme Accelerator**
Date Prepared: 2/1/07	**Prepared By: BT**	**MSDS Number: 011** Revision - 0
Information Calls:	**(503) 260-3799**	NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	ACS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
MONOCYCLIC TERPENE	5989-27-5	No	N/E	N/E	d
NATURAL ENZYMES	N/A	No	N/E	N/E	N/E

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	220 F	Specific Gravity (H2O=1):	1.00
Vapor Pressure: PSIG @ 70 F (Aerosols):	N/A	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature):	18 @75^0 F
Vapor Density (Air = 1):	.62	Evaporation Rate (BUAC = 1):	1.20
Solubility in Water:	Complete	Water Reactive:	No
Appearance and Odor:	Tan colored liquid with citrus odor.		

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA flame projection test (aerosols): N/A	Auto Ignition Temperature: N/E	Flammability Limits in Air by % in Volume:
FLASH POINT AND METHOD USED 115 F (T.C.C.)		% LEL: N/E % UEL: N/E
EXTINGUISHER MEDIA: Non-Combustible	**SPECIAL FIRE FIGHTING PROCEDURES**: None	

Unusual Fire & Explosion Hazards: Provide shielding to protect personnel.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY: [X] STABLE [ ] UNSTABLE	**HAZARDOUS POLYMERIZATION:** [ ] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): None Identified	**Conditions to Avoid:** None Identified

Hazardous Decomposition Products: None

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [X] INGESTION [X] SKIN ABSORPTION [X] EYE

ACUTE EFFECTS: **None**

Inhalation: Can cause headache, dizziness**.**

Eye Contact: Irritating **Skin Contact:** May be an irritant.

Ingestion: Chemical pneumonitis if aspirated into lungs.

CHRONIC EFFECTS: None known.

Medical Conditions Generally Aggravated by Exposure: Asthma

SECTION 6 - EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. Get medical attention.

Skin Contact: Wash with soap and water.

Inhalation: Move to fresh air.

Ingestion: **DO NOT INDUCE VOMITING.** Drink large quantity of water. Get immediate medical attention.

SECTION 7 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type):.	None normally needed		
Protective Gloves:	Solvent resistant	**Eye Protection:**	Safety glasses.
Ventilation Requirements:	Normal room ventilation.		
Other Protective Clothing & Equipment:	None		
Hygienic Work Practices:	Wash with soap and water after contact.		

SECTION 8 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Cover with absorbent material and scoop up. Flush area with water.

Waste Disposal Methods: Dispose of in accordance with local, state and federal regulations.

Precautions To Be Taken In Handling & Storage: Keep away from temperatures above 130 F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

**** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only**

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-1; Flammability-0; Reactivity-0; Special- -		**HMIS Rating:** Health-1; Flammability-0; Reactivity-0; Personal Protection-D	
Manufacturer's Name:	ETEC, LLC	**DOT Hazard Classification:** None	
Address:	6635 NE 59th Place Portland, OR 97218	**TRADE NAME:** **EZT-A2**	
Date Prepared: 2/1/07	**Prepared By:** BT	**MSDS Number: 010**	**Revision** - 2
Information Calls:	**(503) 260-3799**	NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA	

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	ACS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
Bacterial Consortium	N/A	No	N/E	N/E	N/E

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	212 F	**Specific Gravity (H2O=1):**	1.00
Vapor Pressure: PSIG @ 70 F (Aerosols):	N/A	**Vapor Pressure (Non-Aerosols)(mm Hg and Temperature):**	18 @75^0 F
Vapor Density (Air = 1):	.62	**Evaporation Rate (BUAC = 1):**	1.00
Solubility in Water:	Complete	**Water Reactive:**	No

Appearance and Odor: Thin brown / tan liquid with slightly sour odor

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA flame projection test (aerosols): N/A	Auto Ignition Temperature: N/A	Flammability Limits in Air by % in Volume:
FLASH POINT AND METHOD USED N/A		% LEL: N/A % UEL: N/A
EXTINGUISHER MEDIA: Non-Combustible	**SPECIAL FIRE FIGHTING PROCEDURES**: None	

Unusual Fire & Explosion Hazards: None

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY: [X] STABLE [ ] UNSTABLE	**HAZARDOUS POLYMERIZATION:** [ ] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): None Identified	**Conditions to Avoid:** None Identified

Hazardous Decomposition Products: None

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [ ] INHALATION [X] INGESTION [X] SKIN ABSORPTION [X] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS: None

Inhalation: None

Eye Contact: May be an irritant **Skin Contact:** May be an irritant.

Ingestion: Gastrointestinal irritant

CHRONIC EFFECTS: None known.

Medical Conditions Generally Aggravated by Exposure: None Identified

SECTION 6 - EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritation persists get medical attention.

Skin Contact: Wash with soap and water.

Inhalation: Move to fresh air. No adverse effects noted.

Ingestion: **DO NOT INDUCE VOMITING.** Drink large quantity of water. Get immediate medical attention.

SECTION 7 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type):. None normally needed

Protective Gloves: Rubber if desired **Eye Protection:** Safety glasses.

Ventilation Requirements: Normal room ventilation.

Other Protective Clothing & Equipment: Apron and boots if desired.

Hygienic Work Practices: Wash with soap and water after contact.

SECTION 8 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Dike and contain. Collect and re-use.

Waste Disposal Methods: Rinse container with water and dispose of accordingly

Precautions To Be Taken In Handling & Storage: Recommended storage temperature is 50 F. Seal container after use.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

**** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only**